ROLE OF A NEEDS ASSESSMENT – BASED LEARNING COMMUNITY
EXPERIENCE ON ARTISTIC GYMNASTICS COACHES' PROFESSIONAL
KNOWLEDGE AND PRACTICES

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Approval of the Graduate School of Social Sciences

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ABSTRACT

ROLE OF A NEEDS ASSESSMENT – BASED LEARNING COMMUNITY EXPERIENCE ON ARTISTIC GYMNASTICS COACHES' PROFESSIONAL KNOWLEDGE AND PRACTICES

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The purposes of this study were to 1) identify coaches' needs by evaluating athletes' developmental outcomes, 2) design, implement, and evaluate a learning community program (LCP) for the coaches based on the needs identified, and 3) evaluate the long-term effects of the LCP on the coaches' views and practices. A mixed methods research design was used to answer the research questions. In Study 1, an adapted and validated form of a measurement toolkit that measures youth athletes' "Competence", "Confidence", "Connection", and "Character" was applied to 45 youth gymnasts. The gymnasts were from Istanbul, Ankara, Izmir, Bolu, Mersin, and Bartın cities of Turkey. Data were analyzed by using descriptive and inferential statistics. Findings indicated a decrease in gymnasts' perceptions in each of the developmental outcome as they age. Also, girls had significantly higher scores in "Competence" and "Character" outcomes ($p < 0.05$). A six-week LCP was developed based on the findings of Study 1. A LCP was conducted with six coaches and one facilitator. The data comprised video-recorded and fully transcribed six-week LCP, researcher notes, and a focus-group interview. In understanding the long-term effects of the LCP, a long-term participant observation was made and unstructured interviews were conducted with two participant coaches after two years. Qualitative data were analyzed using thematic analysis. The coaches found the LCP quite effective regarding the learning

environment created, and the way the knowledge is built and shared. Additionally, the program strongly raised the coaches' awareness and knowledge of athletes' holistic developmental outcomes. Findings regarding the long-term effects of the LCP indicated the coaches' actual adoption of the view of holistic athlete development and started to make positive changes in gymnasts' developmental outcomes using the professional knowledge they obtained.

ÖZ

İHTİYAÇ ANALİZİNE DAYALI ÖĞRENME TOPLULUĞU DENEYİMİNİN ARTİSTİK CİMNASTİK ANTRENÖRLERİNİN MESLEKİ BİLGİLERİ VE UYGULAMALARI ÜZERİNDEKİ ROLÜ

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Bu çalışmanın amacı 1) sporcuların gelişimsel çıktılarını inceleyerek antrenörlerin ihtiyaçlarını belirlemek, 2) belirlenen ihtiyaçlara dayalı antrenörler için bir öğrenme grubu programı geliştirmek, uygulamak ve değerlendirmek ve 3) uygulanan öğrenme grubu programının antrenörlere ve sporcularına uzun vadeli etkisini incelemektir. Çalışmanın araştırma sorularının cevaplanmasında karma araştırma yöntemi kullanılmıştır. Çalışma 1'de genç sporcuların "Yetkinlik", "Özgüven", "Bağ" ve "Karakter" çıktılarını ölçen kültürel adaptasyonu yapılmış ve psikometrik özellikleri sınanmış ölçek paketi 45 cimnastikçiye uygulanmıştır. Cimnastikçiler İstanbul, Ankara, İzmir, Bolu, Mersin ve Bartın şehirlerindendirler. Veriler betimsel ve çıkarımsal istatistik yöntemleriyle analiz edilmiştir. Bulgular cimnastikçilerin yaşı büyüdükçe her bir gelişimsel çıktı ile ilgili algılarının azaldığını göstermiştir. Ayrıca, kız sporcuların "Yetkinlik" ve "Karakter" çıktılarındaki algısı anlamlı olarak daha yüksek bulunmuştur ($p < 0.05$). Çalışma 1'in bulgularına dayalı olarak altı haftalık bir öğrenme grubu programı geliştirilmiştir. Program altı antrenör ve bir kolaylaştırıcı ile uygulanmıştır. Çalışma verilerini videoya kaydedilmiş ve birebir çevriyazısı yapılmış altı haftalık öğrenme grubu toplantıları, araştırmacı notları ve odak grup görüşmesi oluşturmaktadır. Programının uzun vadeli etkisini anlamak için uzun süreli katılımcı gözlemi ve iki yıl sonra iki katılımcı antrenör ile

yapılandırılmamış görüşmeler yapılmıştır. Nitel veriler tematik analiz yöntemi kullanılarak analiz edilmiştir. Antrenörler, öğrenme grubu programı deneyimini yaratılan öğrenme ortamı, bilginin oluşturulma biçimi ve bu bilginin paylaşılma biçimi konularında oldukça etkili bulmuşlardır. Ayrıca program, antrenörlerin gelişimsel sporcu çıktıları konusunda güçlü bir farkındalık geliştirmelerini ve bilgilenmelerini sağlamıştır. Programın uzun vadeli etkisiyle ilgili bulgular antrenörlerin bütüncül sporcu gelişimine uygun bir bakış açısı kazandıklarını ve edindikleri mesleki bilgileri kullanarak sahada sporcu çıktılarında olumlu değişimler sağladıklarını göstermiştir.

Anahtar kelimeler: Nitelikli antrenörlük, mesleki gelişim, sporcu çıktıları, gençlik sporları, sporda pozitif gençlik gelişimi

To Sıdar

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TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

TABLES

FIGURES

LIST OF ABBREVIATIONS

3 Ps	Participation, performance, and personal development
4 Cs	Athletes' developmental outcomes of competence, confidence, connection, and character
5 Cs	A person's positive developmental outcomes of competence, confidence, connection, caring, and character.
CART-Q	Coach-Athlete Relationship Questionnaire
CBAS	Coaching Behavior Assessment System
CCoP	Coaches' Communities of Practice
CET	Coach Education Training
CFA	Confirmatory Factor Analysis
COMPASS	Relationship maintenance strategies: conflict management, openness, motivation, positivity, advice, support, and social networks
CoP	Communities of Practice
CSAI-2R	Competitive State Anxiety Inventory-2
DMSP	Developmental Model of Sport Participation
LC	Learning Community
LCP	Learning Community Program
LTAD	Long-Term Athlete Development
MAC	Mastery Approach to Coaching
NA	Needs Analysis
NRCIM	National Research Council and Institute of Medicine
PABSS	Prosocial and Antisocial Behaviors in Sports Scale

PAFS	Personal Assets Framework for Sport
PBL	Problem-Based Learning
PD	Professional Development
PE	Physical Education
PYD	Positive Youth Development
SES	Socio-Economical Status
VCF	Value Creation Framework

CHAPTER 1

INTRODUCTION

1.1. Background and Statement of the Problem

Sport participation has the potential to provide physical, psychosocial, and motor development for youth (Côté & Fraser-Thomas, 2007), but only participating in a sport does not directly lead to positive experiences and outcomes (Fraser-Thomas, Côté, & Deakin, 2005) although there has been such belief in many cultures (Coakley, 2016). A large body of research shows that organized sport activities can provide youth with developmental opportunities in which they can foster their performance, participation, and personal development together in a sport program (e.g., Côté & Hancock, 2016). Youth can advance their physical health, critical life skills, and learn fundamental motor skills in both recreational and competitive sport environments (Côté & Fraser-Thomas, 2007) by involving in an environment that facilitates performance, participation and personal development. However, usually, sport programs focus mostly on one aspect at the expense of other two aspects and are forced to choose one outcome over another.

Youth sport experiences are altered by adults, especially by coaches, in order to increase children's and youth's physical performance in a limited time. The adult-led system enforces early selection and early specialization by trying to discover shortcuts to advance athletes' performance while research proves that specializing early to reach competitive success is not required for most sports (Côté & Abernethy, 2012). Aiming to reach athletic success early hampers meeting youth athletes' developmental needs and consequently become harmful for their long-term development (Côté & Lidor, 2013). For instance, in many coaching cultures, selecting young athletes early to develop elite athletes is prevailing although research proves its unreliability (Parcels, 2002), particularly when it happens before or during puberty (Vaeyens et al., 2009). Difficulties may also happen when concentrating only on personal development. That may hinder young athletes' development of sport-specific

1

abilities that could also positively affect their future sport participation (Turnnidge, Hancock, & Côté, 2014).

Although there sport participation and youths' positive experiences and outcomes are regarded as related in the literatures of developmental psychology and athlete development (e.g., Larson, 2000; Fraser-Thomas et al., 2005; Strachan, Côté & Deakin, 2011), many research also indicated relations between sport participation and negative athlete experiences and outcomes. These are injuries, decreased confidence and moral reasoning, burnout, high level of stress, and dropout (Shields & Bredemeier, 1995; Wall & Côté, 2007; Fraser-Thomas, Côté, & Deakin, 2008a, 2008b; Law, Côté, & Erickson, 2007; Gould, Tuffey, Udry, & Loehr, 1996; Eccles & Barber, 1999).

The number of sport clubs has doubled during the last decade in Turkey (Turkish Directorate of Youth & Sports, 2017). However, the nationwide rate of active youth sport participation appears to stagnate during adolescence, and sharply decrease with age (Kin-Isler, Asci, Altintas, & Guven-Karaban, 2009). The youth sport participation data shows that only one sixth of the four million registered athletes have been actively participating to sports (Turkish Directorate of Youth & Sports, 2017). Therefore, while there has been an increase in the number of participants with doubling number of sport clubs during the ten-year period, it appears that the ratio between active participants and passive registered athletes has not changed. This situation may imply an ongoing problem of youth athlete dropout (Pehlivan, 2013) and needs a thorough evaluation of youth sport outcomes to understand to which degree coaches' practices are developmentally appropriate in youth sport.

The Developmental Model of Sport Participation (the DMSP; Côté, 1999; Côté, Baker, & Abernethy, 2003; Côté & Hay, 2002; Côté & Fraser-Thomas, 2007) define the main ways for sport participation. It emphasizes the criticality of developmentally appropriate training patterns and social influences based on evidence (Côté & Abernethy, 2012; Côté & Vierimaa, 2014).

More recently, the Personal Assets Framework for Sports was put forward to define the elements and their functions in fostering youth development through sport (Côté, Turnnidge, & Vierimaa, 2017). Using ecological approach (e.g., Bronfenbrenner, 1995), the Personal Assets Framework recommends that the integration and the interaction of three dynamic elements (i.e., personal engagement

2

in activities, quality relationships, and appropriate settings) are necessary to comprehend the processes of athlete development. In these processes, athletes' development occur, and subsequently affect athletes' participation, performance and personal development in the end. Therefore, evaluating athletes' holistic sport outcomes is needed in determining the areas of need in these elements. This information, in turn, will enable to provide strategies to foster coaches' professional development, and consequently complement the current sport programs.

A developmental approach to athlete development considering young athletes' personal development in addition to their physical performance has been conceptualized as the 4 Cs (competence, confidence, connection & character) of athlete developmental outcomes (Côté, Bruner, Erickson, Strachan, & Fraser-Thomas, 2010; Côté & Gilbert, 2009). Competence refers to athletes' sport-specific ability; confidence refers to athletes' internal sense of overall positive self-worth; connection represents quality relationships with people inside and outside of sport, and character refers to respect, empathy, and responsibility that reflects demonstrating prosocial behaviors while avoiding antisocial behaviors. Deriving from the works in coaching, teaching, positive youth development (Lerner, Fisher, & Weinberg, 2000) and athlete development, Côté & Gilbert (2009) provided an integrative definition of effective coaching that is "the consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, confidence, connection, and character in specific coaching contexts" (Côté & Gilbert, 2009, p. 316). Positive Youth Development approach is a strength-based approach, regarding youth as potentials for positive developmental change to become competent in leading a healthy and successful life (Lerner, Brown, & Kier, 2005). Deriving from the positive psychology movement, the 4 Cs provides clear guidelines in facilitating athletes' development through sport for different contexts (Côté et al., 2010). The 4 Cs examines coaching effectiveness and the effectiveness of sport programs for different sport contexts framed in the DMSP (Côté & Gilbert, 2009). Recent research illustrated that the outcomes of performance, participation and personal development are more likely to be realized via sport participation on the condition that the 4 Cs model is adopted (see Côté, Turnnidge, and Vierimaa, 2016; Côté & Hancock, 2014).

3

Vierimaa, Erickson, Côté, and Gilbert (2012) proposed a measurement framework that enables to measure the 4 Cs outcomes. The researchers suggested that the proposed measurement tool provides a proxy measure of coaches' effectiveness that allows for the identification of coaches' professional needs by assessing youth athletes' both performance and psychosocial sport-specific outcomes. Also, the framework provides an indirect and contextual evidence for the effectiveness of programs in facilitating youth athletes' holistic development. The 4 Cs model and its evaluation framework have been utilized increasingly in recent research (Erickson & Côté, 2016; Allan & Côté, 2016; Miller & Siegel, 2017; Vierimaa, Bruner, & Côté, 2018; Herbison, Vierimaa, Côté, & Martin, 2018).

It is clear from the integrative definition of coaching effectiveness and expertise that coaching is complex and necessitates consistent development of knowledge from a holistic perspective via benefiting from different quality sources of information. Therefore, providing learning environments for coaches that are realistic to their problems, continuing, and focused to athletes' holistic developmental outcomes appears to be a necessity to complementing current coach education programs. Coaches sustain and develop their effectiveness and expertise via formal and informal learning (Mallett, Trudel, Lyle, & Rynne, 2009). Research in coach learning indicated that coaches value formal education opportunities and appreciate its contribution to their learning in some degree (e.g., Kilic & Ince, 2015). However, a considerable amount of research indicates that coaches mostly value and benefit from informal learning situations through which they meet hands-on contextual information by their interaction with their immediate coaching environment both in participation (Abraham, Collins, & Martindale, 2006; Bloom, Durand-Bush, & Salmela, 1998; Gilbert, Côté, & Mallett, 2006; Gould, Giannini, Krane, & Hodge, 1990; Reade, Rodgers, & Hall, 2008) and elite coaching contexts (Erickson, Bruner, MacDonald, & Côté, 2008; Gilbert, Côté, & Mallett, 2006; Gilbert & Trudel, 2001; Lemyre, Trudel & Durand-Bush,2007). Research illustrated that while current formal coach education programs provide a basis of coaching knowledge, they usually fall short of meeting coaches' contextual needs since they have limitations in terms of both content and delivery of the information they provide to coaches. For example, formal coach education programs often offer scientific information that is out of context in a short

period of time (Lemyre, Trudel, Durand-Bush, 2007) while these programs assume that coaches will perfectly understand and transfer the information into their situations (Gilbert & Trudel, 1999). Additionally, these formal environments usually do not allow for collaboration and knowledge internalization. As a result, even if coaches can become knowledgeable via formal education to an extent, they may not be able to become effective coaches who can solve complex problems in their immediate context (Trudel & Gilbert, 2006). There have been numerous knowledgeable coaches from this perspective; however, what makes coaches effective is being able to solve complex problems by effectively using relevant information they obtained (Côté & Gilbert, 2009).

While informal learning appears to be more beneficial for coach learning, if not designed systematically however, obtaining information may also become haphazard and bring about several problems with itself (Mallett et al., 2009). Sharing and using previously adopted experiential knowledge from the field may prevent coaches from keeping up with the pace of ever-changing and developing coaching practices and developments in the world of sport science. Additionally, it may cause the adoption of erroneous coaching practices that may turn into a coaching culture in a coaching context and cause repetition of those practices (Cushion, Armour, & Jones, 2003; Cushion, Nelson, Armour, & Lyle, 2010). To become effective, therefore, coaches need to be able to use both experiential and scientific information in a systematic manner in which they build their own knowledge and solve their contextual problems. However, recent research revealed that there has been a vexing problem of meeting coaches with relevant and eligible information that they can comprehend, internalize, and transfer to their own coaching situation (Kilic & Ince, 2015; Reade et al., 2008; He, Trudel & Culver, 2018). In the studies, the commonly emphasized point is that coaches perceive they would like to work with experts for their felt needs directly, but they can neither appropriately reach eligible scientific information nor communicate their needs with the specialists to solve their specific problems. Moreover, coaches from other coaching cultures in which English is not the language of communication are much less likely to be aware and able to reach relevant and up-to-date sport science information let alone applying that information produced into their coaching situation. That puts an additional barrier on already present difficulties

5

of coaches' ability to comprehend and internalize relevant information for their own coaching situation.

From the perspective that learning and building knowledge is a social activity, a number of studies on professional development (PD) in teaching (e.g., Garet, Porter, Desimone, Birman & Yoon, 2001, Hunuk, Ince, & Tannehill, 2013) and sport coaching (e.g., Trudel & Gilbert, 2006; Gilbert, Gallimore, & Trudel, 2009) point out the merit of social learning theory (Wenger, 1998) on coaches' professional development in building context-specific and systematic knowledge development opportunities for professionals. Specifically, studies conducted in sport coaching so far illustrate the potential of using the Learning Community Approach (Gilbert, Gallimore, & Trudel, 2009) in surmounting coaches' above-mentioned barriers.

In the related literature, it is suggested that program designs must be built upon the desired coach or athlete outcomes to realize measurable outcome changes (Trudel, Gilbert, & Werthner, 2010). Accordingly, given the problem-based nature of the learning community approach, gathering situated evidence that represents coaches' professional needs from a holistic developmental perspective, and building contextual knowledge based on defined needs will both help coaches to adopt a holistic perspective and to find answers to their unique problems. However, limited research examined the impact of a learning community program developed based on a comprehensive scientific evidence that pertains to directly athletes' sport outcomes in a coaching culture. In other words, there is a dearth of research directly defining coaches' needs from a holistic developmental perspective, as presented in the definition of coaching effectiveness and expertise and develop a PD program based on these context-specific needs. Secondly, the definite phases to bridging the gap between coaches and sport specialists (e.g., sport scientists, sport psychologists) has not been clearly defined, either. Therefore, despite the potential of the learning community approach is well-described in the literature, the processes and strategies that lead to transforming a learning community environment into a continuing learning environment in a non-English speaking coaching culture needs to be described.

6

1.2. Significance of the Study

Coaching effectiveness has been evaluated with a unidimensional approach so far (e.g., win-loss records and years of experience [Mallett & Côté, 2006; Côté & Gilbert, 2009]). There is a dearth of research evaluating the elements of coaching effectiveness from a holistic perspective that take young athletes' physical as well as psychosocial development into account (Côté & Gilbert, 2009). Since there has been a steep decline in sport participation during adolescence, examining any differences in athletes' developmental outcomes will be critical in pinpointing coaches' professional needs.

It can be concluded from the studies in Coaches' PD that coaches are more focused on their immediate needs and interests when trying to develop their professional skills (Gilbert et al., 2009). Therefore, being knowledgeable of coaches' measurable needs and designing professional development programs directly based on these needs appears to be essential for effective professional development initiatives (Trudel et al., 2010). There has been a call for the creation of PD networks and LC opportunities for youth sport coaches (Gilbert et al., 2009). In the literature on coaches' professional development, either small or large scale, there has been a limited research driven by scientific information that reflects coaches' contextual needs from a holistic developmental perspective (Trudel et al., 2010). Most of the studies on coaches' PD usually have a lack of a situated scientific evidence to be built upon. Additionally, most of the studies attempting to facilitate coach development have the assumption that coaches have the ability to reach to scientific information and the basic conceptual understanding of defining and communicating their needs with sport science specialists, and are able to reflect on their previous experiences and link them with the scientific information produced in sport science. Therefore, there is a need for describing the processes and effects of a contextual evidence-based learning community program on coaches' perceptions of coaching effectiveness and their future practices.

The contribution of this study will be two-fold. The first part of the study will provide an introduction of a holistic perspective to evaluating coaching effectiveness. In this way, coaches' contextual needs will be determined by examining athletes' perceived developmental outcomes. The second study was based on the findings of the

first part of the study. The findings of the second study will provide definite pathways in developing an effective coach learning community for different coaching cultures directly based on coaches' contextual needs. The use of a holistic perspective in evaluating coaches and developing a continuing learning environment (a Learning Community Program) based coaches' needs (scientific evidence) have not been realized in Turkish sport context.

1.3. Research Questions

To find answers to the abovementioned issues, three successive research questions were asked to answer in a competitive youth artistic gymnastics context. Two consecutive studies were conducted to answer the research questions. The first part of the study was named "Study 1", and the second part of the study was named "Study 2". The first research question aimed at examining developmental needs of youth athletes, and therefore belongs to Study 1. The second research question belongs to Study 2, which was developed based on the findings of the first part of the study. The third research question also belongs to the Study 2. The three research questions are presented below.

1) How do competitive youth gymnasts from different ages and genders perceive their sport outcomes of competence, confidence, connection, and character in artistic gymnastics setting?

2) How does a 6-week learning community program based on the needs arose from the gymnasts' perceived developmental outcomes affect coaches' views and knowledge towards gymnasts' 4 Cs and their learning community experience?

   a) How does the 6-week learning community program take place?

   b) How does a 6-week learning community program affect coaches' perceptions of the 4 Cs and the learning community program experience?

3) What are the long-term effects of the LCP on the coaches' practices and their athletes' sport outcomes?

1.4. Definition of Terms & Concepts

1.4.1. Coaching Effectiveness

The consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, confidence, connection, and character in specific coaching contexts (Côté & Gilbert, 2009).

- **Professional knowledge:** Declarative knowledge in the sport sciences, sport-specific knowledge, and pedagogical knowledge with accompanying procedural knowledge (i.e., a subject matter, curricular, and pedagogical knowledge)

- **Interpersonal knowledge:** relationships (communication) with students, the educational community, and the local community.

- **Intrapersonal knowledge:** Understanding of oneself and the ability for introspection and reflection (i.e., reflection, ethics, and dispositions).

1.4.2. Athletes' Developmental Outcomes (4 Cs)

a) **Competence:** High level of achievement in sport-specific technical skills, tactical skill, and physical skills (Martens, 2004).

b) **Confidence:** The belief or degree of certainty individuals possess about their ability to be successful in sport (Vealey, 1986; p. 222).

c) **Connection:** The quality of relationships and degree of interaction with peers and coaches in the immediate sport environment (Vierimaa et al., 2012).

d) **Character:** Moral development and sportspersonship (Bredemeier & Shields, 1996); the engagement in prosocial behaviors and avoidance of antisocial behaviors (Kavussanu & Boardley, 2009).

1.4.3. Features of Positive Developmental Settings (Eccles & Gootman, 2002)

a) **Physical and psychological safety:** Safe and health-promoting facilities and practices that increase safe peer group interaction and decrease unsafe and confrontational peer interactions.

b) **Appropriate structure:** Limit setting, clear and consistent rules and expectations, firm-enough control, continuity and predictability, clear boundaries, and age-appropriate monitoring.

9

c) **Supportive relationships:** Warmth, closeness, connectedness, good communication, caring, support, guidance, secure attachment, and responsiveness.

d) **Opportunities to belong:** Opportunities for meaningful inclusion, regardless of one's gender, ethnicity, sexual orientation, or disabilities; social inclusion, social engagement, and integration; opportunities for sociocultural identity formation; and support for cultural and bicultural competence

e) **Positive social norms:** Rules of behavior, expectations, injunctions, ways of doing things, values and morals, and obligations for service.

f) **Support for efficacy and mattering:** Youth-based, empowerment practice that support autonomy, making a real difference in one's community, and being taken seriously; practices that include enabling, responsibility granting, and meaningful challenge; and practices that focus on improvement rather than on relative current performance levels.

g) **Opportunities for skill building:** Opportunities to learn physical, intellectual, psychological, emotional, and social skills; exposure to intentional learning experiences; opportunities to learn cultural literacies, media literacy, communication skills, and good habits of mind; preparation for adult employment; and opportunities to develop social and cultural capital.

h) **Integration of family, school, and community efforts:** Concordance, coordination, and synergy among family, school, and community.

1.4.4. A Learning Community Approach

Providing an arena in which colleagues work together to understand and accomplish shared goals, examine data about whether students are accomplishing goals, and provide each other with assistance to accomplish the goals (Saunders & Goldenberg, 2005).

1.4.5. A Coach Community of Practice

A group of coaches who share a common concern, set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis (Culver & Trudel, 2006, based on Wenger, 1998).

CHAPTER 2

REVIEW OF LITERATURE

This literature review is composed of three parts. For "Study 1"; the literature was reviewed under the titles of i) a positive youth development approach" and its link with youth sport research, and ii) youth athletes' development through sport. For "Study 2"; the related literature was reviewed under the title of iii) coaches' learning and professional development.

2.1. A Positive Youth Development Approach and Its Use in Youth Sport Research

Positive youth development is an approach that focuses on understanding, educating, and engaging adolescents in productive activities (Damon, 2004). It is strength-based to the child and adolescent development assuming that all youth have the potential for positive developmental change (Lerner et al., 2005). This approach focuses on building strengths and qualities that help individuals and communities flourish (Snyder & Lopez, 2002), and deems youths to be 'sources to be developed' rather than 'problems to be solved' (Damon, 2004). This perspective has an emphasis on the potentialities rather than the expected incapacities of young people, including most disadvantaged and troubled individuals (Damon, 2004). Peterson (2004) suggested that youths potential needed be fostered to ensure optimal development. Optimal development in youth enables individuals to lead a healthy, satisfying, and productive life as youth, and later as adults, since they gain the competence to earn a living, to engage in civic activities, to nurture others, and to participate in social relations and cultural activities (Hamilton et al., 2004; p. 3). This optimal development is suggested to result in good youth. Peterson (2004) stated that good youth experience more positive affect, are satisfied with their life as it has been lived, recognize what they do well and use their strengths to fulfill pursuits, and are contributing members of society. The ways of fostering the youths' potential through positive development

began approximately two decades ago (e.g., NRCIM, 2002; Benson, 1997; Lerner et al., 2000).

For youth to realize their full potential, The National Research Council and Institute of Medicine (NRCIM, 2002) has conceptualized four main areas for adolescent well-being and healthy development. These are physical, intellectual, psychological/emotional, and social developmental areas. Moreover, assets were suggested for each developmental area. For example, knowledge of essential life skills, vocational skills, school success, critical thinking and reasoning skills, and decision-making skills contribute to positive intellectual development. The NRCIM (2002) provides features of positive developmental settings that are presented in Table 2.1.

Table 2.1. *Features of positive developmental settings (NRCIM, 2002)*

1. Physical and psychological safety
2. Appropriate structure
3. Supportive relationships
4. Opportunities to belong
5. Positive social norms
6. Support for efficacy and mattering
7. Opportunities for skill building
8. Integration of family, school and community

Using NRCIM (2002) as a framework, Fraser-Thomas et al. (2005) reviewed the literature regarding positive and negative youth experiences through sport. The authors reported several positive physical (e.g., cardiovascular fitness and weight control - Health Canada, 2003), psychological/emotional (increasing self-esteem and decreasing stress), social (e.g., fostered citizenship, social success, positive peer relationships, and leadership skills), and intellectual (e.g., academic performance) developmental youth experiences. However, the authors also found a number of negative athlete experiences and outcomes in physical (e.g., sport-related injuries; eating disorders [Anshel, 2004]), emotional/psychological (e.g., low self-confidence and low self-esteem; athletic burnout), social (e.g., acts of violence & aggression) developmental consequences of sport participation. Additionally, the eight setting

features framework was also used to examine positive youth development issue in elite sport context (Strachan et al., 2011).

Benson and his colleagues (1998) have established developmental outcomes for youth. The research institute emphasizes the talents, energies, strengths, and constructive interests that every young person possesses (Damon, 2004). The 40 assets identified are divided into "internal" and "external" assets. Internal assets represent the positive personal attributes of youth, such as commitment to learning, positive values, social competencies, and positive identity. The external assets represent the influence of community that needed for positive development that are support, empowerment, boundaries and expectations, and constructive use of time. These assets support the contextual factors that build a youth's experience in the sport, namely through the influence of peers, coaches, parents, and the community-at-large (Petitpas, Cornelius, Van Raalte, & Jones, 2005). The research investigating youth assets found that when youth have more developmental assets, the likelihood of developing increases positively (Leffert et al., 1998; Scales & Leffert, 1999). Benson and his colleagues have also shown that protection (e.g., high-risk behaviors), enhancement (e.g., being successful in school), and resiliency (e.g., being resilient in difficulties) are the three main effective benefits of the developmental assets. Fraser-Thomas et al. (2005) advocated the possibility that sport participation can produce many developmental assets for youth.

In addition to the above-mentioned approaches (Developmental assets profile, Benson, 1997; eight setting features, The NRCIM, 2002), Lerner et al. (2000), who are regarded as leading proponents of the positive youth development approach, also developed a framework for positive youth development by drawing on the aforementioned frameworks: the five positive outcomes that are competence, character, connection, confidence, and caring and compassion. The authors suggested that to be able to create supportive families and programs that foster and promote positive development, policies must be developed considering these outcomes. If it is realized, youth can show the characteristics of 5Cs, and this will lead to "contribution" to society as a sixth C. Using this framework, the structure and development of positive youth development in school context (Grades 5, 6, 7) were assessed (Phelps et al., 2009; Jelicic, Bobek, Phelps, et al., 2007) and the 5Cs of positive youth development

was found as a robust construct. Factor structure and measurement invariance of the 5 Cs model was tested on early and middle adolescents and was found to be robust for both in early and middle adolescence (Bowers et al., 2010).

The 5Cs of positive youth development was also recognized as a framework for examining positive youth development in sport (Fraser-Thomas, 2005). Recently, however, Jones, Dunn, Holt, Sullivan, and Bloom (2011) examined the 5Cs model with youth sport participants by using the instrument of positive youth development in sport that was adapted from the Phelps et al.'s (2009) measurement tool of 5Cs, and their confirmatory factor analysis failed to support the 5Cs in youth sport context. Exploratory factor analysis revealed a two-factor model that are pro-social values and confidence/competence. The reason may be that Lerner's conceptualization of 5C is not entirely relevant or appropriate to the sport domain (Vierimaa et al., 2012). Additionally, the psychometric properties of the instrument used in this study were not tested for youth sport settings. More recently, Côté et al. (2010) reviewed the sport literature and suggested an improved framework of the 4 Cs (competence, confidence, connection, and character) of athlete outcomes in examining sport context by integrating caring and compassion into the character domain. The authors hypothesized that these four outcomes should emerge from the interactions of coaches and athletes in any sporting environment and suggested the use of this new framework in future positive youth development research in sport.

In athlete development literature, the link between the developmental assets and sport outcomes has been theorized (Côté, Strachan, Fraser-Thomas, 2007; Fraser-Thomas et al., 2005; Petitpas et al., 2005). The Developmental Model for Sport Participation (Côté, 1999; Côté & Hay, 2002; Côté et al., 2003; Côté & Fraser-Thomas, 2007) which is built on Côté and colleagues' (e.g., Côté, 1999; Gilbert et al., 2002; Bake, Côté, & Abernethy, 2003; Beamer & Côté, 2003; Soberlak & Côté, 2003) research with expert athletes, integrates the suggested concepts of NRCIM (2002) and Benson's (1997) assets to be necessary to foster positive youth development (Fraser-Thomas et al., 2005). For the DMSP, Fraser-Thomas et al. (2005) suggested that successful youth sport programs a) consider youths' physical, psychological, social, and intellectual stages of development (Côté, 1999; Côté & Hay, 2002; Côté et al.,

2003) b) are conducted in appropriate settings (NRCIM, 2002) and c) foster developmental assets in youth (Benson, 1997).

2.2. Youth Athletes' Development through Sport

Sport provides opportunities for developing positive outcomes for youth (Eccles & Barber, 1999), and has been used as a means to facilitating positive youth development (Fraser-Thomas, Côté, & Deakin, 2005). Sport, as a structured activity, has been found to have a potential to promote positive development for youth (Fredricks & Eccles, 2006).

Youth sports have three main objectives for youth development that are performance, participation, and personal development (Côté et al., 2007). These objectives provide youth with improved physical health, psychosocial development (opportunity for facilitating psychosocial development such as cooperation, leadership, and self-control), and motor skills that build the infrastructure for future sport career. Accordingly, sport participation should generally provide youth with physical health, the growth of motor skills, and development of psychosocial skills (Côté & Fraser-Thomas, 2007). Competitive youth sport participation has also been considered as a potential arena to facilitating positive developmental outcomes, such as competency in physical and motor skills (Côté & Fraser-Thomas, 2007), increased enjoyment (Strachan, Côté, & Deakin, 2009a), and social development (Fraser-Thomas et al., 2005). Therefore, the development of positive, healthy youth within youth sport programs is possible especially when an appropriate training environment, the provision of opportunities for physical, personal and social skill development, and supportive interactions exist (Strachan, Côté, & Deakin, 2009b; 2011) in youth sport programs. However, in youth sport context, adults often change sport experiences in favor of gaining athletic performance in a short time neglecting the other two objectives of youth development that are participation and personal development (Côté & Lidor, 2013). Even when they focus solely on performance outcome, it appears that sport programs have been ineffective in any of the main objectives of sport participation. For example, obesity rates in children and adults have significantly increased in the last two decades in Turkey (Erem, 2015). In athlete development literature, youth sport participation has also been associated with many negative

developmental experiences and outcomes for youth. Accordingly, youth sport participation has more often been linked to negative physical and psychosocial athlete experiences and outcomes.

In the literature, many studies illustrate that young athletes face negative experiences outcomes from sport participation that lead to dropout. Research in athlete development, sport psychology, and sport sociology illustrate many negative physical and psychosocial consequences of sport participation (Fraser-Thomas et al., 2005). The physical consequences were reductions in self-reported overall health (Beamer and Côté, 2003; Law et al., 2007), physical injuries posed by training and competitions (Baker, Cobley, & Fraser-Thomas, 2009; Law et al., 2007; Fraser-Thomas et al., 2005; Baker, 2003; Reel & Gill, 1996), specific types of injuries during maturation resulting from stressful training (Dalton, 1992), slower rate of maturation (Malina, 1994), eating disorders caused by aesthetic orientation of the sport, coach pressure, and personality traits (e.g. perfectionism) (e.g. Reel & Gill, 1996; Anshel, 2004).

The psychosocial consequences of youth sport participation that mainly stated in the literature were disappointment and discouragement as perceiving poor abilities (Hill, 1988), feeling vulnerable in the presence of teammates that leads to low self-confidence and low self-esteem (Wankel & Kreisel, 1985; Martens, 1993), decreased sport enjoyment in sport activities (Boyd & Yin, 1996; Law et al., 2007; Wall & Côté, 2007), unidimensional self-concept (Coakley, 1992), high level of physical/emotional exhaustion (subcomponent of burnout) (Strachan, Côté, & Deakin, 2009b) and athletic burnout (Smith, 1986; Coakley, 1992). Additionally, the competitive nature of sports also leads to negative outcomes such as an act of violence and aggression (Colburn, 1986). Recent literature also suggests that youth athletes, particularly girls, are becoming concerned about their body image at increasingly early ages (Davison, Earnest, & Birch, 2002). Slater and Tiggermann (2010) used a female-only sample in their qualitative investigation of sport withdrawal. They specifically asked their 49 adolescent female participants to state the reasons why they drop out sports and why they do not participate in sports as much as males. Common reasons were losing interest/getting bored, insufficient time and a lack of competence. The girls did not participate in sports since they did not want to be seen as not feminine, or too revealing.

Athlete development and athletes' sport outcomes do not occur in a vacuum. Therefore, there is a need to have a comprehensive understanding of personal and contextual interacting factors that shape athletes' processes of development to facilitate optimal development for youth. In the literature, usually, sport programs (i.e., early specialization or early diversification) and significant others (coaches, parents, peers, & siblings) (e.g., Fraser-Thomas et al., 2005) were mainly found to have a significant impact on athletes' personal and psychosocial development. The PAFS approach provides a useful framework to understand the athlete development from an ecological perspective comprehensively (e.g., Bronfenbrenner, 1995). This framework suggests that "personal engagement in activities", "quality relationships", and "appropriate settings" are necessary to comprehend the processes of athlete development.

2.2.1. Personal Engagement in Activities

In athlete development literature, two notions appear to mainly direct the development of sport expertise, which is "deliberate practice" (Ericsson, Krampe, & Tesch-Römer, 1993) in psychology, and "deliberate play" (Côté, 1999) in sport psychology. They both explain the skill development either by practice or play and these terms shape and influence athletes' "personal engagement" in sport activities.

Ericsson et al.'s (1993) influential study on the role of practice and the development of expertise defined "deliberate practice" as any training activity done with the specific aim of increasing performance, that necessitate cognitive and physical effort, and is about enhancing skill development. The authors contended that there is a direct relationship between time spent deliberately practicing and performance in elite musicians. They also argued that the accumulation of deliberate practice time needs to coincide with critical periods of biological and cognitive development (i.e., childhood). They stated that early specialization is critical for future success since the earlier one starts deliberate practice, the quicker he/she attains the desired level of skill. Also, they suggested that reaching distinguished performance is determined by the time (hours) spent in deliberate practice in many areas not only in music but also, for example, in sports (Ericsson, 2003) given the positive relationship found between time spent in practice and achievement level (Newell & Rosenbloom, 1980). In the studies

conducted in different sport approved the contention of the notion of deliberate practice (e.g., Baker et al., 2003; Hodges & Starkes, 1996; Deakin & Cobley, 2003).

Côté, however, defined the term "deliberate play" as a form of activity that includes immediate gratification and is designed to maximize enjoyment. Deliberate play activities have rules adapted from standard rules of sports and managed by children or by adults in the activity. When compared with the activities in which deliberate practice prevails, deliberate play activities are children-led, enjoyable, flexible in rules and organization (can be child-led), and can occur in various settings (Côté, Baker, & Abernethy, 2007). In the literature, these features of deliberate play were found to provide many benefits to athlete development such as the extensive foundation of motor skills that help athletes overcome the physical, cognitive and social challenges in sports as well as in their main sport (Côté et al., 2003). The importance of providing children and youth with deliberate play opportunities is clear considering sport became more institutionalized and organized (De Knop, Engström, Skirstad, & Weiss, 1996).

As reviewed by Côté et al. (2007) retrospective studies on the playing activities and training patterns of elite athletes have implications of the role of deliberate practice and deliberate play in talent development in sport. Qualitative and quantitative studies conducted with elite athletes revealed specific developmental stages in that elite athletes firstly involved in various playful sports in which enjoyment and immediate reward is present. Then, they devote themselves to one sport and its specific training. Lastly, they focused on investing a high amount of training activities and devoted to reaching a high level of performance (Bloom, 1985; Côté, 1999; Durand-Bush & Salmela, 2002; Orlick & Partington, 1988). Qualitative interviews with swimmers and tennis players revealed that there had been a gradual transition from playful and fun activities in different sports to one sport by allocating much more time to deliberate practice activities (Bloom, 1985). Additionally, Carlson concluded after interviewing two groups of tennis players that early specialization and high amount of deliberate practice before adolescence do not lead to elite performance in tennis (Carlson, 1988).

For Wiersma (2000) specializing early in a sport happens when children participate only in a single sport yearly in which deliberate practice activities are the main focus. Consistent with previous research (e.g., Baker et al., 2003; Fraser-Thomas

et al., 2008b; Wall & Côté, 2007), Baker et al. (2009) suggested that early specialization has four components that are early start in sport, early involvement in one sport, early involvement in high intensity training activities, and early involvement in competitive sport. In the literature on psychosocial athlete development, there is a number of studies that focused on the negative consequences of early specialization (Baker et al., 2009).

Based on the previous work that proves the unnecessity of early deliberate practice activities for many sports (e.g., Hill, 1993; Carlson, 1988), The Developmental Model of Sport Participation was put forward by Côté (Côté, 1999; Côté et al., 2003; Côté et al., 2007; Côté & Fraser-Thomas, 2007). The DMSP illustrates the importance of developmentally appropriate training patterns and social influences (Côté & Gilbert, 2009). The DMSP has three different outcomes of sport participation that are elite participation, recreational participation, and dropout. The DMSP has four stages that are the sampling years (age 6 – 12), the specializing years (age 13 – 15), the investment years (age 16+) and the recreational years (ages 13 +). These stages are determined based on changes in the type and amount of sport participation and the roles of social influences (i.e., parents, coaches, peers) at each stage. After starting to participate in a sport, participants can continue on the path of recreational level or start a path that focuses on performance. The pathways have different performance outcomes, but they have similar personal developmental outcomes (i.e., 4 C's) through appropriate, research-based coaching strategies (Côté and Gilbert, 2009).

A line of research specifically examined youth's developmental activities conducting retrospective interviews with dropout and continuing youth athletes and their parents using the DMSP that have important implications for sport programming. For example, Wall and Côté (2007) examined the developmental activities that lead to dropout and investment in sport. Parents of eight current and eight dropout youth ice hockey players completed a retrospective survey which assessed the players' organized sport involvements recalled from the ages of 6 to 13 years, providing a longitudinal data set spanning eight years. They found that both the active and dropout players enjoyed a diverse and playful introduction to the sport. Additionally, both groups invested similar amounts of time in organized hockey games, practices,

specialized hockey training activities, and hockey play. However, the study showed that the dropout players began off-ice training at a younger age and spent significantly more hours per year in off-ice training at earlier ages. The authors indicated that participating in physically demanding activities, which are less enjoyable, at early ages may have led the athletes to drop out of the sport. They suggested that children be encouraged to enjoy a variety of sports and they be away from the intense training.

Similarly, Fraser-Thomas et al. (2008a) examined dropout and prolonged engagement in the sport from a development perspective. The authors interviewed 25 dropouts and 25 engaged swimmers (13-18 years), it was found that compared to engaged swimmers, dropouts participated in fewer extracurricular activities, were involved in fewer unstructured swimming play activities and received less one-on-one support from coaches throughout their sport development. Additionally, dropouts began swimming in training camps, dry land training sessions and reached the top of their club earlier than engaged swimmers (2008).

Fraser-Thomas and colleagues (2008b) also examined the impact of training patterns and significant others in children's subsequent participation or withdrawal from competitive swimming with a sample of 10 dropouts, and ten engaged swimmers participated in semi-structured interviews to assess swimming involvement and the role of significant others using the Developmental Model of Sport Participation. They found that only dropouts reported early peaks in performance and had a perceived lack of one-on-one coaching support. Additionally, dropouts reported more often that they have a lack of swimming peers, receiving pressure from parents and having sibling rivalries. Dropouts also reported that they felt they could not participate in any other additional activities while involved in swimming. The authors suggested that encouraging coaching methods that delay the introduction of specialization and intense training sessions, open communication with parents and ensuring that children have a group of friends could promote the continuation of the sport. These studies show that narrowing the sport participation possibilities of children to a single sport and imposing specialization with heavy training may lead to greater risk of dropout.

There is a number of other research that proves the tenets of the DMSP that are a) the need for an early sport diversification for the sports in which peak performance is achieved after puberty, b) the necessity of deliberate play, c) child-centered coaches

and parents, and d) being around peers that are involved in sport (see Côté & Vierimaa, 2014). The authors highlighted the changing developmental environment of the sport has many implications for the design of sport programs, for example, in the choice of learning objectives, curriculum sequencing, and teaching methods. All in all, the research supported what the DMSP recommended regarding the critical role of early diversification and deliberate play in developing a sport system that value athletes' performance development, mass participation, and personal development through sport (Côté & Vierimaa, 2014).

Recently, a line of research suggested that neither early specialization nor early diversification per se may completely explain expert development in some sports (Ford et al., 2012; Ford, Wart, Hodges, & Williams, 2009). Ford et al. (2009) examined early sport participation differences between the youth soccer players who become professional at 16 years of age and those who did not in the context of the DMSP. They found that neither the ways of early diversification nor early specialization alone was supported in the data. The number of other sports and hours spent to other sports did not differentiate the still-elite, ex-elite, and recreation groups. Engaging in only play activity with lower amounts of practice between 6-12 years did not lead to the professional pathway, either. However, there was a significant difference between the still-elite and ex-elites regarding the average hours of play activity. Still-elite group averaged twice as ex-elites did in play activity, whereas they engaged in play activities less than recreation group. Based on the results, the authors suggested a balance between deliberate practice and domain-specific play, which contains fun activities in the relevant sport. They put forward the early engagement hypothesis as an alternative pathway to explain the development of skill in the sport. Based on what the data reveals, they stated that play activities supported success when there is a presence of extensive hours of practice. Ford et al. (2012) stated that in the early engagement pathway, the amount of deliberate practice is relatively low during childhood, whereas the amount of play in the primary sport is relatively high. This approach may also have critical implications for the sports in which peak performance is achieved before puberty (e.g., ice skating & artistic gymnastics).

In sum, according to the DMSP, diversity is needed before specialization (Côté & Abernethy, 2012) and, play and practice activities need to be aligned appropriately

with more play in childhood and transferring increasingly to practice during adolescence including high-performance programs (Côté, Young, et al., 2007). Considering also with the early engagement hypothesis, it is clear that athletes need activities that increase their intrinsic motivation during their childhood. Therefore, as diverse youth-led sporting experiences during childhood are also necessary for optimal athlete development (Coakley, 1983; Côté, Erickson,& Abernethy, 2013), the understanding of and practice of the notion of deliberate practice in coaching contexts also necessary for the realization of the 4 Cs (i.e., competence, confidence, connection, & character) and consequently the 3Ps (i.e., participation, performance, & personal development).

2.2.2. Quality Relationships

Athlete development occurs largely by socially interacting with others within the social context (Côté et al., 2016). Athletes' interactions with coaches, parents, peers, and siblings strongly influence their sport outcomes (e.g., Fraser-Thomas & Côté, 2009a, Jowett & Poczwardowski, 2007; Ullrich-French, & Smith, 2006). Among other factors, coaches' role in facilitating athletes' positive experiences and outcomes is most critical (Horn, 2008). Athletes' positive developmental outcomes can be contributed by the social factors, including coach-athlete relationships, peer relationships, and building a positive and supportive team environment (Turnnidge, Vierimaa, & Côté, 2012).

As reviewed by Holt and Neely (2011), coaches' characteristics and skills are basic building blocks of youth sport programs (Vella, Oades, & Crowe, 2011). Coaches need to consistently improve athletes' competence, confidence, connection, and character in their coaching context to be effective by using their professional, interpersonal, and intrapersonal knowledge (Côté & Gilbert, 2009). Research indicates that coaches are influential in affecting athletes' performance by their leadership behaviors or autonomy-supportive behaviors (Charbonneau, Barling, & Kelloway, 2001; Gillet et al., 2010; see Horn, 2008). Coaches also influence athletes' rate of participation by influencing their sport enjoyment, self-determined motivation and sport-related persistence (e.g., Alvarez, Balaguer, Castillo, & Duda, 2009; Pelletie, Fortier, Vallerand, & Breire, 2001). Lastly, coaches significantly contribute to young

athletes' personal development (e.g., Côté et al., 2010). In sum, research demonstrates the critical role of coaches in facilitating optimal development in youth sport.

Athletes' interactions with families (i.e., parents & peers) and peers also influence their sport development (Scanlan & Lewthwaite, 1988). As cited in Strachan, Fraser-Thomas and Nelson-Ferguson's (2016) review, the literature provided useful pathways for parental support (Côté & Hay, 2002), parental involvement (Fredricks & Eccles, 2004), and parenting styles (Holt, Tamminen, Black, Mandigo, & Fox, 2009). Athletes' relationship with their siblings is also an important aspect that affects athlete development (Bloom, 1985). While siblings can help develop youth's physical, emotional and psychological skills (Fraser-Thomas, Strachan, & Jeffery-Tosoni, 2013), they can also cause negative outcomes such as jealousy, isolation, resentment and frustration (Bloom, 1985; Côté, 1999; Fraser-Thomas, Côté, & Deakin, 2008b; Harwood & Knight, 2009).

2.2.3. Appropriate Settings

Research illustrates that the physical and psychological setting features of sport environments significantly influence athletes' holistic development, and consequently their performance, participation, and personal development (e.g., Balish & Côté, 2013; Henriksen, Stambulova, & Roessler, 2011; Stachan, Côté, & Deakin, 2011).

Youth sport programs need to be assessed regarding program structure and delivery of activities. Eccles and Gootman's (2002) eight setting features, which reflects the extent of the success of sport programs in ensuring psychosocial development, may be used as a framework. The eight setting features have increasingly been used in youth sport context (Strachan, Côté, & Deakin, 2011; Bean, Harlow, Mosher, Fraser-Thomas, & Forneris, 2018) to examine the physical and psychological appropriateness of sport settings for athletes' psychosocial development.

As defined in the PAFS approach, athletes' outcomes (i.e., competence, confidence, connection, & character) develop in the presence of optimal personal engagement in activities, quality relationships, and appropriate settings. Therefore, examining athletes' developmental outcomes in sport settings appears to be critical in

defining youth athletes' needs as well as the extent of coaching effectiveness and the effectiveness of programs in the sport settings to be examined.

2.3. Coaches' Learning and Professional Development

Coaching is a dynamic and complex endeavor (e.g., Cushion et al., 2003); therefore, coaches are obliged to continuously learn a variety of skills and obtain relevant information for their improvement in their ever-developing professional environment. In this part of the review, i) coaches' paths to learning coaching profession (formal, informal, & nonformal learning, ii) actual and ideal sources for coaches, and iii) the learning community approach in coaching, and iv) small-scale studies using the learning community approach will be discussed.

2.3.1. Coaches' Paths to Learning Coaching Profession

In adult learning literature (Coombs and Ahmed, 1974; Merriam & Caffarella, 1999; Tuijnman & Boström, 2002) and in coaching literature (e.g., Nelson, Cushion, & Potrac, 2006; Mallett, Trudel, Lyle, & Rynne, 2009) three main categorization of learning for coaches have been stated. These are 'formal,' 'nonformal,' and 'informal' learning situations (e.g., Nelson et al., 2006). Formal learning situation is described as "highly institutionalized, bureaucratic, curriculum-driven, and formally recognized with grades, diplomas, or certificates (Merriam, Caffarella, & Baumgartner, 2007). Nonformal (less formal) learning situations are "organized learning opportunities separate from the formal education system. These opportunities usually have a few prerequisites, are short-term, and voluntary (Merriam et al., 2007). Mallett et al. (2009) stated that Marsick and Watkins's (1990; 2001) work, whose are from adult education describes informal learning as well as incidental learning:

> *Informal learning, a category that includes incidental learning, may occur in institutions, but it is not typically classroom-based or highly structured, and control of learning rests primarily in the hands of the learner. Incidental learning is defined as a by-product of some other activity, such as task accomplishment, interpersonal interaction, sensing the organizational culture, trial-and-error experimentation, or even formal learning. Informal learning can be deliberately encouraged by an organization or it can take place despite an environment not highly conducive to learning. Incidental learning, on the other hand, almost always takes place although people are not always conscious of it. [Marsick & Watkins, 1990; p. 12]*

Therefore, the coaching experiences that are occurring outside the formal and nonformal (less formal) coach education situations are usually associated with informal learning (Nelson et al., 2006). Coach learning literature appears to mainly focus on formal and informal learning situations.

2.3.1.1. Formal Learning Situations

Formal learning situations are coaching programs that give certification to coaches after measurement and evaluation of coaching competencies (Nelson et al., 2006). These programs are developed by the national governing bodies of sport and in higher education programs. Formal education programs for coaches that have been designed in a variety of countries to enhance coaching competencies have common features such as classroom teaching, having different levels of coaching, and having well-defined content for each level (Wright, Trudel, & Culver, 2007). Several studies illustrated that coaches are interested in formal education programs (Gould et al., 1990), formal coach education programs increased coaches' perceptions of efficacy (e.g., Malete & Feltz, 2000), and coaches find formal learning opportunities valuable (e.g., Erickson, et al., 2008). However, despite a seemingly large body of work regarding formal learning situations (e.g., Cassidy, Potrac,& McKenzie, 2006; Culver & Trudel, 2006; Nelson & Cushion, 2006; Vargas-Tonsing, 2007; Wiersma & Sherman, 2005) including specific writings in this topic (e.g., Cassidy, et al., 2004; Cushion et al., 2003; Trudel & Gilbert, 2006) there have been few studies that aimed at examining and evaluating coach education programs (Cushion et al., 2010; McCullick et al., 2009).

Research in coach learning also illustrates that coaches, in general, value formal learning situations less as compared to other learning situations (e.g., Gould et al., 1990; Irwin, Hanton, & Kerwin, 2004). Research revealed that, based on their experiences, coaches regard formal education situations as a beginning (e.g., Abraham et al., 2006), and believed that formal courses add to little new information to the knowledge they had already learned. Research illustrates that formal courses provide relevant knowledge and that knowledge is regarded as important by coaches (Gilbert & Trudel, 1999). However, the knowledge is presented out of context, and these programs have an assumption that coaches will perfectly learn the concepts introduced

and be able to use them in their practices easily (Gilbert & Trudel, 1999). Coaches perceived some of the concepts introduced in formal learning situations were regarded as too abstract from real-life coaching to be seen as valuable (Lemyre, Trudel, & Durand-Bush, 2007). Additionally, these formal environments offer too much information in a relatively limited time (Lemyre et al., 2007), and coaches question themselves about its value during their career after some time (Irwin et al., 2004). Coaches also reported that they attended the formal courses since they are compulsory (Wright et al., 2007). Formal provisions focus on 'training' coaches 'rather than 'educating' them by providing a standardized curriculum and gold standard of coaching (e.g., Abraham ad Collins, 1998). From this perspective, many coach education programs are 'training' coaches (Nelson et al., 2006; Cushion et al., 2010). They added that even some coach education provisions could become indoctrinations, which there is only one right way of doing things (Rodgers, 2002) preventing learner choice. Turkish formal coach education programs also resemble to the abovementioned features of formal situations coaches are met in other coaching culture such as having coaching levels and involving classroom teaching with predefined coaching curricula. While Turkish coaches find formal educational opportunities valuable, similarly, they value informal coaching situations more (Kilic & Ince, 2015).

2.3.1.2. Informal Learning Situations

Many types of research on coach learning from different coaching cultures showed that coaches learn from a variety of learning situations, and informal learning has an important place in coach learning. For example, studies in developmental coaching context (e.g., Erickson et al., 2008; Kilic & Ince, 2015; Lemyre et al., 2007; Gilbert & Trudel, 2001; Wright et al., 2007) illustrate the dominance of informal learning situations in coaches' learning. The studies and writings in elite coaching context (Abraham et al., 2006; Bloom et al., 1998; Cushion et al., 2003, Gould et al., 1990; Irwin et al., 2004; Kilic & Ince, 2015; Nelson & Cushion, 2006; Rodgers, Reade, & Hall, 2007; Reade et al., 2008a, 2008b) are also in line with the view that coaches mostly learn from informal learning situations.

Specifically, it appears from the related research that coaches learn more from their experiences (Abraham et al., 2006; Bloom et al., 1995; Gould et al., 1990; Jones et al., 2004; Rodgers et al., 2007; Salmela, 1995; Wright et al., 2007;), consulting with others in their immediate coaching environment and attending coaching conferences (Kilic & Ince, 2015; Reade et al., 2008a, b) than formal learning situations. In experiential learning, there is a difference between mediated (primary) and unmediated (secondary) learning experiences (Moon, 2004). For Jarvis (2004) a primary experience is where a person enters a situation and experiences it subjectively. The secondary experience is not interactive all the time (Jarvis, 2004). Moon (2004) advocates that learning not be tidy as it appears. Trudel and Gilbert (2006) suggested that coaches must become competent in defining their problems, developing strategies for these problems, and then evaluating their strategies for solving the problems they defined. Without these reflective phases, coaches get experienced without influencing their practice meaningfully (Cushion et al., 2010; Gilbert & Trudel, 2001). Jarvis (2004) stated that coaches are not usually reflective and directly accept and socialize with the knowledge, values, beliefs, and expectations of the coaching culture they are in. Reflection, mentoring, and situated learning is the three topics come to the fore in informal coach learning situations.

2.3.1.2.1. Reflection

The theoretical framework of reflection for professionally developing knowledge was introduced by Schön (1983, 1987). For Schön, reflecting in (e.g., thinking about what one is doing, even while doing it) and reflecting on the experience can bring about growth, which is he called it as 'reflective conversation with the situation', that is when trying to solve the problem, finding out the incongruence of the trials to solve it, and then reconsidering the problem afterwards. Gilbert and Trudel (2001) used Schön's (1983) theory of reflective practice and developed an experiential learning model. The authors showed that coaches learn via engaging in three forms of reflective practice: (1) reflection-in-action (i.e., during what is happening), (2) reflection-on-action (i.e., during the action but not in the midst of the activity), (3) retrospective reflection-on-action (i.e., outside of the action happening). Gilbert and

Trudel's (2001, 2004, 2005) work showed how coaches effectively learn from their experiences.

However, there is a danger that coaches can superficially reflect and remain descriptive instead of being a deep critical reflection (Cushion et al., 2010). Cushion et al. (2010) stated that reflection has two ends starting from superficial to going into deep. For a reflection to be deep, the authors suggested allowing enough time for it to be developed and supported. Knowles, Gilbourne, Borrie, & Nevill (2001; p.204) suggested that reflective skill development is a serious issue even when it is done with structured support. Therefore, reflective skills do not occur automatically with coaching experience. Gilbert and Trudel, (2006) stated that reflective strategies could be used for coach learning, but these strategies necessitate time, commitment and programmatic effort.

2.3.1.2.2. Mentoring

Mentoring provides both structured and unstructured learning support for coaches (Cushion et al., 2010) and several studies have stated the impact of mentoring in coach learning (e.g., Bloom et al., 1998; Gould et al., 1990; Irvin et al., 2004)

According to Cassidy et al. (2009), many researchers of coaching agree that mentoring is valuable; however, there is not a conceptual definition of a mentoring. According to the recent research, mentoring has been used in the coaching settings, but its success is debatable because its unstructured and uncritical form only serves to reproduce the existing coaching culture and practice (Cushion, 2001). Cassidy, Jones and Potrac (2008) claimed that it is the "methods that inform the mentoring strategies used" which causes mentoring to be reproducing existing practice. Cassidy et al. (2008) termed "quality mentoring" and said that mentoring should involve doing something with a trainee instead of doing to a trainee. They suggested that mentoring be seen as an investment in the whole personal development of a coach. Cushion et al. (2003) also drew attention to the danger of the mentoring process which allows mentors to rule their trainees to become their copied coaches. Research so far has not justified the use of mentoring extensively (Jones, Harris, & Miles, 2009).

2.3.1.2.3. Situated Learning

Coaching is a complex social encounter (Jones, Armour, & Potrac, 2004); therefore, learning from experience plays an important role in coach development (Culver & Trudel, 2006). However, our institutions (coach education programs) are usually based on the supposition that learning is an individual process, that it has a starting point and an end, that it is best separated from the rest of our activities, and that it is the result of teaching (Wenger, 1998: 3). Wenger (1998: 3) suggested that we place learning in the context of our lived experience of participation in the world and assume that it is a part of our human nature and is a social phenomenon, reflecting our own deeply social nature as human beings capable of knowing. In Situated Learning Theory, Lave and Wenger (1991: 43) argue that since learning is complex, relational and situated endeavor, there is a need for a conceptual shift from the traditional view of regarding the person as a learner to learning as participation in the social world as well as from regarding learning as a cognitive process to the view of social practice. That conceptual shift has also been discussed for the coaching profession (Cassidy & Kidman, 2010).

Lave and Wenger suggested that for learning to occur, involvement in a 'community of practice' is compulsory (CoP). For Lave and Wenger (1991), CoP's are sharing common characteristics, especially regarding knowledge, a community of people, and shared practices. Wenger (1998) argued that the process of learning in a defined community is a 'vehicle for the evolution of practices and the inclusion of newcomers while also the vehicle for the development and transformation of identities' (p.13). For Wenger (1998), CoP participants need to have an engagement of a shared activity that they have a common ground. Wenger suggested that learning is not related to acquiring knowledge with only social participation (Cassidy et al. 2009). 'Legitimate peripheral participation' (LPP), helps us understand the process of CoP defined by Lave and Wenger (1991). LPP is related to how to become a part of a CoP. Lave and Wenger (1991) stated that starting from the periphery, a newcomer joins a CoP and in time they get more competent and settle himself at the center of the CoP even it does not seem like an intentional act. Mallett et al. (2009) highlighted that although situated learning is a type of informal education, it contains a loosely structured informality within itself; therefore, it is structured in delivery and intent.

Culver and Trudel (2006) defined CoP for coaching profession as "a coaching community of practice (CCoP)" that is 'a group of coaches who share a common concern, set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis". The authors suggested that it is possible for workers of a team, club or a sport organization to for a CCoP as long as its participants are effectively using their interactions to learn from one another with having a shared purpose and closeness. The authors drew upon the work of Wenger (1998) and contended that the interactions in a CCoP are influenced by mutual engagement, joint enterprise and shared repertoire.

In coaching, the Situated Learning Theory (Wenger, 1998) to cultivate coaches' communities of practice (CoP) has been increasingly used (Bertram, Culver, & Gilbert, 2017; Culver & Trudel, 2006; Lemyre et al. 2007; Cassidy et al., 2006; and Culver, Trudel, & Werthner, 2009). In these studies, the importance of the facilitator has been underlined in the group learning process, with having a degree of structure to the learning activity (Culver & Trudel, 2008). In the related literature, it is suggested that experience and interaction with others are inevitable in coaching (Trudel & Gilbert, 2006). However, to facilitate a fair coach learning experience for coaches, coach education initiatives need to control and facilitate these experiences (Cushion et al., 2003; Werthner & Trudel, 2006). In the literature, a situated, collaborative reflection within a mentoring relationship was also suggested for developing coaches (Cushion et al., 2010). Cushion et al. (2010) in their review, ask the question of how reflection and situated learning can structure learning knowing that they require time and effort to develop and become embedded into coach learning. Importantly, Cassidy et al., 2009; pp. 171) suggest that the coach learning within a CCoP can be enhanced when the facilitator of the activities can integrate appropriate theoretical concepts to guide and inform the discussions of the 'real world' issues that coaches have to contend with in the field.

2.3.2. Actual and Ideal Information Sources for Coaches

Research on coach learning clearly suggests that coaches would like to learn mostly via informal learning situations such as by directly asking sport science specialists, doing, interacting with others, and thinking on their experiences (e.g.,

Erickson et al., 2008; Kilic & Ince, 2015; Mesquita et al., 2010; Williams & Kendall, 2007) and naturally give more value to those informal information sources (Trudel & Gilbert, 2006). Recent studies in knowledge transfer of sport science to coaches indicate that there is a knowledge gap regarding what and how sport science information is transferred to coaches. Coaches believe that sport science research contributes to their sports (e.g., Reade et al., 2008a; Kilic & Ince, 2015; Williams & Kendall, 2007); however, they have barriers of reaching eligible sport science information, understanding it, and being able to apply it to their unique coaching situation (e.g., Kilic & Ince, 2015; Reade et al., 2008b). For example, studies revealed that coaches ranked scientific publications very low in obtaining up-to-date scientific information (Kilic & Ince, 2015; Reade et al., 2008b; Williams & Kendall, 2007). Research indicates that coaches have critical barriers to accessing and assimilating scientific information. In Turkish coaching context, finding out the source of information, being able to understand and implement the sports science information into their field, and lack of monetary support (Kilic & Ince, 2015) were some of the important barriers. One other important barrier to obtaining eligible knowledge is English knowledge (Kilic & Ince, 2015; He, Trudel, & Culver, 2018). Lack of English knowledge appears to limit Middle Eastern and Asian coaches wanting to obtain information from abroad.

Coaches may demand a balanced approach to coach learning with benefiting both informal and formal learning situations. For example, Turkish coaches would like to ask about their coaching needs directly to sport science researchers (Kilic & Ince, 2015). However, coaches generally rank formal learning situations low in obtaining information. This may be because of the low impact of current formal provision (Cushion et al., 2003; 2010). Informal learning situations, however, may be detrimental for coaches if they are left totally unstructured. Although formal coach learning situations were regarded inadequate because of their being 'decontextualized' (e.g., Gould et al., 1990; Lyle, 2002) informal learning situations could pose 'reproducing the existing coaching culture, power relations, and existing coaching practice' (Cushion et al., 2003). As a result, coach-to-coach communication, for example, from more powerful to less powerful may hinder improvement. Irwin et al. (2004) suggested that mentoring, as an informal way of learning, becomes

31

unproductive when it is restricted and deprived of critical thinking and a high level of interaction. Mallet et al. (2009) highlighted that both formal and informal learning situations have benefits and weaknesses. The authors suggested that formal education situations cannot encompass all of the experiential learning necessary to embed learning. Also, they stated that the potential negative sides of informal learning situations could be amended by moving from experiential work experience to an apprenticeship with a slight level of structure, reflection, and evaluation (Mallett et al., 2009). The authors concluded that formal learning situations need extensive and various experiences to convert situated learning to an understanding. Therefore, there appears to be a need for a slightly structured informal learning environment for coaches in which they can communicate their needs, actively obtain and understand the eligible scientific information they need, and contextualize this information with their coaching situation by reflection and critical thinking on their contextual needs in a collaborative manner.

2.3.3. A Learning Community Approach

To complement the formal education situations regarding providing contextual and further development opportunities to coaches, the creation of ongoing professional development opportunities and learning communities have been called for by prominent sport and education associations (Gilbert, Gallimore, & Trudel, 2009). Penney (2006, p. 35) emphasized the shift from thinking that professional development occurs on particular days and at organized courses to the engagement in an ongoing and contextual professional learning process. A learning community approach was defined by Saunders and Goldenberg (2005) as "providing an arena in which colleagues work together to understand and accomplish shared goals, examine data about whether students are accomplishing goals, and provide each other with assistance to accomplish the goals" (Gilbert et al., 2009).

As reviewed by Gilbert et al. (2009), the value of the learning community approach has been emphasized in both teaching and coaching literature under the names of "professional learning communities" (e.g., Garet, Porter, Desimone, Birman & Yoon, 2001; Penney, 2006), communities of practice (e.g., Culver & Trudel, 2006), and inquiry-based learning (e.g., Gallimore, Ermeling, Saunders, & Goldenberg,

2009). Nevertheless, coach development initiatives still have the classical approach that is based upon training and certifying coaches (e.g., Trudel & Gilbert, 2006). In the literature, the insufficiencies of classical teaching approaches as compared to problem-based learning approaches (Strobel & Van Barneveld, 2009; Walker & Leary, 2009) indicate that there is a need for the use of learning community approach in coach education system as a complementary pathway. In the problem-based approach, there are (a) less-structured problems with having more than one answers, (b) has a learner-centered approach that allows for learner choice about what problems to address, (c) teachers facilitate the learning process, and (d) problems must be specific to the learners' professional needs (Walker & Leary, 2009). Gilbert et al. (2009) argued that many studies in the past four decades illustrate that traditional learning approaches such as traditional formal coach education workshops are effective in recognizing the answers of a test, which pertains to short-term memory. The authors contended that, contrarily, in the problem-based learning approach there is a higher learner satisfaction, long-term knowledge remembrance, and performance assessments (i.e., applying what has been learned). Since coaches need to solve complex contextual problems continuously, a learning community approach appears to be a much more suitable instructional method for coaches' situation (Gilbert et al., 2009).

In the definition of coaching effectiveness (Côté & Gilbert, 2009) it is clear that coaches need to have professional knowledge, but they also need to use that knowledge to solve their context-specific problems to be effective (Côté & Gilbert, 2009). Therefore, only the presence of formal coach education programs may provide knowledgeable coaches, have not resulted in the development of effective coaches (Trudel & Gilbert, 2006). Although important and necessary, formal coach education courses occur once with lots of information trying to be disseminated to coaches. Research showed that formal coach education courses alone might not be most appropriate for coach development (Gilbert & Trudel, 2001). On the other hand, informal learning situations, which coaches valued more as compared to formal coach education (Trudel & Gilbert, 2006), enables coaches to learn in their context and to benefit from their social networks during trying to find answers to their problems. Providing "loosely structured" (Mallett et al., 2009) informal learning opportunities to coaches in which they can reach and learn relevant eligible information to learn when

solving their contextual problems appears to be more important than introducing to them decontextualized knowledge via formal courses (Lemyre, Trudel, & Durand-Bush, 2007; Kilic & Ince, 2015; Vargas-Tonsing, 2007; Wright & Trudel, & Culver, 2007).

The research in teacher education suggests that building professional learning communities and teacher learning teams can result in increased student achievement on the condition that teachers collaboratively work on student achievement (e.g., Vescio, Ross, & Adams, 2008; Hunuk, Ince & Tannehill, 2013). Building learning communities has also been regarded as an effective complementary approach to classical coach education initiatives (Culver & Trudel, 2008a; Trudel & Gilbert, 2004; Werthner & Trudel, 2006). Gallimore et al. (2009) identified five key elements to building and continuing effective teacher learning communities that may be directly relevant to using this view for informal coach education initiatives (Gilbert et al., 2009):

  i. *Stable settings for improving instruction and learning:* To improve teacher instruction and achievement, there is a need for stable environments to work together. Disturbing factors such as canceling the meeting for other serious situations, or digress from the main topic and losing focus hinders continuous knowledge development process.

  ii. *Job-alike teams:* A job-alike team comprises of 3-7 teachers teaching the same grade level, course, or subject area. If team members do not share common instructional challenges, teams are likely to drift into superficial discussions and ineffective actions.

  iii. *Published protocols that guide but do not prescribe:* The importance of a clear protocol that structures the discussion but not prescribes has been documented (Saunders et al. In press). The protocol includes the steps that are familiar to the educators. It identifies goals for student learning; findings or students' developmental assessments of their progress toward defined goals; bringing the experts who help in achieving the goals; planning and delivering lessons everybody tries; using classroom performance data to evaluate the commonly planned and delivered lessons; and reflecting on student gains to determine next steps. The protocol

enables each member to contribute their knowledge, creativity, and skills as they try to solve common instructional problems although it structures and keep the team focused on the issue collaboratively.

iv. *Trained peer facilitator:* Every team needs a person to guide their colleagues through the discussion over time. Since peer facilitators give the same lessons as the others in the team, they can introduce protocol steps, and encourage the team to focus on a problem until it is solved.

v. *Working on student learning goals until there are tangible gains in student learning:* The team needs to stick with the challenge that they work on until their students improve. When teachers see improvements in student achievement as a result of their approach to improving instruction, they begin to confide in the learning process that they are in. Teachers will see causal connections between their efforts and student achievement increment if they have stable settings and facilitators that support their team's protocols that enhance continuous development.

Based on previous research in sport coaching, Gilbert et al. (2009) suggested that these five elements of successful teacher learning communities can be realized in youth sport settings.

Regarding the element "stable settings dedicated to improving instruction and learning," Gilbert et al. (2009) suggested that reorganizing existing sources of time and place may be beneficial in building learning communities among coaches. Trudel and Gilbert (2006) stated that considering the majority of coaches are volunteers and parents of children, using regular league meetings by focusing more on professional development instead of mainly on organizational issues (changing rules, disciplinary issues, etc.). Additionally, the authors suggested reducing the number of practice and games and allocate this time to coach learning community meetings. The authors contended that this little change would result in providing enough time for coaches to enable them to work with the other fellow coaches and address their context-specific coaching issues. Gilbert et al. (2009) added that the other four criteria are dependent on the realization of the "setting" criterion.

For the element "job-alike teams," the research on adult learning, teaching, and coaching show that learners value the learning experiences that pertain to their immediate contextual needs. Gilbert et al. (2009) argued that there is a lack of belief in the effectiveness of teacher and coach development programs provided by experts since they are far away from the very setting (Blank et al., 2008; Garet et al., 2001; Trudel et al., 2010). Gilbert et al. (2009) suggested that building a professional learning community for coaches may be most effective and practical when it is built with a small group of coaches who coach the same sport in the same setting (i.e., age-group / and competitive level). The authors added that small teams of coaches in the same league or workplace could be organized based on the coaches' schedule to meet with ensuring that each team has at least one experienced coach. The authors highlight that discussing real issues with other coaches who share the same context is critical for coach development.

Regarding "published protocols that guide but do not prescribe," Gilbert et al. (2009) suggested that a written protocol is a requirement for increasing the accountability of coaches for their learning, and it helps them understand and share the experience they have had during the learning community. Trudel and Gilbert (2006) stated that coaches mostly work alone and usually, their coaching experiences are less than five years. Additionally, a coach needs supervision for learning how to turn their coaching experiences as learning opportunities effectively. Gilbert et al. (2009) suggested that the protocol not present rigid instructions for the team members, but need to provide pathways on how to structure a learning community. The authors stated that the functioning protocol in teachers' professional development research could be adapted to youth sport setting:

  i.   Jointly identifying goals for athletes' learning
  ii. Finding or developing an assessment of athlete progress toward those goals
  iii. Bringing in experts who assist in accomplishing goals
  iv. Planning and delivering lessons everyone tries (helping each other plan practices that include agreed-upon athlete learning goals)
  v.   Using performance data to evaluate the commonly planned and delivered lessons
  vi. Reflecting on athlete gains to determine next steps in the learning process

For "trained peer facilitators," Gilbert et al. (2009) suggested that there needs to be a someone who provides guidance and make everyone in the team feel responsible for contributing to the learning process. Research proves that without appropriate leadership, the learning community built will easily be disbanded and the same-old coaching practices start to continue in the settings (Culver et al., 2009; Gallimore et al., 2009). Gilbert et al. (2009) argued that a peer facilitator would be more effective than an outside expert. However, there needs to be an orientation period that needs to be led by professionals with experience in creating and leading professional learning communities. Then league administrators or other coaches who experience peer facilitation can lead the learning community in time.

For "working on athlete learning goals until there are tangible gains in athlete development," Gilbert et al. (2009) suggested that targeting one specific coaching issue at a time until there is measurable evidence that the athletes have improved their competence regarding the issue. Additionally, the authors stated that documenting the problem-solving process in the form of a written format can be used in future meetings at the start of each season. The authors added that instead of regarding that written information as a recipe, coaches could benefit it for their development and motivation for their problem-solving activities.

Some hardships in front of the related elements were put forward based on previous coaching research. Finding a stable place for coaches would be dependent on sport associations or directors (Culver & Trudel, 2006). Forming job-alike teams will be possible if coaches agree to collaborate which is not natural (Wright et al., 2007). The written protocol needs to be regularly reviewed because coaches change all the time and there is a limited number of tenure coaches (Trudel & Gilbert, 2006). Peer facilitator needs to be a person who is respected in his/her community as well as being familiar with the learning community approach and how to lead it (Trudel & Gilbert, 2004). Lastly, reliably measuring athletes' progress in predefined goals will be hard because of the complex nature of athlete learning (Ford, Coughlan, & Williams, 2009).

In addition to what has been stated as a potential hardship to building a learning community in a coaching context, there are also critical contextual issues that need attention. Based on research on building a learning community of coaches (e.g., Culver & Trudel, 2006) and coaches' use of sport science in different cultures (e.g., He, et al.,

2018; Kilic & Ince, 2015), it can be argued that there should be a proficient expert in building such a learning community when the aim is also to help coaches assimilate eligible scientific knowledge. In addition to eliminating the potential rivalry among coaches preventing extensive knowledge sharing (Wright et al., 2007), an expert can also convey relevant scientific information by making coaches ready to understand relevant concepts for their professional development and introducing them in the form that coaches can comprehend and use for their situation. It is especially critical for different coaching cultures in which the means of communication is not English. Therefore, these abovementioned five suggested elements need refinements according to the differing needs of coaches. When, for example, the primary aim of a learning community is to ingrain a new coaching concept or framework in the coaches, there surely needs an expert who is both experienced in building community teams as well as has high competencies in coaching and sports science to expand the vision of a learning team.

In coaches' professional development literature, a few works are focusing on providing informal coach education initiatives. Trudel, Gilbert, and Werthner (2010) reviewed the literature regarding coach education effectiveness by small-scale, university-based, and large-scale programs. The authors stated that there is a scarcity of studies on this issue, and more importantly, the results of the studies suggest that these training programs did not have a long-term impact on actual coaching practice. The authors limited their review between 1998 and 2007. There were four small-scale education programs (Smith, Smoll, & Cumming, 2007; Smoll, Smith, & Cumming, 2007; Coatsworth & Conroy, 2006; Conroy & Coatsworth, 2004; Trudel et al., 2000; Cassidy et al., 2006) and four university-based coach education programs (Demers et al., 2006; Jones & Turner, 2006; Knowles et al., 2001; Knowles et al., 2006).

In the small-scale coach education programs, Smith and Smoll and colleagues' work is an important example of building coach education programs that examine the cognitive-behavioral approach to coach training. The researchers initially built a baseline of coaching behaviors and athlete attitudes and perceptions in youth baseball (n = 51) and basketball (n = 31) male coaches and their teams (n = 724 athletes) between 8 and 15 years of age (Smith & Smoll, 2009; Smith et al., 1978, 1983). Coaches behaviors were coded during the games using the Coaching Behavior

Assessment System (CBAS), and in the first study, the coaches finished a coaching philosophy questionnaire. At the end of the season, athletes' perceptions, attitudes, and self-esteem were measured with two questionnaires. According to the findings, athletes' attitudes were affected by coaches' coach behaviors significantly. Athletes' perceptions about themselves, their coaches and the sport experience were also strongly influenced. Young athletes with low self-esteem showed a more positive approach to the coaches who are more reinforcing and encouraging the athletes. The athletes least liked coaches who were not supportive and punishing. The study revealed the difference between how coaches perceived themselves and how are their actual behaviors in the field. These studies laid the foundation of Coach Effectiveness Training (CET) program. This program is a 2.5 hours' workshop designed to enhance positive control, to help coaches understand winning as an effort, and to develop their awareness and self-monitoring.

CET was used in four studies. In the first study, there was 31 male baseball coaches and 325 athletes who were between 10 and 15 years of age (Smith, Smoll, & Curtis, 1979). Coaches were given a manual with guidelines and a personal behavioral profile based on observation at the end of a workshop (using the CBAS) that lasted 2 hours. Coaches completed self-monitoring forms after the first ten games. Questionnaires were used to assess athletes' perceptions, attitudes, and self-esteem. Coaches in the experimental group delivered more reinforcement to their athletes than the control group. Their athletes evaluated these coaches as more favorable in building interpersonal team climate. The coaches who received the training were perceived as more reinforcing, more encouraging, more instructive, and less punitive when athletes made mistakes. Additionally, the athletes with low self-esteem were the athletes who positively changed their attitudes towards their coaches most.

The second intervention was done with 18 male baseball coaches and 152 athletes who were 10-12 years of age. The researchers collected data from athletes on their perceptions of the coaches' behaviors and their attitudes toward the coaches and the sport participation. Athletes filled three tests of self-esteem and anxiety before and after the season. The trained coaches were perceived by their athletes as more engaging in desirable behaviors, liked more by their athletes, were regarded as better teachers and perceived as providing more fun. The trained coaches' athletes showed decreased

anxiety. The athletes who started the season with low self-esteem showed significant increases. Regarding participation rate, trained coaches lost only 5% of their athletes while other coaches lost 26% of their athletes.

In their recent study, Smith, Smoll, and colleagues modified the CET program and labeled it as MAC (Mastery Approach to Coaching). This 75-minute program delivered by using lecture approach. The main themes of the program were positive coaching behaviors and a definition of success as maximum effort. With a quasi-experimental design, the program was applied to 37 community basketball coaches and 216 youth athletes including girls (n = 99). Athletes completed four measurement scales in anxiety, motivational climate, an achievement goal, and academic achievement goal at the beginning and the end of the season. The athletes of trained coaches perceived their coaches more mastery oriented. These athletes had lower ego orientation scores and higher task orientation scores, and they exhibited less anxiety from the beginning to the end of the season.

Coatsworth and Conroy (2006) and Conroy and Coatsworth (2004) tested the effectiveness of the intervention that Smith and Smoll designed, with seven developmental level swimming coaches and 135 youth swimmers (52 boys and 83 girls) by deliberately choosing an entirely different sample to examine the effectiveness of the CET. The coaches taken the intervention received a 2-hour workshop, and they were given Smoll and Smith's coaching manual. Using the CBAS, coaching behaviors were coded in 1-hour practice, and the athletes filled a self-esteem scale and a performance failure appraisal inventory three times during a seven-week time. The results showed that there was very limited or no impact of the CET workshop. The findings were attributed to some methodological limitations such as small sample size, unsuitability of some scales, insufficient data points for coach behaviors, and the relatively brief nature of the workshop. Conroy and Coatsworth concluded that a 2-hour workshop would not result in expected coach behavior change.

Trudel et al. (2000) built an intervention that aimed at a specific coaching aspect. It was applied to 28 competitive ice hockey coaches and their athletes who were between 14-15 years of age. The authors used special video recordings during the meetings that aimed at (a) making coaches aware of injuries and penalties in the field, (b) showing the criticality of teaching body checking, (c) furnish teaching

materials, and (d) present the concept of self-supervision and how to utilize this technique during the season. The coaches had to teach bodychecking during at least four on-ice training sessions. When the authors compared the data from the previous season with the next season, they did not find any significant results. The authors stated that many variables could not be controlled. For example, some coaches admitted that they did not follow the strategy completely because of time constraints and player changes during a season. The authors concluded that a short-term intervention that only included coaches would not be sufficient for behavior change.

With a different approach, Cassidy et al. (2006) did not measure the effectiveness of a behavioral approach. The authors examined the effectiveness of a theoretical coach education program that can be stated as a community-orientated, short-term (28-hours over six months), classroom-based, educational development coaching program with having no assessment being offered for free to volunteer coaches. In-depth semi-structured interviews with the participants revealed that the program helped them to see the complexity of the coaching process and critically reflect on their view. During the program, the coach educator facilitated the discussions, interaction, and negotiation of meaning among the coaches instead of lecturing and defining coaching and its theoretical background.

Considering the abovementioned studies Trudel et al. (2010) argued that it is challenging to determine the effectiveness of such an intervention even a) researchers have a full dominance of the content, b) select a trained researcher as a facilitator, c) decide the sport and its context, and d) build a control and experimental group conditions. Additionally, the authors argued that there was not any data on the long-term impact of these training programs including athlete outcomes related to the research variables. Thirdly, the small-scale studies on coach education training programs only provide information about competitive team sports.

Regarding university-based coach education programs, Trudel et al. (2010) reviewed four studies. Demers et al. (2006) designed a coach education program to develop reflective coaches. The researchers stated that faculty members have to work together and time becomes a barrier. Additionally, they reported that students might have difficulty transferring the information introduced in courses to their practice.

They suggested creating specific assignments that require students to complete critical reflection reports.

Jones and Turner (2006) believed that coaches need to develop reflection, problem-solving, and critiquing skills that are integral to Problem-Based Learning (PBL). The authors introduced the principles of PBL during the last year of bachelor degree coaching students. Results indicated that student began to think differently about coaching, but the changing process was most challenging. Tutors need to be well trained to provide a balance of allowing students to discuss and managing the discussions to make sure that the critical topics are discussed without derailments. If students are not familiar with the PBL approach, they would behave antagonist and will need support and clear information and expectations. The authors added that the problematic scenarios have to be selected carefully. Lastly, participants need to work in small groups, and it becomes quite time-consuming.

Knowles et al. 2001; 2006) reported the impact of an intervention to develop and assess reflective skills of bachelors' degree coaching students. Students attended lectures about the reflective practice in the first semester of their second year. In the second semester, they coached 60-hour and attended five workshop sessions to discuss topics in coaching, keep a reflective journal, and write an academic year report. Results illustrated that some coaches thought that the workshops allowed collective discussion and the generation of plans. Others, however, thought that they needed extra support during their early stages of coaching. Additionally, the workshop facilitator had complex and multi-faceted roles. The services the facilitator provided to the coaches necessitated the knowledge of sports science, pedagogy, and reflection skills, as well as effective interpersonal skills. Assessing the reflective skills of the students was also an issue since it depends on the writing skills of students. The authors emphasized that when coaching experience increases it does not guarantee the development of reflective skills. To determine the extent that graduates of coaching science degree used reflective processes in their practice and no evidence was found regarding the use or critically approaching the coaching issues. None of the coaches allocated time for reflective writing.

The abovementioned four studies illustrated that developing reflective practitioners is challenging as well as its evaluation. Although university students were

in a controlled environment (i.e., a university setting), their reflection development was poor, and even poorer when they started to coach in real life. Trudel et al. (2010) suggested that non-traditional approaches like problem-based learning needs to be used to develop reflective coaches. Knowles (2005) stated that in their curriculum none of the programs offered to become a reflective practitioner. Trudel et al. (2010) also argued that very few university-based coach education programs focus on developing reflective coaches. In Turkey, coach education in universities is based on traditional curricula just as in the US (McMillin & Reffner, 1999).

The impact of more recent studies related to building and benefiting from informal learning situations was generally based on coaches' perceptions. Culver and Trudel (2006) built a coach community of practice examine coaches' learning process in skiing. This seminal study had three phases representing three seasons. During the first phase, six coaches who coached 11 and 12 year-olds, in part two the participants were the same head coach, three different club coaches, and two coaches from other clubs. During the part three, the leading researcher adopted the facilitator role and examined how three coaches from the first part and part two, now coaching two different athletes, interacted. The authors found that there needs to be a presence of a facilitator to support and realize the CCoP. The authors explained that the CoP built in their study stopped functioning without an expert facilitator's presence. That can be attributed to the inherent rivalry between coaches because of the competitive coaching environments frequently mentioned in the literature (Culver, Trudel, & Werthner, 2009; Trudel & Gilbert, 2004). This environment prevents coaches from building a collaborative and cooperative environment that nurture their practices (Culver et al., 2009; Trudel & Gilbert, 2004). The study did not reveal the aspect of the coaches' development explicitly.

Falcao, Bloom, and Gilbert (2012) examined coaches' perceptions of the impact of a two-hour coach training program designed to enhance youth developmental outcomes. Six youth sport coaches from both competitive and recreational contexts in a Canadian city participated in their study. The researchers engaged the participants in the intervention in stages as introductory, conceptual, practical, and intervention. They used the principles of Positive Youth Development and the developmental athlete outcomes (4 Cs). The coaches perceived that the

activities built together in the community promoted cohesion and communication as well as contributed to the athletes' competence, confidence, connection, and character/caring.

Falcao, Bloom, and Bennie (2017) investigated the effect of a two-hour humanistic coaching workshop on the coaches' perceptions towards the workshop as well as to explore the coaches' experiences in basketball school coaches from low socioeconomic communities in Canada. Coaches perceived that they learned humanistic coaching and how to ensure it in their environment.

Similarly, Garner and Hill (2017) explored an impact of a community of practice on eight international elite ski coaches' development of interpersonal and intrapersonal knowledge. The coaches were encouraged to discuss their successful and unsuccessful practices, and their ideas that they have not yet managed to realize, but curious about their peer's opinions during a six-week informal roundtable discussion. The authors found that by the concept of emotional intelligence in and storytelling in the CCoP, the coaches developed their interpersonal knowledge. Additionally, group reflection and a change in role frame helped develop coaches' intrapersonal knowledge.

A line of research investigated an existing or built coach community of practice environments. Culver, Trudel, and Werthner (2009) retrospectively investigated a sport leader's attempt to enhance a community of practice in a competitive youth baseball league. The study was analyzed using Wenger's (1998) community of practice framework. The study highlighted that the necessity of a visionary leader in building and continuing a cooperative coaching environment in a competitive coaching context. More recently, Bertram, Culver, and Gilbert (2017) explored how an existing community of coaches was created and continued in a university setting, and the values created by participating in the CCoP. The study results illustrated that the coaches' learned many coaching strategies that worked for their athletes in increasing their athletes' performance. The study also showed that coaches created values within each cycle of the Value Creation Framework (Wenger, Trayner, & De Laat, 2011) by participating in a CCoP.

Generally, the coaches in the abovementioned studies perceived increased coaching knowledge (e.g., interpersonal and intrapersonal; Falcao, Bloom, & Gilbert,

44

2012; Garner & Hill, 2017), increased self-awareness and being reflective that resulted in a change of role frame in line with athlete-centered approach (Falcao et al., 2012; Falcao et al., 2017; Garner & Hill, 2017) and tools to realize the athlete-centered approach in the field (Falcao et al., 2017). Additionally, the coaches perceived that they observed positive changes in athletes' developmental outcomes such as in 4 Cs (Garner & Hill, 2017; Bertram, Culver, & Gilbert, 2017) and in athletes' autonomy, communication, motivation, and willingness to help teammates (Falcao et al., 2017) in line with improvements in their coaching practices. Bertram et al.'s (2017) study showed that coach community of practice might provide impactful learning opportunities within a highly competitive sport setting. However, Culver, Trudel, & Werthner's (2009) retrospective study illustrated that to build an informal learning community in a competitive sport environment that is collaborative and nurturing; there needs a presence of a strong, visionary leader. Otherwise, the environment may return to its traditional, competitive environment in time. Related studies were presented below (Table 2.2).

As understood from the literature, a learning community approach has a significant impact on coach learning in different coaching contexts and is promising for coaches' development. While coaches generally consider formal coach education important, they prefer experiential sources (e.g., Kilic & Ince, 2015; Mesquita et al., 2010; Reade et al., 2008a, 2008b; Wright et al., 2007) in the first place. Coaches also perceive that critical coaching skills such as pedagogy and communication lack in formal coach education programs (Dickson, 2001). Therefore, it can be argued that when learning environment is 'decontextualized' (Nelson & Cushion, 2006) the success of current formal coach education programs is open to question. Considering the literature on coaches' use of sports science, there are several issues to be touched upon regarding designing such educational opportunities for coaches from different coaching cultures.

Firstly, previous research highlighted "language" as an important barrier for coaches from different cultures (e.g., He, Trudel, & Culver, 2018; Kilic & Ince, 2015) and this barrier has two dimensions. The first barrier is the inability to reach eligible empiric knowledge written in English. The second barrier is the inability to understand written scientific research that coaches expect them to be plainer and more

comprehensible (Irwin et al., 2004; Reade et al., 2008; Reade et al., 2008b; Williams & Kendall, 2007). Therefore, there is a need to describe the characteristics of such a learning community program designed in which eligible scientific information is comprehensible for the coaches whose native language is not English.

Secondly, this line of research indicates that coaches appear to have a narrow view of coaching (unidimensional view) and have difficulty in meeting and communicating with experts in the same conceptual ground (speaking the same language) that might lead to meeting their contextual needs. Therefore, the question of how a learning community needs to be designed to improve coaches' ability to reach the experts and communicate with them using the same language needs to be addressed.

Thirdly, the previous studies showed that coaches adopted a holistic perspective to coaching and become more thoughtful about their practices (become reflective) both during and after their actions while becoming knowledgeable in informal learning communities. Although these studies raised coaches' awareness of athletes' developmental outcomes (i.e., 4 Cs) and improved their interpersonal and intrapersonal knowledge, there is a need for developing an informal learning opportunity based directly on an empiric contextual data (real needs) about these outcomes. Gilbert et al. (2009) suggested that there is an urgent need for building informal learning opportunities for coaches that are contextual, ongoing and that prioritize athletes' development. However, such programs become more realistic when built on measurable outcomes and defined contextual needs based on these outcomes (Trudel et al., 2010). Considering coaches' effectiveness are measurable (Vierimaa et al., 2012), therefore, focusing directly on the 4 Cs of athlete outcomes in developing a learning community program will be highly relevant in increasing coaching effectiveness (Côté & Gilbert, 2009; Vierimaa et al., 2012; Côté et al., 2010).

Table 2.2. *Small-scale coach education studies using a learning community approach*

Study	Sport Context	Participants	Method	Intervention	Findings
Smith et al. (2007); Smoll et al. (2007)	Basketball English-speaking	37 coaches 216 athletes	No	75-min workshop Mastery Approach to Coaching	Athletes of trained coaches perceived coaches to be more mastery-oriented, had an increased mastery goal orientation scores, and decreased anxiety from beginning to late season
Coatsworth & Conroy, 2006; Conroy & Coatsworth (2004)	Swimming English-speaking	7 coaches 135 athletes	No	Adapted the Coach Effectiveness Training 2-hour workshop	No significant results found on youth fear of failure, increased positive self-esteem over the season in girls, no change in coaching behaviors

Table 2.2. *(Continued)*

Trudel et al. (2000)	Ice hockey English-speaking	28 coaches	No	Body checking and injury prevention 2-hour workshop	Coaches stated improved knowledge on teaching body checking, satisfied with the material provided and likely to use again, no change in the number of minor penalties or athlete injuries
Cassidy et al. (2006)	Rugby English-speaking	8 coaches	No	Rugby Coach Development 28-hour meetings during six months	Coaches became more aware of their athletes' learning preferences, changed the way they coached, and coaches valued the structured learning opportunity in which they share ideas
Demers et al. (2006)	Non-sport specific English-speaking	Undergraduate college students	No	Baccalaureate in Sport Intervention 3-year undergraduate program	Problem-based learning approach necessitates continuing faculty collaboration; there need to be focused assignments that help students to make meaning between course content and coaching practice

Table 2.2. *(Continued)*

Jones & Turner (2006)	Non-sport specific English-speaking	11 Undergraduate students	No	12-week problem-based learning program	Students usually had difficulty in adopting PBL approach. Training is needed. Defining problems clearly and finding time and resources to find solutions are needed. Students understand the complexity of coaching better, but the evaluation process is difficult.
Knowles et al. (2001)	4 sports English-speaking	8 Undergraduate students	No	60-hours reflective practice coursework	Coaches believed the program was beneficial to their development especially in the development of reflective skills. Coaches recommended early and mandatory supportive workshops. The role of the facilitator is difficult and multi-faceted requiring a variety of skills. Writing a reflective journal needs time and a clear structure. Must take time from the workshop for reflective writing. Assessment of skills of reflection is problematic.

Table 2.2. *(Continued)*

Knowles et al. (2006)	3 sports English-speaking	6 coaching science graduates	No	60-hours reflective practice coursework	No evidence found at a critical and practical level. Coaches tended to reflect on primarily coaching problems. None of the coaches allocated time for reflective writing although they acknowledged its importance in the reflective process. Reflection was limited to mental notes and peer discussion.
Garner & Hill (2017)	Skiing English-speaking	8 ski coaches	No	6-week meetings ranged from 60 to 120 minutes	Coaches developed interpersonal and intrapersonal knowledge through enhanced emotional intelligence, gaining an athlete-centered approach, storytelling, group reflection and changing role frames. Group reflection was central in increasing coach self-awareness, and change of role frame in line with the athlete-centered philosophy. Some evidence of an impact on the athlete outcomes of competence, character, and confidence.

Table 2.2. *(Continued)*

| Bertram, Culver, & Gilbert (2017) | Athletics English-speaking | 4 Division I university coaches | | Exploring an existing CCoP | Participating in learning groups allows members to create value within each cycle of the Value Creation Framework.

All coaches from different levels created values.

Coaches engaged in learning that pertinent to their needs

CoPs can, in fact, provide impactful learning opportunities within a highly competitive university sport setting.

Coaches felt cop helped them improve their practices and observe improvements in their outcomes.

The study provided support for the use of Wenger et al.'s VCF. |

Table 2.2. *(Continued)*

Falcao, Bloom, & Gilbert (2012)	Soccer & Basketball English-speaking	6 youth sport coaches	No	A 2-hr workshop that divided into introductory, conceptual, practical, and intervention stages (Carron & Spink, 1993)	Coaches reported an increase in knowledge and a better understanding of their players. Coaches perceived that activities promoted cohesion and communication, while also contributed to the development of athlete 4Cs.
Falcao, Bloom, & Bennie (2017)	Basketball English-speaking	12 youth sport head coaches	No	A 2-hr humanistic coaching workshop	Participants reported positive outcomes in their athletes in autonomy, communication, motivation, and willingness to help teammates. The workshop taught coaches about humanistic coaching and provided tools to apply their knowledge. Coaches had positive experiences and observed developmental outcomes in their athletes despite time and effort required to use humanistic coaching.

Table 2.2. *(Continued)*

Culver, Trudel, & Werthner (2009)	Youth baseball league	7 participants (the technical director, the league manager, and 5 coaches)	No	A retrospective case study of a CCoP that a sport leader built, and after leaving a league in 3 time periods	The period 1 (4 years) portrays how a visionary leader, initiated changes of coaches sharing knowledge and being responsible for the athletes from all of the teams.
					Establishing a co-operative environment in a competitive context necessitates strong leadership and there were challenges of alignment of coaches, parents, and referees.
					The period 2 (3 years) showed the loss of the visionary leader led to the return to a more traditional, competitive environment
					The period 3 (1 year) showed a willingness to return to the collaborative ways of period one but also difficulties in realizing it without a strong visionary leader.

Table 2.2. *(Continued)*

Culver & Trudel (2006)	A skiing club	3 parts of participants 6 coaches and a head coach (Part 1) Same head coach and 3 different club coaches and 2 coaches from other clubs (Part 2) 3 coaches from Part 1 and 3 coaches from Part 2	No	Negotiating coaching practice that prioritizes athlete development by collaborative inquiry in CCoP	CCoP's are suggested as a model for coach education. The presence of a facilitator is required to realize the CCoP. The cultivation of a CCoP failed without a facilitator Competitive coaching environment prevented information sharing.

CHAPTER 3

METHOD

3.1. Research Design

A mixed methods research design was used to answer the research questions of the study. It is "a procedure for collecting, analyzing, and mixing both quantitative and qualitative research methods in a study to understand a research problem" (Creswell & Plano Clark, 2007). The mixed methods research design has increasingly been used in social sciences as a legitimate and stand-alone research design (Creswell, 2009; Hanson et al., 2005; Tashakkori & Teddlie, 2003). Conducting a mixed methods study can be used when one type of research is not enough to answer research questions (Creswell, 2008).

Specifically, the embedded sequential mixed method design was used to answer the research questions of the study. Creswell & Plano Clark (2011; p. 91) suggest that the embedded design is appropriate when the researcher needs to answer different questions that necessitate different types of data in order to enhance the application of a quantitative or qualitative design to address the primary purpose of the study. In the embedded design, the researcher uses both qualitative and quantitative methods within a quantitative or qualitative design (Creswell & Plano Clark, 2011). Creswell and Plano Clark (2011) explains that the researcher can add a strand (either qualitative or quantitative) to enhance the overall design such as when developing an intervention. Based on the purpose of the supplemental data within the larger design, the researcher can decide to collect it before, during, after or using some combination (Creswell, Fetters, Plano Clark, & Morales, 2009). The researcher may first define the needs by using one strand concurrently or sequentially and then develop an intervention according to the defined needs. After that, the researcher tests the effectiveness of the intervention with another strand (Creswell & Plano Clark, 2011).

1. PHASE
One year
Needs Analysis

2. PHASE
Design
Four weeks

3. PHASE
Implementation & Evaluation
Six weeks

Validity & Reliability of Measures

Competence, Confidence, Connection, & Character

Data collection
- The 4 Cs measurement framework
- Gymnasts between 12-18 years of age
- (n = 45)

Interpreting the findings

Design
Content development for the LCP
- 4 Cs framework
- Adult learning principles
- A standard worksheet

Implementation
A six-week Learning Community Program
- Six Coaches
- A facilitator
- A sport psychologist
- Transcribed 6-week LCP video record
- Researcher Notes

Evaluation of coaches' LCP experiences
- A focus-group interview with coaches,
- Interviews with the facilitator & sport psychologist

Evaluation of the long-term effect of the LCP
- Follow-up interviews with two participant
- Field observations

Figure 3.1. *Flow chart for overall design of the study and data collection methods*

56

The primary focus of strand of the study is the 6-week learning community program. The results of Study 1 (a quantitative study) was used to enhance the design of the intervention (Study 2).

3.2. Study 1

3.2.1. Participants

Participants of Study 1 were nine coaches and their gymnasts from large (İstanbul, Ankara, İzmir), mid-sized (Bolu & Mersin) and small-sized (Bartın) cities of Turkey. The coaches were two women (32 & 45 years of age) and seven men coaches (M_{age} = 35; SD = 8.19) with an average of 15 years of coaching experience (SD = 5.02) in artistic gymnastics. The coaches have been coaching their gymnasts for at least one year at the time of the data collection and had at least five years of experience in a competitive sport context. The teams consisted of female (n = 23) and male (n = 22) gymnasts between 12 and 17 years of age (M = 13.98, SD = 1.50) with an average of 9.18 years of experience in artistic gymnastics and 5.84 days of weekly training. Among the 67 participants accepted to participate in the study, 45 gymnasts from 9 teams (23 girls & 22 boys) were in between the target age range. The average active population of competitive youth gymnasts at this age range were about 90 (Competition lists; Turkish Gymnastics Federation, 2015); therefore, it was assumed that the sample represented approximately half of youth artistic gymnast population at the time of the data collection. Demographic characteristics of the participants are presented in Table 3.3.

Before the data collection, informed consents were taken from gymnasts, parents of gymnasts, and coaches. An approval from the Human Subjects Ethics Committee of Middle East Technical University (Appendix E) was obtained for all of the study procedures before the data collection. Informed consents (informed consent forms are in Appendix F & G), including parents' written consent for all participants, were obtained. For each team of gymnasts, the data were collected during the first quarter of the season within one month. The club settings were visited by the researcher to collect the data. Gymnasts from each team completed the PYD toolkit. The data were collected separately from coaches and gymnasts aiming to ensure trustworthiness of responses.

Table 3.3. *Demographic characteristics of artistic gymnasts (n = 45)*

Characteristic	N	%
Gender		
Female	23	51
Male	22	49
Age Group (years of age)		
12 – 13	21	47
15 – 17	24	43
Training (days in a week)		
5 days	7	15.6
6 days	38	84.4

3.2.2. Data Collection

3.2.2.1. Measures: PYD Toolkit

The gymnasts' developmental outcomes measured were competence, confidence, connection, and character (the 4 Cs). In measuring the gymnasts' perceptions of the 4 Cs in competitive youth sport context, the culturally adapted form of the PYD toolkit that Vierimaa, Erickson, Côté, and Gilbert (2012) proposed was used. PYD toolkit consists of four measures to examine youth athletes' perceptions of the 4 C's.

The gymnasts' competence was measured by using the Sport Competence Inventory, developed by Vierimaa et al. (2012; adapted from Causgrove Dunn, Dunn, & Bayduza, 2007). The Sport Competence Inventory aims to measure three elements in athletes' competence: technical skills, tactical skills, and physical skills. The measure has three versions that provide a triangulated rating of an athlete's competence by the athlete herself, her teammates, and coach. In each version, gymnasts, teammates, and coaches rated gymnasts' competence on a 5-point Likert scale ranging from 'not at all competent' to 'extremely competent in the three elements. A single combined total score of a gymnast's competence was calculated at the end.

Confidence was examined using the modified form of the Self-Confidence subscale of the Revised Competitive State Anxiety-2 (CSAI-2R; Cox, Martens, &

Russell, 2003), which aims to measure athlete's 'trait confidence' (Vierimaa et al., 2012). The Self-Confidence subscale has five items (e.g., "I am confident I can meet the challenge"). Gymnasts rated themselves on a 4-point scale ranging from '*not at all*' to '*very much so.*'

Connection was examined using the Coach-Athlete Relationship Questionnaire (CART-Q; Jowett & Ntoumanis, 2004). CART-Q is composed of 11 items that measure the constructs of closeness (emotional dimension; e.g., I like my coach), commitment (cognitive dimension; e.g., I am committed to my coach), and complementarity (behavioral dimension; e.g., when I am coached by my coach, I adopt a friendly stance) in a coach-athlete relationship from the views of both athletes and coaches. Using identical but worded forms, gymnasts and their coaches rated their relationship on a 7-point scale ranging from 1 '*not at all*' to '*extremely.*'

Lastly, Character was examined using the Prosocial and Antisocial Behavior in Sport Scale (PABSS; Kavussanu & Boardley, 2009) after its adaptation for competitive artistic gymnastics context. PABSS is a 20-item questionnaire that has four sub-dimensions, which evaluate athletes' prosocial and antisocial behaviors both toward their teammates and opponents. The gymnasts rated their behaviors on a 5-point scale from '*never*' to '*very often.*' The total character score was calculated by subtracting the gymnasts' score on the prosocial dimension from their score on the antisocial dimension (Erickson & Côté, 2016).

3.2.2.1.1. Adaptation of PYD Toolkit

In adapting the measures, three steps were followed, respectively. Firstly, a back-translation procedure was followed (Brislin, 1980). Then, 'cognitive interviews' were conducted with a group of competitive youth gymnasts on the toolkit. Finally, psychometric properties of the Turkish version of the toolkit was tested with the data of youth athletes from a variety of individual and team sports. The Cronbach's alpha values of the present sample for each dimension were also reported.

3.2.2.1.1.1. Back Translation

Firstly, two independent bilingual experts in physical education and sports translated the original PYD toolkit into Turkish. Then, an agreement was reached after these two translations were compared and contrasted. After agreeing on the Turkish form by the translators, another translator translated this Turkish form of the PYD toolkit into English. These two forms of the PYD toolkit (English & Turkish) were decided to be matching with each other. In this way, the PYD toolkit was given its Turkish form in order to continue with further adaptation procedures.

3.2.2.1.1.2. Cognitive Interviews

In Turkey, competitions in artistic gymnastics start at the age of 7. Therefore, in order to determine the appropriate use of age limit, the usability of PYD toolkit was tested about its comprehensibility and content, conducting '*cognitive interviews*' with 12 competitive youth gymnasts between 8 and 14 years of age (Kilic & Ince, 2016).

Cognitive interviewing, rooted in cognitive psychology, is defined as "the administration of draft survey questions while collecting additional verbal information about the survey responses, which is used to evaluate the quality of the response or to help determine whether the question is generating the information that its author intends" (Beatty & Willis, 2003). It is a diagnostic toolkit for pre-testing instruments such as questionnaires and tests the validity of verbal reports based on the respondents' thought process (Willis, 2015). Collins (2001) stated that an important part of validity is that the participants have a similar understanding of the questions as the measurement designers; and that the questions do not exclude or misinterpret major ideas, or miss important aspects of the phenomena being examined. Collins (2001) described three preconditions behind this idea of standardization: firstly, respondents need to be able to understand the questions being asked; secondly, questions need to be understood in the same way by all respondents; and lastly, respondents need to be willing and able to answer these questions. There are three kinds of evidence to examine the validity of survey questions: (a) Statistical (identification of the specific effect of question measurement error on survey estimates), (b) direct study of the question – answer process (identification of how and where a question fails to measure purposefully), and (c) experimental (identification of

whether proposed changes to question forms actually improve data quality) (Collins, 2001). Collins (2001) states that "cognitive interviewing" refers to the second type of evidence.

The psychometric tests conducted to measure the validity and reliability of survey questions assume that all the respondents understand the questions in a consistent way, the questions are asking for information that respondents have and can retrieve, the wording of necessary information they require to be able to answer them in the way required by the researcher, and where interviewers are being used, they always read the questions as worded (Collins, 2001). Therefore, although psychometric tests may detect overt problems that may negatively affect participants' answering process, they cannot provide evidence for the reasons for the problems. Cognitive interviews, however, can provide answers both for revealing the reasons for answers and detect important constructs that may have been omitted, misunderstood, or incompletely represented in a survey question (Desimone & Le Floch, 2004). Respondents' thought processes must be understood to assess the validity and potential sources of error in a survey (Schwarz, 2007). Willis (2005) noted that the respondent's cognitive processes lead the survey response, and therefore, an understanding of cognition is a focus to designing questions and to understanding and reducing sources of response error (p. 23).

Cognitive interview is founded on the four-stage cognitive model of thought process (Tourangeau, 1984; Willis, Royston, & Bercini, 1991). According to the model, the respondent firstly needs to understand an item, then remember relevant information. After that, the respondent must make judgment dependent on the recall of knowledge. Lastly, he/she needs to answer the survey question depending on this process.

Willis (2015) defines two verbal reporting techniques in cognitive interview designs. These are "think-aloud" and "verbal probing" techniques. In the think-aloud technique, respondents verbalize their thought processes while answering survey questions. In this way, the interviewer determines respondents' thought processes and documents these processes real timely. The interviewer needs to be as neutral and uninvolved as possible so as not to direct the thoughts of respondents that may cause bias (Willson & Miller, 2014). In order to obtain quality data, short-term memory, as opposed to long-term memory, was considered to produce higher quality data in the respondents'

reports. Therefore, the technique is applied using concurrent verbal reporting (during question administration), to be sure that the respondent actually remembered what they were thinking and did not fabricate their thought process after the fact (Willson & Miller, 2014). The verbal probing technique, however, is asking probes that were prepared by the interviewer in order to explore how respondent approach survey items. The difference between the two techniques is that, in verbal probing, the interviewer takes a more active role in the interview and can collect specific data about the four-stage cognitive model (Tourangeau et al., 2000). In the think-aloud technique, however, the interviewer does not interact with the respondent by, for instance, never referring to themselves while interviewing process. Willis (2014) states that think-aloud technique demands less from the interviewer since it is about requesting from a participant to think aloud while answering the questions. On the other hand, verbal probing necessitates more responsibility on the interviewer, as the questions may take a variety of forms.

3.2.2.1.1.2.1. Cognitive Interview Procedures

Cognitive interviews were conducted with 12 gymnasts (5 girls, seven boys) between 8 and 14 years of age ($M = 10.75$) to evaluate the Turkish form of the PYD toolkit (Vierimaa et al., 2012). The interviews were conducted within the same cognitive lab with the same interviewer. The respondents were competitive youth gymnasts from the only central gymnastics hall in Ankara. In Piaget's (1970) Cognitive Development Theory, individuals progress through from the stage of concrete operations to the stage of formal operations between 11 and 12 years of age. Therefore, relatively more participants were recruited to the interviews in this age range. The demographic characteristics of the participants were presented in Table 3.4.

Cognitive interviews were conducted at a university setting (classroom) that had been arranged for the interviews. Each interview lasted approximately 30 to 40 minutes. Gymnasts answered the PYD toolkit by "thinking aloud", and they were encouraged to make comments on any problems they could encounter (e.g., what was clear and accurate, what was ambiguous or awkward, & what was absent from the item; Desimone & Le Floch, 2004) while they were completing every item of the toolkit. Right after the completion of an item, gymnasts were probed by the interviewer (researcher). A protocol

of questions designed to further examine the gymnasts' degree of comprehension of an item was utilized (Table 3.5).

Table 3.4. *Demographic characteristics of interviewees*

Age	Gender		Number
	Female	Male	
8	-	1	1
9	1	2	4
10	-	1	
11	1	2	
12	2	-	6
13	-	1	
14	1	-	1
Total	5	7	12

For example, a conversation between a gymnast and an interviewer occurred as follows:

- *Participant: (Thinks-aloud while reading the instructions part of a measure in the PYD toolkit)*
- *Interviewer: What does the item "I am close to my coach" mean to you? What is being close to your coach?*
- *Participant: My coach resides in the same vicinity as ours. So, we are close to each other.*

In examining another measure in the toolkit, the conversation was as follows:

- *Participant: (reads the instruction of the measure aloud)*
- *Interviewer: What does "competence" mean to you?*
- *Participant: I do not surely know. I have heard it for the first time.*
- *Interviewer: Can you explain what the instructions ask from you?*
- *Participants: (No answer).*

Table 3.5. *The cognitive probes utilized for the PYD Toolkit (Collins, 2001)*

Think-aloud/general	How did you go about answering that question? Tell me what you are thinking. I noticed you hesitated before you answered. What were you thinking about? How easy or difficult did you find this question to answer? Why do you say that?
Comprehension	What does the term x mean to you? What did you understand by X?
Retrieval	How did you remember that? Did you have a particular period in mind?
Confidence Judgment	How well do you remember this?
Response	How sure of your answer are you? How did you feel about answering this question? Were you able to find your first answer to the question from the response option shown?

The results related to each measure of PYD toolkit were presented below.

In Sport Competence Inventory, the participants below 12 could not comprehend the measure as intended. They could not thoroughly understand the items of "technical skills," "tactical skills," and "physical skills" in line with the inventory aims to measure. Additionally, these participants could not distinguish the items from one another, either. In Table 3.6, the difficulties that the participants encountered by age were presented.

In the Self-Confidence Subscale, reading difficulty, failing to remember instructions, and comprehension obstacles were observed with 8 and 9-year-olds. Additionally, these participants also had difficulty in rating the subscale (e.g., having difficulty in using a scale). Other participants were able to comprehend the instructions and the items of the subscale as intended and were able to fill the subscale correctly. The participants were able to comprehend the words "self-confidence," "to perform," "to mentally picture," and "to come through under pressure" starting from at the age of 10.

In the CART-Q, in parallel with the findings of other measures, relatively younger participants were not able to comprehend most of the terms involved in the measure. For example, when asked to a 9-year-old participant the meaning of "being close to coach," the participant understood the concept as "physical closeness," and responded as "Yes, I am close to my coach, he resides in the same vicinity as ours." Similarly, an 11-year-old

participant was asked to give an example of "sacrificing," and the participant responded as "it means my coach will not be angry with me when I do a skill wrongly." In Table 3.7, difficulties that the participants encountered in CART-Q by age were presented.

In the PABSS, 8 to 9-year-old participants were not able to comprehend the instructions of the measure. One participant had difficulty in both reading and comprehending the instructions. As for other participants (10 – 14 years of age), they more often had difficulty in understanding the items of the PABSS. For example, when asked about the 12 and 13-year-old participants about the meaning of "feedback," they responded as "I do not know." Another participant responded to the question as "answering positively in order for my friends not to think ill of me." In Table 3.8 difficulties that participants encountered in the PABSS by age were presented.

In addition to these findings, cognitive interviews revealed that several items in the PABSS might most probably be inappropriate for competitive artistic gymnastics context. For example, when a 14-year-old participant was thinking aloud, she said for the item "I deliberately fouled an opponent" as: "nobody fouls us since we do gymnastics by ourselves." This participant also commented for the item "I tried to injure an opponent" as "I cannot try to injure an opponent because I do not see my opponents when I compete."

Table 3.6. *Thematic classification of the observed comprehension obstacles encountered by age in sport competence inventory (Adapted from Willis & Zahnd [2007])*

Items	Age (n)						
	8 (1)	**9 (3)**	**10 (1)**	**11 (3)**	**12 (2)**	**13 (1)**	**14 (1)**
Technical skills (e.g., handstand, backflip on balance beam, somersault on the floor)	RD, RS, C, FR, D	RD, RS, C, FR, D	D	D	-	-	-
Tactical skills (e.g., decision-making, developing a strategy)	RD, RS, C, FR, D	RD, RS, C, FR, D	C, D	D	-	-	-
Physical skills (e.g., strength, speed, agility, endurance, & flexibility)	RD, RS, C, FR, D	RD, RS, C, FR, D	D	-	-	-	-
Words							
Competence	RD, C	RD, C	-	-	-	-	-
Being competent	RD, C	RD, C	-	-	-	-	-
Sincerity	RD, A	RD, A	A	-	-	-	-
Rating	RD, A	RD, A	-	RD (1)	-	-	-

Codes: *reading difficulty (RD), reading slowness (RS), comprehension (C), fail to remember instructions (FR), fail to distinguish technical, tactical, & physical skills (D)*

Table 3.7. *Thematic classification of the observed comprehension obstacles encountered by age in CART-Q*

Concepts in the items	Age (n)						
	8 (1)	**9 (3)**	**10 (1)**	**11 (3)**	**12 (2)**	**13 (1)**	**14 (1)**
To be committed	RD, C	RD, C	C	-	-	-	-
To trust	RD, C	RD, C	-	-	-	-	-
To have a promising future	RD, C	RD, C	-	-	-	-	-
To sacrifice	RD, C	RD, C	C	C (2)	-	-	-
To adopt a friendly stance	RD, C	RD, C	-	-	-	-	-
To be close	C	C	C	-	-	-	-

Themes: reading difficulty (RD), comprehension (C)

Table 3.8. *Thematic classification of the observed comprehension obstacles encountered by age in the CART-Q*

Concepts	Age (n)						
	8 (1)	9 (3)	10 (1)	11 (3)	12 (2)	13 (1)	14 (1)
Positive feedback	C, RD	C	C	C	C	C	-
Criticize	C	C	-	-	-	-	-
Constructive feedback	C	C	-	-	-	-	-
Physically intimidate	C	C	C	C (2)	-	-	-
Verbally abuse	C	C	C	-	-	-	-
Encourage	C	C	-	-	-	-	-
Season	C	C	-	-	-	-	-
Experience	C	C	-	-	-	-	-
Respond honestly	C	C	-	-	-	-	-
Rarely	C	C	-	-	-	-	-
Foul	C	C	-	C	C	-	-

Themes: reading difficulty (RD), comprehension (C)

Results revealed that the participants who were below 12 years of age were not able to comprehend instructions and items of PYD toolkit as intended, and had difficulty in distinguishing the concepts from each other. Also, the content of the PABSS was found to be in need of modification for its appropriate use for competitive youth artistic gymnastics context."

According to Piaget's (1970) theory of cognitive development, intellectual growth proceeds through an invariant sequence of stages. Humans progress through from the concrete operational stage to the stage of formal operations between 11 and 12 years of age. Children in the cognitive operation stage cannot abstractly reason while they can apply their logic to the tangible aspects of the experience. Formal operational

stage; however, involves ration and abstract thinking. The PYD toolkit aims to measure a psychosocial aspect of athletes' experiences; and therefore, generally involves abstract concepts within itself. The items that the participants were not able to comprehend (e.g., sacrifice, closeness, & complementarity) were mostly related to the formal-operational stage in which better personal decision-making, forming an identity, thinking about the psychological reasons for others' behaviors, and results of an action takes place (Shaffer & Kipp, 2014; p. 225). Piaget believed that the transition from concrete-operation to formal-operational reasoning occurs very slowly.

Additionally, although Piaget stated the invariability of the developmental stages, he argued that transition age through the stages depends on numerous individual differences. He stated that the cultural factors and other environmental influences might either accelerate or retard children's cognitive development rate. Therefore, Piaget regarded the age norms representing the cognitive stages as approximations (Shaffer & Kipp, 2014; p. 205). Giving support to Piaget's Cognitive Theory, findings revealed that although the PYD toolkit was able to be implemented with athletes from 10 years of age (Vierimaa et al., 2012), it may be more appropriate that the PYD measurement framework is used starting from 12 years of age in Turkish sporting culture.

Because the PABSS is designed primarily for team sport (Kavussanu & Boardley, 2009; Vierimaa et al., 2012), several items of the PABSS did not fit to artistic gymnastics context. Specifically, the behaviors "to deliberately foul an opponent" and "to try to injure an opponent" were reported as irrelevant by the participants. These items pertain to 'physical contact' with an opponent. Since other items pertain to physical contact as well, expert opinion of two coaches (national & international level coaches) were also taken regarding the relevancy of the items of the PABSS. The expert coaches verified the items that the participants stated in the cognitive interviews. Additionally, the coaches pointed out that the item "I physically intimidated an opponent" as most likely to be irrelevant for artistic gymnastics context.

3.2.2.1.1.3. Psychometric Testing of the PYD Toolkit

In the light of the findings of the cognitive interviews and opinions of expert coaches on the issue, a) the PYD toolkit was given its last form, and applied to participants starting from 12 years of age for all data collection procedures, including psychometric testing of the PYD toolkit and evaluating gymnasts' outcomes, and b) 3

items that found as irrelevant in the PABSS were excluded from the measure before data collection.

In testing the construct validity of the two measures (i.e., the Self-Confidence subscale, & the PABSS), Confirmatory Factor Analyses were conducted. Initially, the assumptions of the CFA were tested (i.e., sample size, missing data, & outliers; Tabachnick & Fidell, 2013) in their relevant data. Then, the analyses were conducted, and the fit indices for the measures were reported. As superiority of any fit indices was not proven, multiple fit indices for the measures were reported. Chi-square statistics, Comparative Fit Index (CFI), Non-Normed Fit Index (NNFI), and Root Mean Square of Approximation (RMSEA) values were reported. An insignificant result of Chi-square statistic indicates a good fit of a model; however, this statistic is sensitive to sample size (Tabachnick & Fidell, 2013). Kline (1998) suggests that a good indicator of model fit can also be a Chi-square to *df* ratio that is to be less than 3. For an acceptable fit, CFI and NNFI values should be larger than .90 (Maruyama, 1998; Schumacker & Lomax, 1996). For RMSEA, values less than .05 indicate good model fit, and values between .05 and .08 indicate mediocre model fit (Brown & Cudeck, 1993). The values above .10 indicate poor fit (MacCallum, Browne, & Sugawara, 1996). Additionally, factor loadings of each item of the PABSS were reported. Stevens (2002) recommends that the factor loadings be greater than .40 (Field, 2009; p. 645). The relevant psychometric procedure followed for each measure in the PYD toolkit was explained under their titles, respectively.

3.2.2.1.1.3.1. Competence

To evaluate the reliability of Sport Competence Inventory, raters' internal consistency reliability (athlete, coach, & teammate; Cronbach's Alpha) and inter-rater reliability were examined with a sample of 392 youth athletes (12-18 years of age; M_{age} = 14.01; SD = 1.86) from artistic gymnastics (n = 45, 11.7%), basketball (n = 46, 11.7%), boxing (n = 27, 6.9%), football (n = 31, 7.9%), rhythmic gymnastics (n = 8, 2%), swimming (n = 55, 14%), tennis (n = 38, 9.7%), track and field (n = 61, 15.8%), volleyball (n = 37, 9.4%), and wrestling (n = 43, 11%). The participants' mean score of training days in a week were 4.47 (SD = 1.21). In the calculations, gymnasts' self-rating scores, the average score of teammate ratings, and coach's ratings were used as suggested (Vierimaa et al., 2012). In examining the internal consistency reliability of

the raters, Cronbach's alpha values for each raters' total score was calculated. In order to examine inter-rater reliability, Intraclass Correlation Coefficient (ICC, Field, 2009) scores were calculated for each item. Intraclass correlations measure the relationship between the variables that measure the variables within the same class, and it can be used to assess the consistency between judges' (raters') ratings of a set of objects (Field, 2009; p. 678).

Primarily, the data were screened regarding univariate and multivariate outliers. Each value that exceeds the value range of ±3.29 is considered an outlier (Tabachnick & Fidell, 2013). No univariate outliers were detected as excessing the range of 3.29 standard deviations (Tabachnick & Fidell, 2013). Mahalanobis distance with $p < .001$ did not detect any multivariate outliers, either. Cronbach's alpha values for the three dimensions were found .81 for athletes, .86 for coaches, and .88 for teammates. The result revealed that the reliability values for each rater were above the acceptable value limit of .70 (Nunnally, 1978).

Table 3.9. *The rater's descriptive and internal consistency information*

The Raters	Technical Skills		Tactical Skills		Physical Skills		Internal Consistency
	M	SD	M	SD	M	SD	α
Athletes (n = 392)	3.66	1.02	3.56	1.08	3.65	1.05	.81*
Coach	3.42	1.10	3.26	1.16	3.20	1.10	.86*
Teammates (average)	3.64		3.49		3.56		.88*

* α > .70

ICC values of the raters (athlete, coach, & teammate) for each item were .75 for technical skills, .70 for tactical skills, and .68 for physical skills. For the present sample, based on a single combined score of gymnasts' competence scores in each dimension, Cronbach's alpha value was .80.

3.2.2.1.1.3.2. Confidence

The psychometric properties of the CSAI-2R had been tested with two independent sample of athletes (Cox, Martens, Russel, 2003). A confirmatory factor analysis revealed that the self-confidence subscale had good psychometric properties with standardized path coefficients of .69 to .80.

The construct validity of the Turkish self-confidence subscale of the Revised Competitive State Anxiety-2 was examined with a dataset comprised of 382 competitive youth athletes (182 female, 47.6%; 200 male, 52.4%) from artistic gymnastics (43, 11.3%), basketball (n = 46, 12%), boxing (n = 26, 6.8%), football (n = 31, 8.1%), rhythmic gymnastics (n = 8, 2.1%), swimming (n = 55, 14.4%), tennis (n = 38, 9.9%), track and field (n = 61, 16%), volleyball (n = 36, 9.4%), and wrestling (n = 38, 9.9%). The participants' mean score of training days in a week were 4.46 (SD = 1.21). Confirmatory Factor Analysis (CFA) was conducted with AMOS 20 software program after data screening.

Firstly, the data were screened for univariate and multivariate outliers. One univariate outlier was found excessing the range of 3.29 standard deviations from the mean, and its score was changed with the closest extreme score that was in between the defined range (Tabachnick & Fidel, 2013). Two multivariate outliers were detected using Mahalanobis Distances at α = .001 level. These cases were excluded from subsequent analysis (Tabachnick & Fidel, 2013). Skewness and kurtosis values were within the boundaries of -3 and 3. For multivariate normality assumption, Mardia's test was run and was not found significant ($b2p$ = 33.53, p = .09). Therefore, the data were examined by using Maximum Likelihood method. Findings (CFI = 0.98; NNFI = 0.96; RMSEA = 0.07, and χ^2/df = 1.436) revealed that the self-confidence subscale demonstrates good psychometric properties. Cronbach's alpha of the measure was .76. For the present sample, Cronbach's alpha was .71. The item loadings of the measure were presented in Table 3.10.

Table 3.10. *Factor loadings of items for Turkish Self-Confidence Subscale of the CSAI-2R*

Item		Factor Loadings
1	I feel self-confident.	.72
2	I'm confident I can meet the challenge.	.64
3	I'm confident about performing well.	.71
4	I'm confident because I mentally picture myself reaching my goal.	.64
5	I'm confident of coming through under pressure.	.47

3.2.2.1.1.3.3. Connection

The psychometric properties of the Turkish version of CART-Q had been evaluated with 71 coaches and 151 youth athletes from individual and team sports (Altıntaş, Çetinkalp, & Aşçı, 2012). Internal consistency coefficients of the subscales of CART-Q were reported to range from .82 to .90 for athletes, and .69 to .78 for coaches. For the present sample, Cronbach's alpha values of the subscales of the CART-Q range from .70 to .78 for gymnasts. As only nine coaches evaluated the relationship with their teams of gymnasts, Cronbach's Alpha value was not calculated for the coaches.

3.2.2.1.1.3.4. Character

The PABSS was originally developed for team sports; therefore, psychometric properties of the measure were tested as suggested (Vierimaa et al., 2012) after revising its content for individual sports, most adequately for artistic gymnastics, in which physical contact of an opponent is not likely to occur. In cognitive interviews, most of the gymnasts had regarded the item "I deliberately fouled an opponent" and item "I retaliated after a bad foul" as inappropriate and stated that these behaviors do not occur neither in training nor competitions. After that, the items of the PABSS had also been discussed with a group of expert coaches with national and international levels in order to confirm the findings. In addition to verifying the irrelevance of the two items perceived by the gymnasts, the coaches had also regarded the item "I tried to injure an opponent" as irrelevant for artistic gymnastics context. Finally, two experts with Ph.D. in sports sciences had discussed the appropriateness of the PABSS to artistic gymnastics context. Based on this pre-testing process, the abovementioned three items were excluded from the measure before further testing and analysis.

To evaluate the psychometric properties of the 17-item PABSS, CFA was conducted with a sample of 158 individual competitive youth athletes (artistic gymnastics, n = 40; swimming, n = 33, 20.9%; tennis, n = 34, 21.5%; & track and field, n = 51, 32.3%) between 12 and 18 years of age. Firstly, the data were screened for univariate and multivariate outliers. One univariate outlier was found excessing the range of 3.29 standard deviations from the mean, and its score was changed with the closest extreme score that was in between the defined range (Tabachnick & Fidel, 2013). One multivariate outlier was detected by Mahalanobis Distances at α = .001 level. This case was excluded from subsequent analyses (Tabachnick & Fidel, 2013). To examine

multivariate normality, Mardia's Test (Mardia, 1985) was used and found insignificant. Therefore, CFA with Maximum Likelihood estimation was run with the data with 157 participants.

The first run of CFA revealed that the item 20 "I physically intimidated an opponent" was loaded with a value of less than .40. Therefore, this item was also eliminated from the scale before further analysis. The second run of CFA revealed the model indices as CFI = .939; NNFI = .925; RMSEA = .053, and χ^2/df = 1.436, indicating a good fit of the model. Each item of the measure significantly contributed to the proposed dimensions of the hypothesized model. The factor loadings of the 16 items were presented under their subdimension in Table 3.11.

Cronbach's alpha assessing internal consistency was .74 for prosocial dimension, and .80 for antisocial dimension. For the present sample, Cronbach's alpha was .55 for prosocial dimension, and .88 for antisocial dimension.

Table 3.11. *Factor loadings of items for the PABSS*

Subdimension	Item numbers	Standardized estimates
PO	Item 4	.75
	Item 6	.69
	Item 10	.77
AO	Item 2	.58
	Item 13	.79
	Item 17	.68
	Item 19	.48
	Item 20	.02
PT	Item 1	.46
	Item 8	.82
	Item 12	.46
	Item 15	.81
AT	Item 3	.46
	Item 7	.65
	Item 11	.70
	Item 14	.64
	Item 18	.61

PO: Prosocial behaviors towards opponent; AO: Antisocial behaviors towards opponent
PT: Prosocial behaviors towards teammate; AT: Antisocial behaviors towards teammate

The relatively low value of Cronbach's alpha for prosocial dimension can be attributed to a small sample size of the participants (N = 45). Similar to previous research (Erickson & Côté, 2016), this study aimed to picture gymnasts' outcomes holistically. Therefore, for the present sample, an overall character score was calculated for each gymnast by extracting their ratings in antisocial dimension from the prosocial dimension.

3.2.3. Data Analysis

After data screening, descriptive statistics of the gymnasts' responses of 4 Cs (competence, confidence, connection, & character) both in general and based on gender and age-group differences were calculated. Then, gymnasts' scores in each dimension were compared based on their gender and competitive level (i.e., age-group). In this sense, the gymnasts were grouped based on their level of competition as Age-group 1 ($n = 21$; 12-13 years of age), and Age-group 2 ($n = 24$; 15-17 years of age) similar to the age stages of the DMSP. The statistical analyses were done with SPSS software (Version 24). In the further data analyses, gymnasts' each total "C" score on the PYD toolkit were compared based on age group and gender, carrying out Mann-Withney test (Mann & Withney, 1947).

3.2.4. Limitations

In evaluating the study findings, the following limitations of the study should be considered. Firstly, the 4 Cs of athlete outcomes data were collected via surveys. Secondly, the data represents the three major cities of Turkey. Thirdly, the psychosocial aspect of the study (i.e., confidence, connection, & character) represent solely the gymnasts' perceptions. Only competence measurement has a scoring method that involves coaches' and teammates' perceptions in addition to the gymnasts. Fourthly, the sample size of the study was rather limited due to the limited total participating competitive gymnasts between the age group determined at the time of data collection. Roughly nearly half of the population of competitive gymnasts between these ages were reached. Finally, the gymnasts' peer relationships were not examined because of setting limitations.

3.3. Study 2

3.3.1. Participants

3.3.1.1. The Coaches

Men's artistic gymnastics coaches from the biggest professional gymnastics hall located in Ankara were invited to the study. Among the coaches who accepted to participate, six of them were invited for the study. Since the gymnastics hall is the only one, which hosts participatory, developmental, and elite gymnasts, the coaches were invited from the hall using purposeful sampling. This site and the coaches invited were "information rich" for the purpose of the study (Creswell, 2009; p. 206). The purposeful sampling serves for best understanding the central phenomena by selecting people and sites intentionally (Creswell, 2009). The reason for selecting coaches from Ankara was to facilitate coaches' weekly learning community meetings. Coaches with different coaching levels were purposefully selected to enhance group learning. The selected coaches volunteered to participate in a six-week learning community meetings. The coaches' detailed information is presented in Table 3.12.

The two of the coaches who participated in the LCP (Coach 1 & Coach 6) naturally participated to the study once more by reporting the effects of the program on their practices and their gymnasts' developmental outcomes long after the implementation of the program.

3.3.1.2. The Facilitator

The facilitator was a Ph.D. working at a university for more than two decades as a lecturer at the time of the study conducted. He has more than a decade of experience in athletics as an elite athlete and was a national team coach in Turkish triathlon whose athletes competed both nationally and internationally. He completed his Ph.D. in Curriculum and Instruction in Educational Sciences with the expertise of instructional design in physical education. He is highly experienced in designing, supervising, and facilitating teaching practices, and building and sustaining professional development opportunities to practitioners (e.g., communities of practice, see Hunuk Ince, & Tannehill, 2013).

The facilitator's role was to represent the university as a member of the learning community. A learning community necessitates a steady professional leadership to be built and sustained to create a cooperative learning environment (e.g., Culver et al.,

2009). His position was mainly to present key concepts and relevant empirical information to the coaches by preparing discussion worksheets for each topic, listen to the coaches' ideas and experiences regarding the topics and relevant concepts, and maintain the focus of the meetings rather than trying to lead the coaches to one end directly.

3.3.1.3. The Psychologist

The psychologist had a bachelor's degree in psychology and specialized in sport psychology. She is an experienced consultant who has been professionally working with elite youth athletes in athletics and figure skating.

The psychologist's role was to answer coaches' specific questions that pertain to their felt needs in the domain of sport psychology. She was invited to take part in the study on the coaches' demand towards the end of the meetings. Her position was to answer the coaches' questions regarding their contextual problems.

3.3.2. The Intervention

The coaches participated in a six-week learning community program. The meetings were held at a local university laboratory. The laboratory was equipped with audiovisual educational technologies. The weekly meetings lasted for approximately 2-3 hours. The program was designed to bring coaches together to discuss the 4 Cs of athletes' developmental outcomes. Mainly, the aims of the meetings were to 1) make coaches aware and knowledgeable about holistic approach to athlete development, 2) provide the coaches with an environment in which they can learn both from group experiences and relevant empiric knowledge in regard to the elements of coaching effectiveness (i.e., the 4 Cs), and to 3) help coaches develop reflective skills regarding their own coaching practices in the context of the holistic approach to sport coaching.

The discussions in each meeting were led by the facilitator. Each meeting focused on the dimensions of the 4 Cs. The last meeting focused on coaches' reflection on the 4 Cs and the program designed. The focus of the first meeting was to introduce the coaches the purpose of the program, its principles, and the 4 Cs of athlete outcomes and their links with coaching effectiveness.

Table 3.12. *Coaches' biographies and coaching roles*

Coach	Roles	Gender	Age	Years in coaching experience	Education	Level (out of 5)
Coach 1	Head coach; Coach educator	Male	35	11	Bachelor's in PE & Sports	4
Coach 2	Head coach	Male	49	20	Bachelor's in Sports Coaching	5
Coach 3	Assistant coach	Male	24	4	Bachelor's in PE & Sports	2
Coach 4	Assistant coach	Male	24	3	Undergraduate in Sports Coaching	2
Coach 5	Assistant coach	Female	23	2	Undergraduate in PE & Sports	2
Coach 6	Assistant coach	Male	22	3	Bachelor's student in Sports Coaching	2

Coaches chose the order of the topics to discuss as well as offering an additional topic they felt important as an outcome for athlete development (i.e., creativity). In the second meeting athletes' character development was discussed. The third meeting targeted at discussing "connection" that is the relationship between coaches and athletes, as well as athletes and others. The fourth meeting focused on athletes' development of "confidence" and "creativity." In the fifth meeting, the group discussed youth athletes' "competence" development and met the sport psychologist to discuss their felt coaching needs. Coaches discussed their contextual needs with the sport psychologist that they had expressed during the meetings. Lastly, the sixth meeting involved a reflective practice on what has been discussed so far and ended with an evaluation of the learning community experience as a group. All of the meetings were video-recorded and transcribed verbatim.

The learning community program was developed considering Wenger's (1998) social theory of learning, the elements of a learning community approach, and the principles of adult learning (Brookfield, 1986; pp. 10). The program developed was in line with the three dimensions of practice that constitutes a community of practice. These are mutual engagement, joint enterprise, and shared repertoire. As suggested in situated learning theory, in the learning environment developed, these three dimensions were present. While "shared repertoire" was naturally present from the beginning of the meetings, the other dimensions were built and nurtured throughout the program. Firstly, the coaches have become mutually engaged by negotiating on the topics and knowing how to go for help as well as meeting each other's needs when necessary. Secondly, a collective negotiation on the topics and issues has been built even if there is no full agreement on them. This collective negotiation shows freedom of any outside mandate that could be fully directed by an outsider (Wenger, 1998; p. 80). Thirdly, all the coaches were from the same sport environment and were discussing the same topics that the facilitator helped them assimilate and then later use. This process facilitated the negotiation of meaning. When the participants of a group maintain their mutual engagement for a long time and learn from each other, a community of practice is formed. Therefore, the study reflects more of the facilitation of a community of practice with beginning as a learning community functioning as a transitional stage to it.

In the definitions of "the learning communities", it is clear that almost all of the elements of it comply with the CoP approach. The emphasized elements in the definition of the learning community are working together, accomplishing shared goals, examining data about students (learners), and providing each other with assistance to accomplishing shared goals (Saunders & Goldenberg, 2005). The participants in the program worked together to accomplish a shared goal that was improving their coaching effectiveness. They examined contextual data that reflect their coaching setting, and enriched its meaning by amalgamating with their field experiences. Lastly, they supported each other's learning throughout the meetings through both their experiential knowledge and the relevant scientific information provided. Therefore, from this perspective, the program developed can be assumed to be a learning community and cultivation of a coaches' community of practice.

In line with Wenger's (1998) suggestion, the members of the community shared a common interest (a specific coaching issue), collectively pursued that interest (increased their perceived coaching effectiveness, fully participated), and socially interact with each other (met to discuss coaching issues weekly, asking questions). Additionally, the trust and respect among community members have been present, which was regarded as the indicator of an effective community (Whitcomb, Borko & Liston, 2009).

In helping adults learn effectively, Brookfield (1986) suggested the six principles. These are voluntary participation, respect of each other's self-worth, collaboration and cooperation, a continual process of collaborative practice, increased critical reflection, and nurturing of self-directed, empowered adults. Each of the principles considered as vital to the LCP and adopted for providing an effective adult learning environment for the coaches.

The main content of the six-week learning community program is presented in Table 3.13.

The facilitator followed a standardized discussion worksheet designed for the meetings that serve the learning community to a) identify coaches' initial knowledge on the topic to be discussed, b) develop a shared understanding among the coaches by defining the outcome and relating its theoretical background with the coaches'

experiences and field observations, c) reveal coaches' various perspectives on the factors influencing the facilitation of the outcome discussed, and the working strategies they developed to enhance the facilitation of that outcome, d) discuss the results of relevant data in relation to the outcome in-depth, and e) discuss relevant scientific information in facilitating the development of the outcome, respectively.

When followed step by step, the design of the worksheet aimed to a) create an awareness and adoption of the topic discussed, b) make coaches familiar of the academic language of the concept discussed, c) enhance group learning based on different professional experiences, d) disseminate the latest scientific knowledge with the level of language that coaches can comprehend with their native language, e) ignite coaches' reflection on their own practices based on what they have learned both from group experiences and relevant scientific information provided, and finally f) have an adequate conceptual repertoire and awareness that help them become competent in determining their professional needs and communicating these needs with field experts (e.g., a sport psychologist). The worksheet especially serves for coaches' knowledge translation and internalization. The design of the worksheet format also in line with previous research that provides a framework for knowledge translation (i.e., Graham, et al., 2006). Recent work in coaching research used the framework for the purpose of bridging the knowledge gap in youth sport context (Holt et al., 2017).

The developed standardized worksheet for each meeting that includes athletes' developmental outcomes is presented in Table 3.14.

The content of the meetings was determined based on the needs appeared in the 4 Cs framework. The results of Study 1 indicated coaches' needs in each developmental dimension. For each meeting topic (e.g., connection) relevant eligible scientific information was reviewed and prepared in the form that the coaches can easily comprehend to increase the coaches' effectiveness for each topic (i.e., 4 Cs).

In deciding the relevant information, the suggestions of relevant work (e.g., Côté & Gilbert, 2009; Vierimaa et al., 2012; Vella & Gilbert, 2014; Côté et al., 2010) were primarily considered. The empirical information used for each C was presented in Table 3.15.

Table 3.13. *The content of the six-week LCP*

Week	Topic
1	Introduction on the purpose and the principles of the program
	Introduction of the 4 Cs of athlete developmental outcomes (competence, confidence, connection, & character)
	Discussion on the coaches' ways of obtaining professional knowledge
2	Discussion on athletes' development of "Character"
3	Discussion on gymnasts' "Connection" (athletes' relationship with significant others) development
4	Discussion on gymnasts' "self-confidence" and "creativity" (suggested by the coaches) development
5	Discussion on gymnasts' "competence" development
	Meeting with a sport psychologist (to discuss contextual needs and current coaching practices on the coaches' demand)
	Discussion on the program experience
6	Discussion on the coaches' changing views & practices
	Discussion on the content & delivery of the program

Table 3.14. *A standardized worksheet format followed throughout the meetings*

	Steps	Aims
1	Identify coaches' initial knowledge on the topic to be discussed	- To make coaches to express their understanding of a topic - To draw the coaches' attention and raise their awareness regarding the topic
2	Develop a shared understanding of the topic among coaches by defining the outcome and relating its theoretical background with the coaches' experiences and field observations	- To be able to discuss the topics based on the same ground of understanding - To enhance ownership of the concept - To make coaches familiar with the academic language of the concept to be discussed
3	Discuss coaches' various perspectives on the factors influencing the facilitation of the outcome discussed and the working strategies they developed to enhance the facilitation of that outcome	- To enhance group awareness of the factors and learning based on different professional field experiences and views - To enhance group interaction
4	Discuss the findings of relevant data about the outcome in-depth	- To increase awareness and ownership of coaches' professional needs - To think about underlying reasons for the results and reflect on coaching practices that may lead to these results
5	Discuss relevant scientific information in facilitating the development of the outcome	- To enable coaches to obtain relevant eligible knowledge - To facilitate a deeper understanding of the issue by introducing the latest relevant scientific information and reflecting on coaches' previous knowledge and thoughts about the topic with a different lens.

Table 3.15. *The content of relevant empirical information shared with the coaches during the meetings*

Content	Source	Models & Conceptual Frameworks Used
Character	Kavussanu & Boardley (2009); Shields & Bredemeier (2014)	- Model of moral action (Bandura, 1999) - Prosocial and antisocial behaviors, moral disengagement (Kavussanu & Boardley, 2009) - Self-determination Theory (Nicholls, 1984)
Connection	Jowett (2007) Lorimer & Jowett (2014)	- The conceptual model of the coach-athlete relationship (Jowett, 2007) - COMPASS model of relationship maintenance in the coach-athlete relationship (Rhind & Jowett, 2010)
Confidence	Vealey (1986); Vealey & Vernau (2010)	- Definition of sport confidence (Vealey, 1986) - Model for building confidence (Vealey & Vernau, 2010)
Creativity (added by participants)	Grigg & McGregor (2012); Nickerson (1999)	- Development of creativity to develop teaching and learning of gymnastics - Key developments underpinning creativity (Nickerson, 1999)
Competence	Martens (2012); Balyi et al. (2013);	- Teaching techniques (cognitive, practice, & automatization phases; Martens, 2012) - Teaching tactics (tactical triangle; Martens, 2012) - Trainability based on physical growth and development (Balyi et al., 2013) - Differentiated communication based on cognitive stages (Shafer & Kipp, 2013) - Emotional development (Balyi et al., 2013)

3.3.3. Data Collection Instruments

The data were collected in 2015 and following two years. The data regarding the meetings were collected May through the second week of June 2015. The data regarding the long-term effect of the program were collected via ongoing field observations from the end of the meetings and conducting unstructured interviews with two participant coaches in December 2017. Qualitative data collection methods were used for the present study. The qualitative data collection instruments are presented in Table 3.16.

3.3.3.1. Video-Recorded Six-Week LCP

The main data source for the intervention study was the video records of the six-week LCP meetings. The permission was taken from the participants for the recordings. The aim of the video records of the LCP meetings was to understand the whole processes of the coaches' LCP experience during which the coaches and the facilitator were in mutual interaction. The recorded data were transcribed for the analysis.

3.3.3.2. Interviews

The interviews regarding the study were conducted by the researcher. All of the coaches, the facilitator, and the sport psychologist were interviewed face to face at the end of the LCP experience. With the facilitator and the sport psychologist, semi-structured interviews were conducted. With the coaches, a focus group interview was conducted. A combined approach was used during the focus-group interviews (Patton, 2002). Using both a structured format that include the questions that must be asked, there were additional questions to serve for deepening or exploring the topic based on the researcher's choice (Patton, 2002). As Denzin and Lincoln (2008) suggest, there is no one style in interviewing that could fit any situation or for any participants. Therefore, in this study, interviews were conducted using a standardized interview format during the focus group interviews. Interviews were conducted with the flexibility that the interviewer can continue with a special interest to an issue regarding the topic. In the focus group interview, in addition to the coaches' LCP experience, the researcher also focused on the ways the coaches use to develop themselves professionally.

Table 3.16. *The qualitative data collection instruments*

Research Questions – Subquestions	Data Collection Instruments
2) How does a 6-week learning community program based on the needs arose from the gymnasts' perceived developmental outcomes affect coaches' views and knowledge towards gymnasts' 4 Cs and their learning community experience?	
(a) How does the 6-week learning community program take place?	- Video-recorded six-week LCP - Researcher notes (non-participant observation)
(b) How does a 6-week learning community program affect coaches' perceptions of the 4 Cs and the learning community program experience?	- Focus group interviews with coaches - Post-interview with the facilitator - Post-interview with the sport psychologist
3) What are the long-term effects of the LCP on the coaches' practices and their athletes' sport outcomes?	- Participant observation - Interviews with two coaches

3.3.3.2.1. Semi-Structured and Unstructured Interviews

Semi-structured interviews conducted with the facilitator, the sport psychologist, and the coaches who provided critical information about the LCP experience. The facilitator and the sport psychologist provided important descriptive and evaluative information about the LCP experience. In the unstructured interviews conducted with the two coaches explained how the LCP affected their coaching practices and consequently their athletes' sport-specific outcomes in two years. The interview conducted with the facilitator aimed to understand the facilitator's role during the LCP, specifically, how he defined the meetings regarding coaches' discussions on the elements of coaching effectiveness and the process of building relevant knowledge regarding these elements. The purpose of the interview conducted with the sports psychologist was to understand her views on her experience in the informal learning situation designed. Specifically, a) her views on coaches' ability in defining their own needs and communicating these needs with her, b) the coaches' approach towards her as a field specialist and c) her opinion on meeting coaches to discuss their needs in such an environment were the focus areas that she pointed out.

The coaches determined the focus of the interviews. The coaches reported on how their coaching practices changed after participating in the LCP, and how their subsequent changes in their practices affected their athletes' developmental outcomes. Two of the coaches gave critical examples of what they have experienced in the period (approximately after two years) regarding the changes in their practices and the improvements in their young gymnasts.

3.3.3.2.2. A Focus-Group Interview

Focus-group interviews have been widely used in social science and applied research, specifically in action research and in program design and evaluation (Marshall & Rossman, 2016). The groups are composed of a small number of people (4 to 12 persons) who share specific characteristics relevant to the study's questions (Marshall & Rossman, 2014). The focus-group interviews can be semi-structured or unstructured (Sparkes & Smith, 2014). The researcher builds a supportive environment for the participants to be able to express their personal, multiple, and sometimes conflicting point of views (Sparkes & Smith, 2014). For Sparkes and Smith (2014), this facilitation

of a supportive environment may involve periodically recalling the focus of the group, prompting group members to answer issues, and ascertaining agreements and disagreements among group members. Since this method is socially oriented, it allows for studying participants in a more natural atmosphere instead of artificial experimental conditions, and a more relaxed environment than a one-to-one interview (Marshall & Rossman, 2014). In the study, specifically, the type of "phenomenological focus groups" was used. This type of focus group interview method is used when exploring the groups' views and experiences in which the researcher seeks to understand the essence of someone's experience, their consciousness and the essential features of someone's experience of a particular phenomenon (Savin-Baden & Major, 2013; p. 377). An interview protocol was used in the focus-group interview. The protocol involved questions about the coaches' motivations for participating in the program, the possible changes in their attitudes and to athlete development and their subsequent practices, their views on the contributions of the program to their professional development in general, and their views on the learning environment built through a LCP (e.g., sharing experiences, meeting empirical information, and interaction).

3.3.3.2.3. Field Notes

Field notes are text recorded by the researcher during observation in a qualitative study (Creswell, 2012; p. 216). For Lofland (1971; 102) the most important determinant of later bringing of qualitative analysis are the field notes. Field notes include everything the researcher regards essential to note during the observation (Patton, 2002).

I collected field notes as a nonparticipant observer (Creswell, 2012) in each meeting of the LCP by keeping a research diary. The field notes included the setting features of the intervention occurred, the participants' behaviors and social interactions during the meetings, and my reflections and interpretations of the happenings throughout the meetings. The field notes provided a better understanding of the coaches' processes of increasing their awareness and knowledge in the 4 Cs, increase in the ability to define their professional needs and communicating them with the field experts through the end of the program. Field notes were also corroborating the interview results.

As a coach in the setting, I also acted as a participant observer (Creswell, 2012) during and after the program. During that prolonged period (2 years) I had a chance to observe the coaches in their setting and took field notes. I remained close to the coaches for any possible occasion regarding their professional development.

3.3.4. Data Collection Procedure
3.3.4.1. Data Collection

The data were collected in three distinct time periods during the spring semester of 2015-2016. Firstly, the data collected throughout the 6-week LCP meetings. The data was obtained in a university laboratory by video recording all of the meetings and taking field notes. Each meeting record was transcribed verbatim for the analysis. Secondly, at the end of the sixth meeting, a focus-group interview was conducted with the coaches.

Additionally, semi-structured interviews were conducted with the facilitator and the sport psychologist regarding their LCP experience. Thirdly, unstructured interviews were conducted with the two coaches who participated in the LCP after two years (December 2017). Since the researcher's role was also a coach in the same context as coaches', it was possible to remain close to the five of the coaches for a long time. The two of the coaches (Coach 1 & Coach 6) participated in the LCP approached to the researcher to reflect on the effects of their participation in the program on their practices and consequently their gymnasts. Especially one developmental level gymnast's competition records were reported by the coach to prove his improvement.

3.3.4.2. Researcher's Role

I have been researching in the area of sports coaching and also coaching in a participation artistic gymnastics context for more than five years. I have spent quite some time with gymnastics coaches from different contexts as well as coaches from different sports. My experiences as a coach and a researcher helped me to identify coaches' professional needs by practicing with them or observing their coaching practices. I have built a strong relationship with most of the coaches that allowed me to obtain in-depth information regarding my study focus.

As a researcher, I have collected the study data from the participants of the Study 2, analyzed it, and reported the effects of the LCP on the coaches' perceptions of their professional knowledge, and partially their gymnasts' developmental outcomes.

My long-term coaching in the field helped me build a trustful relationship with the coaches. The coaches behaved comfortably in my presence and naturally contacted with me during the LCP. As a non-participant observer, my duties in this phase of the study involved video-recording the meeting discussions, taking notes, and ensuring a comfortable environment for the meetings. After the LCP, as a coach, I stayed close to the participant coaches in the field in case they want to make contact with me regarding the study. I conducted interviews with the coaches who contacted me on their subsequent field experiences in relation to the effects of the program on their practices after participating in the LCP.

3.3.5. Data Analysis

The video-recorded and wholly transcribed six-week LCP meetings, the focus-group interview with the coaches, semi-structured interviews with the facilitator and the sport psychologist, researcher field notes, and unstructured interviews conducted with the two of the coaches were analyzed using thematic analysis. In the development of major themes from the data, Descriptive Coding (Wolcott, 1994), Pattern Coding (Miles & Huberman, 1994), and Evaluation Coding (Patton, 2002) approaches were used (Saldana, 2009).

Descriptive Coding was used to analyze the whole data's basic topics to help answer the essence of the study (Saldana, 2009; p. 70). Descriptive Coding categorizes data at a basic level to provide an organizational grasp of the study (Saldana, 2009; p. 73).

For the data regarding the focus-group interview with the coaches, Evaluation Coding (Patton, 2002; Rallis & Rossman, 2003) was used after using Descriptive Coding (Saldana, 2009). Rallis and Rossman (2003, p. 492) suggest that Evaluation Coding is the application of non-quantitative codes onto qualitative data that assign judgments about the importance and worth of programs. The authors explained that evaluation data involves description, comparison, and prediction. Description involves the patterned observations or participant responses regarding the assessment of quality. Comparison is comparing the program with a standard or an ideal. Prediction implicates recommendations for change, if needed, and the ways of implementation of those changes.

In analyzing interview and observation data and developing the major themes from the data, Pattern Coding (Miles & Huberman, 1994) was used (Saldana, 2009; p. 152). For Miles and Huberman (1994, p. 69) pattern codes are "explanatory or inferential codes, ones that identify an emergent theme, configuration, or explanation. They pull together a lot of material into a more meaningful and parsimonious unit of analysis. They are a sort of meta-code. Pattern Coding is a way of grouping those summaries into a smaller number of sets, themes, or constructs".

3.3.6. Limitations

In evaluating the study findings, the following limitations need to be considered. The purposeful selection of the coaches was based on a feasible selection criterion. The participants invited were from a gymnastics hall, which is located in the same city of the study setting. In terms of the duration of the intervention, designing additional meeting weeks would have been more fruitful for the coaches, but was not feasible due to time and financial constraints.

Table 3.17. *Data collection instruments and related data analysis for each research questions*

Research Questions – Subquestions	Data Collection Instruments	Data Analysis
2) How does a 6-week learning community program based on the needs arose from the gymnasts' perceived developmental outcomes affect coaches' views and knowledge towards gymnasts' 4 Cs and their learning community experience?		
(a) How does the 6-week learning community program take place?	- Video-recorded six-week LCP - Researcher notes	Thematic analysis - Descriptive coding - Pattern Coding
(b) How does a 6-week learning community program affect coaches' perceptions of the 4 Cs and the learning community program experience?	- A focus group interview with coaches - Semi-structured interview with the facilitator & the sport psychologist	Thematic analysis - Descriptive Coding - Pattern Coding - Evaluation Coding
3) What are the long-term effects of the LCP on the coaches' practices and their athletes' sport outcomes?	- Participant observation - Unstructured interviews with two participant coaches	Thematic analysis - Descriptive Coding - Pattern Coding

CHAPTER 4

RESULTS

In this chapter, firstly, the gymnasts' perception of their 4 Cs of outcomes based on age and gender was reported. Then, I presented the results of the process of a 6-week learning community program, its effects on coaches' perceptions of the 4 C's of athlete outcomes, and of their perceptions of the learning community program experience; lastly the long-term effects of the LCP on the coaches' practices and their athletes' outcomes.

4.1. Study 1

4.1.1. Research Question 1: How do competitive youth gymnasts from different ages and genders perceive their sport outcomes of competence, confidence, connection, and character in artistic gymnastics setting?

Primarily, the data were screened in terms of missing data, outliers, and violation of normality and homogeneity of variance. There were not any missing values in the data. Two univariate outliers were detected as being higher than the value of 3.29 standard deviation from the mean. These scores were changed with the closest extreme scores that were in between the defined range (Field, 2009; Tabachnick & Fidel, 2013).

In total scores of the measures representing each of the gymnasts' outcomes (4 Cs), the results of Shapiro-Wilk test for normality, and Levene's Test for homogeneity of variance detected significant violations, except only competence data had a normal distribution. The results of parametric (i.e., t-tests) and non-parametric (i.e., Mann-Withney tests) tests did not change the results of the study. However, since normality assumptions were violated, in examining age-group and gender differences between the gymnasts' perceived outcomes (competence, confidence, connection, & character), Mann-Withney test (Mann & Withney, 1947) was used (Field, 2009).

Descriptive statistics of the outcomes (Table 4.18), and participants' information based on their gender and age (Table 4.19) were presented below.

Table 4.18. *Descriptive statistics of variables in the PYD Toolkit*

Measures	Mean	SD	Min	Max
Competence (1-5)	4.03	.40	2.91	4.69
Confidence (1-4)	3.39	.44	2.40	4.00
Connection (1-7)	6.10	.69	4.18	6.91
Character (1-5)	.71	.48	-.53	1.35

Note: Character score calculated by extracting antisocial score from prosocial score.

Table 4.19. *Descriptive statistics for the sample in terms of gender and age-group*

			Competence (out of 5)	Confidence (out of 4)	Connection (out of 7)	Character (out of 5)
Gender	Female	Mean	4.19	3.43	6.15	.88
		SD	.28	.50	.76	.33
		Min	3.64	2.40	4.36	-.06
		Max	4.69	4.00	6.91	1.35
	Male	Mean	3.86	3.35	6.05	.53
		SD	.45	.37	.63	.54
		Min	2.91	2.60	4.18	-.53
		Max	4.58	4.00	6.82	1.24
Age-group	1 (12-13)	Mean	4.14	3.58	6.43	.96
		SD	.28	.37	.68	.22
		Min	3.64	2.60	4.18	.53
		Max	3.69	4.00	6.91	1.35
	2 (15-17)	Mean	3.93	3.21	5.81	.49
		SD	.48	.43	.58	.54
		Min	2.91	2.40	4.36	-.53
		Max	4.67	4.00	6.73	1.29

Note: Character score calculated by extracting antisocial score from prosocial score

According to the group comparison results, in competence measure, based on the triangulated scores, age-group 1 gymnasts ($Mdn = 25.98$) and age-group 2 gymnasts ($Mdn = 20.40$) did not differ from each other on their total competence score, $U = 189.50$, z = -1.42, *ns*, r = -.21. However, female gymnasts' ($Mdn = 27.50$) competence

scores were significantly higher than that of their male counterparts' (*Mdn* = 18.30), *U* = 149.50, z = -2.35, *p* < .05, *r* = -.35.

Using Mann Withney Test, in confidence measure, no significant differences were found between male (*Mdn* = 21.02) and female (*Mdn* = 24.89) gymnasts, *U* = 209.50, z = -1, *ns*, *r* = -.15; however, age-group 1 gymnasts (*Mdn* = 28.74) perceived significantly more self-confident as compared to age-group 2 gymnasts (*Mdn* = 17.98), *U* = 131.50, z = -2.77, *p* < .05, *r* = -.41.

In connection measure, no significant differences were found between male (*Mdn* = 21.36) and female (*Mdn* = 24.57) gymnasts, *U* = 217.00, z = -.82, *ns*, *r* = -.12; however, age-group 1 gymnasts (*Mdn* = 29.38)   had significantly higher connection scores as compared to age-group 2 gymnasts (*Mdn* = 17.42), *U* = 118.00, z = -3.06, *p* < .05, *r* = -.46.

Lastly, in character measure, female gymnasts (*Mdn* = 27.20) had significantly higher scores than their male counterparts (*Mdn* = 18.61), *U* = 156.50, z = -2.2, *p* < .05, *r* = -.33. Additionally, age-group 1 gymnasts (*Mdn* = 29.43) had significantly higher character scores as compared to age-group 2 gymnasts (*Mdn* = 17.38), *U* = 117.00, z = -3.07, *p* < .05, *r* = -.46.

4.2. Study 2

The research questions regarding the effect of the 6-week learning community program on the coaches' views and knowledge, and its long-term effect on the coaches' practices and their athletes' outcomes were answered by analyzing the verbatim transcriptions of video-recorded program meetings, and interviews and field notes using Thematic Analysis. I presented the findings under the sub-questions of the research question. Thematic analysis of each meeting was presented in the illustrated form at the end of each meeting.

4.2.1. Research Question 2 (a): How does the 6-week learning community program take place?

The learning community program discussions were mainly based on the conceptual framework of the 4 Cs of athlete outcomes. Therefore, the titles of the main themes included competence, confidence, connection, and character. The analysis yielded a theme "creativity" as a developmental outcome in addition to the dimensions

of the 4 Cs of athlete outcomes. There were six main themes representing the topics of the meetings. These were a) first meeting (including introduction of the 4 Cs), b) character, c) connection, d) confidence and creativity, and e) competence, respectively. I presented the findings under these main topics with their chronological order below.

4.2.1.1. First Meeting

The themes appeared in the first meeting were 1) the purpose and the principles of the program, 2) the presence of 4 C's of athlete outcomes in the context, and 3) coaches' ways of obtaining professional knowledge (Figure 4.2).

4.2.1.1.1. The Purpose and the Principles of the Program

At the beginning of the meeting, the facilitator firstly explained the purpose of the program that was to support the coaches' professional development by discussing the extent that competitive artistic gymnasts' developmental experiences and coaches' practices are in congruence with the suggestions of the holistic approach to athlete development. The facilitator stated that they would examine together the gymnasts' developmental aspects that were in need of improvement based both on scientific data obtained from the field as well as the coaches' felt needs based on their experiences, and then try to find out answers to these areas of need together. The facilitator reminded the coaches that in searching for the answers, they would draw both from their experiential knowledge and the relevant scientific information produced in sports science. In doing that, he said, he would try to facilitate the discussions rather than trying to give lectures to them. He emphasized that there will be a mutual learning environment for each member of the group, and they will learn together from this discussion process.

After that, the facilitator informed the coaches concerning the principles of the learning community as being an informal and interactive environment in which professionals with different experiences and coaching levels voluntarily gather and share knowledge without any hierarchy between them. The facilitator especially highlighted the centrality of non-hierarchical interactive environment and freedom of thought during the meetings. Also, he underlined that the topics that they would discuss will be based on the coaches' needs and interests.
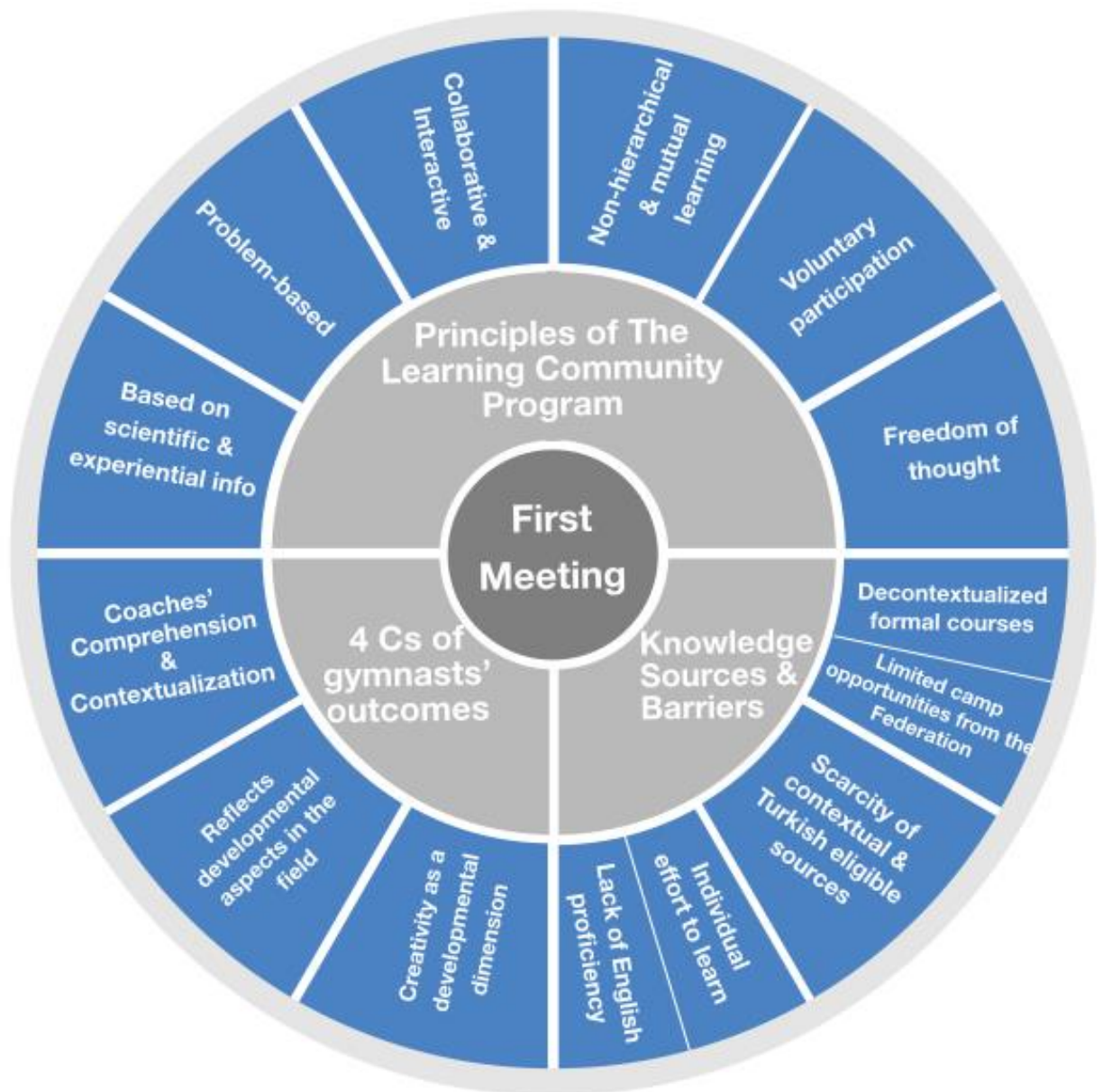
Figure 4.2. *Wheel chart for the themes appeared in the first meeting*

The facilitator added that for each community member to have a shared conceptual understanding of the topics to be discussed, he would first bring forward their related concepts and terminologies, and define each of them to the coaches before starting the discussions about the topics. The facilitator guaranteed the coaches that near to the end of the sessions, they would start to feel that participating in the discussion meaningfully supported their professional development. He stated that he was also very motivated since he would learn a lot from them since he had never worked in an early

specialized sport context before. He introduced his own athletic background as an athlete in track and field, and his following career as a coach in competitive triathlon, which the sport facilities were in the same sport complex with the gymnasium that coaches work. Then the group started to discuss about the factors affecting gymnasts' development based on their field experiences and observations in the context of 4 Cs.

4.2.1.1.2. Discussion on the 4 C's of Athlete Outcomes in the Context

The facilitator introduced the concepts of the 4 Cs of athlete outcomes one by one, and their relation with effective coaching to the group based on the integrative definition of coaching effectiveness and expertise (Côté & Gilbert, 2009). The coaches responded that the framework very well covers gymnasts' developmental aspects. In addition to the 4 C's, the coaches stated that "creativity" need to be discussed exclusively as a developmental aspect since it has a critical role in reaching success in elite artistic gymnastics.

Firstly, the facilitator started discussing "competence", which have three dimensions: "technical skills," "tactical skills," and "physical skills." Since artistic gymnastics is an individual sport, a need arose in the group for making the meaning of "tactical skills" clear for artistic gymnastics context. The coaches defined "tactical skills" as "gymnasts' decisions made to prepare the best routine for his\her capabilities as well as strategic changes made when needed in gymnasts' routines based on their opponents' positions during competition." They stated that in more serious competitions gymnasts need to align their routine's level of difficulty by taking their opponents' skill level into consideration. The coaches commented that they prepare an easier routine to be short-listed, and try to win the medal with their best routine gymnasts could perform. For this reason, the coaches stated that gymnasts need to have two distinct routines. They thought that to win medals, both coaches and gymnasts need to think about developing right strategies.

Secondly, the facilitator brought forward the concept of "self-confidence" in sport. The coaches argued that to reach high performance in artistic gymnastics, gymnasts need to perform the necessary skills fearlessly; therefore, self-confidence is critical in reaching a high level of performance.

Our sport has a high risk of injury. For example, a gymnast does sault on the high bar and grabs it again. In other words, not every gymnast can reach this level because of their fear. If gymnasts want to reach at the national level, they need to be self-confident. (C1)

The coach also argued that coaches need to know their gymnasts well to develop self-confidence in them. He argued that coaches have to know gymnasts' needs and readiness and provide positive support to them accordingly to increase their self-confidence. The coaches believed coaches' negative behaviors towards their gymnasts also cause them to perceive less-confident in the sport.

A coach might have decreased his/her gymnasts' self-confidence. There are such cases. He/she may have failed to build the connection of self-confidence. Because, for example, we, with my gymnasts (age about ten) work on the pommel horse. I can see that he is ready for the movement. I start to make him feel that he is ready. I know my gymnast. He needs some encouragement at this stage, like 'you can do it, you are ready for this movement' and build his confidence, and then he can perform it automatically. Feeling your gymnast needs is very important in coaching. (C1)

The coaches stated that gymnasts' personal attributes affect gymnasts' self-confidence in sport. The coaches said some introvert gymnasts are less-confident compared with extrovert ones who are considered spoiled and expressing themselves better. For the coaches, there are many talented but introvert gymnasts in the field. One coach stated that his one of national-level gymnast had been an introvert, and he has been trying to overcome his introversion by integrating the gymnast in social activities more often. The coaches argued sport by itself may also help prevent being an introvert. For the coaches, adolescence is a critical factor affecting gymnasts' self-confidence. They commented that during this stage of development gymnasts either become more introvert or extrovert and spoiled. The coaches believe these attributes determine self-confidence either negatively or positively.

Thirdly, the facilitator started to discuss the concept of "connection," which occurs between coaches and gymnasts as well as between teammates. The coaches stated that there are many problems in both types of connections. Regarding the relationship among teammates, the coaches said that the better gymnasts in a group might help develop others by creating a mild competition atmosphere during training.

There is a talented gymnast in the group and as he develops, he also indirectly helps their teammates improve themselves. His teammates started to feel more

ambitious and try harder to reach his performance by being more focused during training and competitions. They may think that 'being better from the best in the team would mean being much better in the competition. (C1)

However, they also stated that the competitive environment created that is not under coaches' control may cause quarrels between teammates, which may even result in dropping out of sport especially when a gymnast perceive himself\herself less successful and helpless in the team. The coaches stated that they witness such incidences often in different teams and age groups.

Competition brings success. However, it should be under the control of coaches who makes it mild and friendly. Otherwise, gymnasts may even fight with each other and some of them quit. It happened in the past. (C1)

They argued that strong ties created between gymnasts enable them to support one another more, and consequently increase overall success in the team. They said that strong peer interactions bring success to the team. They cited C1's successful team in which each gymnast earned scholarship and study together within a same private school. The coach of the team said that although each gymnast's personality is quite different, they get along very well both at school and during the training. The coach attributed this harmony between the team to time they spend together at the same private school. In this way, they could socialize each other more than other gymnasts.

They are together almost every day, and they are getting along very well. But if they had not had a scholarship together and study at the same school, I do not know whether they would be in such a harmony like this. (C6)

Additionally, the coaches also regarded parents as important agents in either strengthening or weakening both types of connection. The coach of the abovementioned team stated that parents' effective interaction with one another affects their children's relationship with their teammates and with him positively. The coaches argued that social activities organized by parents help strengthen group ties as well as the coach-gymnast relationship.

Whenever a parent organizes a competition travel, their relationship gets strengthened since they travel and stay together. And therefore, they interact each other much more. One of my gymnasts' parent is a very social man. He organizes our every competition travel in advance by planning what to do and where to visit in that city. Then he informs each parent and me. It unbelievably enhances group cohesion and strengthen both type of relationships. (C1)

They believed that in this way gymnasts' sense of belonging also gets stronger. The coaches stated that this social environment is also important for parent socialization.

Parents become addicted to this environment because they find a social space in which they cheer up. They come from their stressful working environment and meet other parents who become their friends. They organize picnics and long-distance trips. For example, when they go to a competition with their children, they also do touristic tour of that place together. As these kinds of things happen more, connection gets strengthened and it positively affects success. (C4)

Coaches believed that "connection" as the gymnasts' outcome also influences their character development. The coaches said that they pay special attention to gymnasts' character development because they regard it as one of the preconditions of being a successful gymnast. The facilitator stated that theoretically, character development is considered as moral development and fair play, and explained that both egoism and helpfulness might develop in gymnasts' character. The coaches argued that the nature of artistic gymnastics may cause gymnasts' egoism. They stated that gymnasts compete alone, and therefore, the likelihood of egoism and desire to being at the forefront are high. They said that gymnasts compete with their teammates to be selected for competitions. The coaches stated that they observed gymnasts' interaction with their teammates in such circumstances (i.e., during competitions) and believed that although gymnasts in the same team seem to behave friendly and supportive to each other during a competition, their egoism sourced by their will to winning predominates. However, the coaches argued that there is no physical contact between gymnasts as happens in many other sports, and that decreases the likelihood of antisocial behaviors among peers.

Finally, the coaches argued that gymnasts need to be creative to reach high-level success. They thought that creativity could help gymnasts to create new movement patterns and combinations in gymnasts' routines, which may make them advantageous to their opponents, especially in top-level competitions. The coaches argued that gymnasts need to master the skills of six different apparatuses, and each involves many movement skills. They believed that creativity has a major role in gymnasts' creation of new movements or routines, developing unique training patterns. Also, the coaches commented that coaches' use of teaching methods in teaching new skills to gymnasts. The coaches underlined the importance of pedagogy in facilitating coaches' creativity.

They argued that coaches need to be able to use different teaching methods\strategies to facilitate gymnasts' creativity.

> *For me it makes difference on the coaches' part because when coaches become creative, they will teach skills in many different ways. What you do is important when teaching skills. Can you use different steps to facilitate learning? For example, a gymnast does not understand the skill. How do you make him/her understand it? You do it another way. I think coaches' creativity is more important in that sense. Because you can teach skills in many creative ways. (C1)*

After coaches' remarks on the necessity of using different teaching strategies, the facilitator stated the positive effect of creating an athlete-centered training environment by, for example, using problem-solving approach to trigger gymnasts' creativity which aims to make them think more about what they learn.

At the end of the discussion of the concepts of 4 C's of athlete outcomes, the coaches stated that the framework perfectly reflects their contextual needs for gymnasts' sport development and that the discussion made clear the critical points of this framework. The coaches regarded the character development as a precondition to being a successful gymnast and thought that there are critical issues in the context regarding character development. When the facilitator asked they said that they want to continue with discussing gymnasts' character development the next meeting.

4.2.1.1.3. Coaches' Ways of Obtaining Professional Knowledge

The coaches argued that formal coach development system does not provide professional knowledge based on their needs, and they try to get necessary information via individual effort. For the coaches, nowadays, technical knowledge sharing has become prevalent thanks to the advancements in technology. They said that they could now easily reach contemporary training videos and other visual materials on the internet.

> *We can follow the developments in the gymnastics world more closely now. In other words, we can watch a skill movement with its learning stages from YouTube. We can see where is the mistake and so on. We can now easily reach high technical success because our horizons have been broadened. We have talented gymnasts and we came to understand that we have everything we need to reach high performance. Nobody used to share anything about their training. But you need to search and learn about the routines done in the world, and their content and difficulty. (C1)*

The coaches commented that they have come to understand how insufficient the coach certification programs for their professional development as they start to work in the field. They complained about the scarcity of eligible Turkish written sources specific to artistic gymnastics.

Later on, the coaches stated that to support coaches' professional development, the Federation sends coaches to international organizations such as camps, but they are limited to the coaches who could develop high-level gymnasts. Additionally, coaches have difficulty in communicating with their colleagues in these organizations since the official language of them is English and coaches do not have this proficiency. The coaches highlighted the critical importance of learning English in having the ability to increase their professional development. In this way, they stated that they could be appointed at international organizations in which they could establish professional networks with colleagues from abroad. However, they believed that learning English is almost an innate ability; therefore, they feel helpless about it. They said that they feel sorry when they cannot communicate with other people at international organizations, and argued that the federation has to have a leading role in meeting this need.

4.2.1.2. Second Meeting (Character)

After the coaches developed a general understanding of the major objectives of the learning group, its principles, and the conceptual framework to be used in the following discussions, the facilitator asked the coaches which concept to discuss first in the following meeting. They decided to continue with the "character" dimension of the 4 C's of athlete outcomes first. They put the priority on character development over other domains as they regarded it as a precondition for being a successful gymnast, and for them, there have been issues sourced by gymnasts' poor character development that negatively affect team cohesion and coach-gymnast relationship.

Thematic analysis of the meeting revealed six themes in line with the outline of the discussion worksheet designed. These were 1) the coaches' understanding of character development, 2) developing a shared understanding of character development, 3) discussing the factors that affect gymnasts' character development based on the coaches' experiences and observations, 4) the coaches' strategies to facilitate gymnasts' character development, 5) discussion on the findings of NA for character outcome, and

6) discussing relevant scientific recommendations to facilitate gymnasts' character development. I presented the findings under their relevant themes below (Figure 4.3).

4.2.1.2.1. The Coaches' Understanding of Character Development

The coaches believed that character-wise gymnasts are disciplined, ethical, respectful, responsible, hardworking, and resilient to physical pain. For the coaches, character-wise gymnasts are more disciplined in training. Also, they consider them better communicators with their coaches, and respectful to their opponents as well as their teammates. For the coaches, these gymnasts are responsible, hardworking, and respectful to others in and out of the gym. They consider them as more serious, determined, committed to their goals, and autonomous in training. The coaches stated that coaches are after working with such "serious" gymnasts who have these character traits.

> *... they are already aware what they do. Some children view the gymnasium as a playground but some others are really focused on success and train to achieve it seriously. We mostly look at whether they are responsible and hardworking. And whether they kindly greet other people in the gymnasium. We rather try to teach this. If a gymnast greeted me, then he cannot leave without greeting other coaches in the gymnasium. We also observe the same in other gymnasts. And we look at their being hardworking. We feel pleased and envy when we see other coaches' gymnasts are able to train alone. We say 'how character-wise this gymnast is! (C1)*

Another point the coaches gave credence as a good character trait was confronting the continuous physical pain of injuries occurred in training and competitions. The coaches said that serious injuries occur, for example, in gymnasts' hands and joints and most of the time they have to continue injured for not to fall behind in training and competitions. For the coaches, this experience of being able to continue training with the pain of an injury helps develop gymnasts physical and psychological resiliency and patience much. The coaches stated that every gymnast confront this struggle and if they cannot endure this painful process, they drop out of the sport.
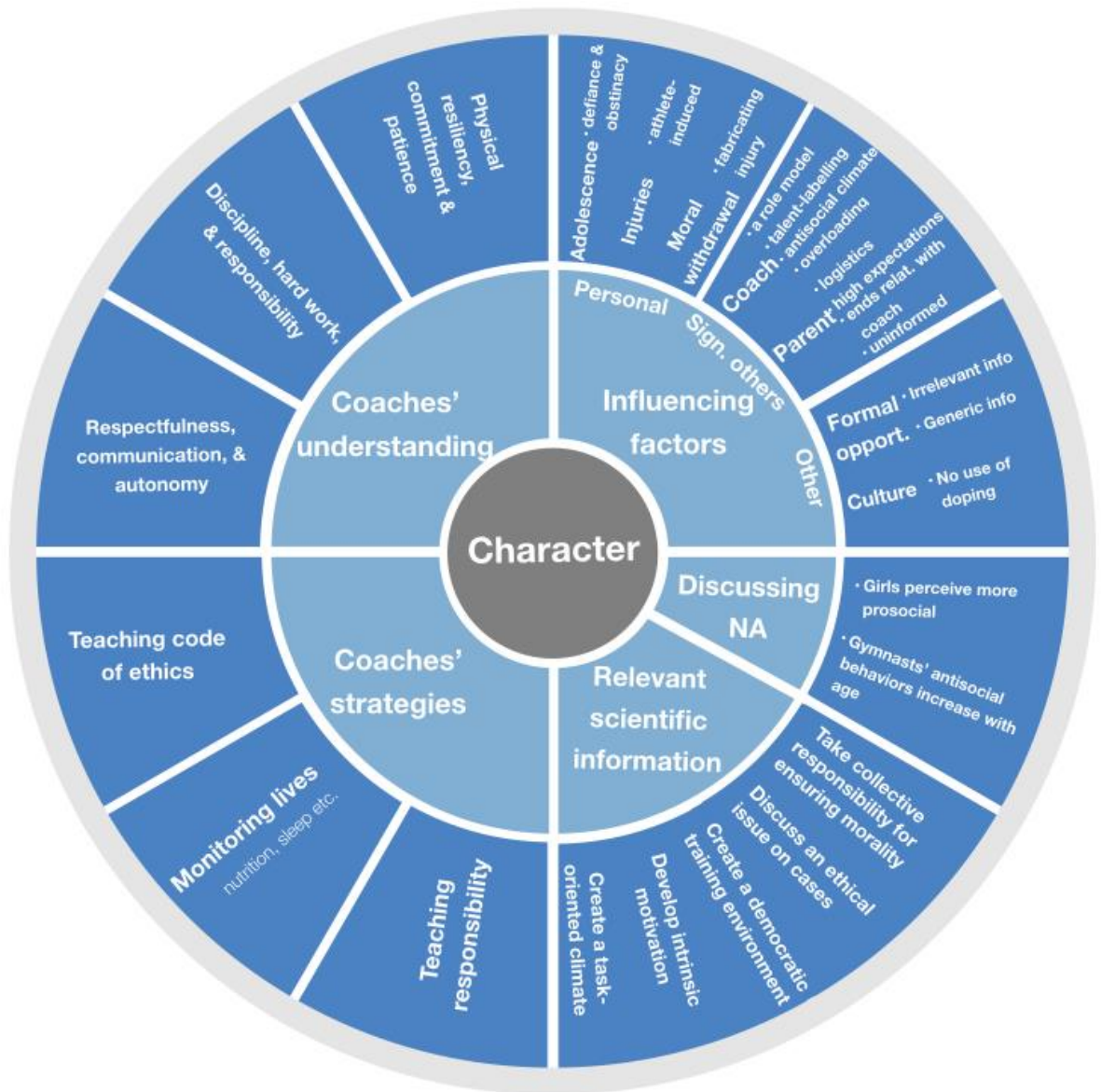
Figure 4.3. *Wheel chart for the themes appeared in the second meeting*

Lastly, the coaches described the gymnasts with lack of character traits based on their own experiences and observations in the field. In addition to the opposite of what they have stated as desirable character traits so far, defiance to coach and unjustly leaving coach were the main issues coaches experienced in the field and considered as lack of character for gymnasts. The coaches emphasized that these two traits would eventually lead to drop out of the sport.

4.2.1.2.2. Developing a Shared Understanding of Character Development

Based on the contemporary literature on character development, the facilitator introduced the definition of "character" and its central concepts to the group. Drawing on developmental psychology and sports psychology research, the facilitator introduced the definition of character to the coaches as "moral development and sportspersonship" (Bredemeier & Shields, 1996) and "respect for the sport and others (morality), integrity, empathy, and responsibility" (Côté & Gilbert, 2009). The last definition of character the facilitator shared with the coaches was "engagement in prosocial behaviors and avoidance of antisocial behaviors (Kavussanu & Boardley, 2009).

After defining "character" in sport, the facilitator introduced the coaches Bandura's model of moral action focusing on proactive and inhibitive dimensions of morality (Kavussanu & Boardley, 2009). Then, he defined the three aspects of the model, which are "prosocial behaviors," "antisocial behaviors," and "moral disengagement." After that, the facilitator shared with the coaches the definitions of the dimensions of character as the intellectual character, civic character, and performance character (Shields & Bredemeier, 2014). The coaches stated that they understood the definitions and concepts as well as confirmed the presence of them in artistic gymnastics context.

4.2.1.2.3. Discussing Factors That Affect Gymnasts' Character Development Based on the Coaches' Experiences and Observations

The coaches argued that mainly coaches, parents, gymnasts' developmental stage (i.e., adolescence), and injuries have a significant effect on gymnasts' character development. Also, the relative influence of coach development programs on coaches' knowledge of how to facilitate gymnasts' character development was another factor that coaches stated to affect character development. I regrouped the factors under the titles of "personal factors", "significant others", and "other contextual factors" and presented the findings under these titles below.

4.2.1.2.3.1. Personal Factors
4.2.1.2.3.1.1. Adolescence

The coaches argued that gymnasts usually become defiant when they enter into their adolescence. They commented that adolescence affects defiant behaviors towards their coaches such as doing the opposite of what coaches say, not following coaches' suggestions, and talking back in a conversation. They added that if a gymnast has a high success rate, defiant behaviors increase more.

> *It is a very important factor for success. If there is a gap in character, especially when gymnasts enter into adolescence, they start to break up from the coach in addition to disturbing team cohesion. We have many examples in the field in elite context. In small gymnasts, it's all right you can deal with it, but when they start to win and for example, and are accepted to the national team, they become a handful. They start to talk back to their coaches or do not do what coaches suggest, or do the opposite. This also highly disturbs the harmony of training. (C2)*

Additionally, based on their experiences with national level gymnasts, the experienced coaches in the group stated that coaches and their gymnasts were obstinate each other especially when a gymnast come from a different coaching culture. The coaches commented that different coach upbringing gymnasts brought is the main reason for this obstinacy. One coach exemplified the issue by mentioning his experience with a national-level gymnast transferred from a different coach to him:

> *It was like this: for example, I do not have much problems with gymnasts who started with me from the beginning. But I faced hardships with gymnasts coming from other coaches. For instance, I worked with one gymnast in the national team. He could not accept my coaching system because I think his previous coach had a different system that I cannot accept. Because of that, he could not accept the system I built and started to obstinate with me. In the end we split up, we could not work together. (C1)*

4.2.1.2.3.1.2. Injuries
4.2.1.2.3.1.2.1. Athlete-Induced Injuries

For the coaches, injuries rarely occur in the early phases of gymnasts' skill development. As the level of the skills gets more complex and risky, injuries happen more often. They commented that adolescence is a critical period that gymnasts suffer from injuries more likely because they start to grow up rapidly and the difficulty of the skills to perform increases.

... not happen in early ages. But when skills start to get difficult, injuries start to happen. Also, it appears with adolescence when their body grows suddenly. In addition to causing injuries, rapid growth brings about joint pains on the knees and wrists. (C2)

Coaches argued that injuries negatively affect gymnasts' character development both positively and negatively based on their level of seriousness. When injured badly, by for example falling from an apparatus, gymnasts become timid for fear they injure themselves again, and they believed this negatively affects their future skill learning. Coaches said they take precautions for safety and be alarmed all the time during gymnasts' performance on an apparatus, and sometimes they save them from an injury while gymnasts are performing a skill. The coaches added that the source of most of the injuries is not the training, and gymnasts could also injure themselves when they are free.

Every time the wrist... I myself have been to the hospital ten times with gymnasts. During my twelve years of coaching, I have taken many gymnasts to hospital. But most of them did not happen during skill execution. For example, they mount on the balance beam and fall or something else. (C1)

One coach stated that gymnasts may also injure themselves at school.

... and they usually get injured at school. One day a bruised eye, another day a broken nose. (C6)

4.2.1.2.3.1.3. Moral Withdrawal

By reflecting on their experiences and observations, the coaches stated that when gymnasts perform badly during a competition and realize that their ranking will be lower than expected, some of them fabricate an injury and blame this fabricated injury to leave competition or training. One experienced coach commented on the issue:

... for example the gymnast starts to compete. He is ready, no injuries and so on. He starts to compete badly in second apparatus. He creates a false injury when he realizes he cannot be in the rankings and his performance was bad. Then his shoulder suddenly starts to hurt! And he wants to leave the competition. We have experienced it many times. (C1)

The experienced coaches in the group stated that these gymnasts do not accept and face their poor performance, and this prevents them from learning from their

mistakes. The coaches argued that coaches pose this problem of gymnasts' moral withdrawal by their intolerant approach.

4.2.1.2.3.2. Significant Others
4.2.1.2.3.2.1. Coaches

Thematic analysis of the group's discussion on "coaches' influence" on gymnasts' character development revealed six subthemes. They were 1) coaches as role models, 2) coaches' talent-labeling, 3) aligning training regimen for the best gymnasts in the team, 4) forcing gymnasts beyond their limits, 5) coach-created climate, and 6) coaches' roles in increasing gymnasts' consciousness. I presented the findings under each subtheme below.

4.2.1.2.3.2.1.1. Coaches as Role Models

The coaches argued that coaches have a significant influence on athletes' character development since gymnasts spend a considerable amount of time with their coaches. For the coaches, especially in artistic gymnastics, the influence of coaches on gymnasts' personal development (ethics and personality) is more significant because coach-athlete interaction starts as early as when a gymnasts' are three to four years of age.

> *They come at their very early ages and coaches become an idol to them. Their character is shaped based on their coaches' behaviors. (C2)*

Drawing on their experiences and observations in the context, the coaches argued that gymnasts take their coaches as a role model in many aspects including coaches' behaviors and appearance. Starting from early ages, gymnasts take their coaches as a model. By spending a long time together, their character resembles their coaches' character in time.

> *We usually resemble gymnasts their coaches and say 'he is just like him'. We can easily distinguish them based on their behaviors and appearances. They even imitate their coaches' body language. (C1)*

The coaches contended that that might either positively or negatively affect gymnasts' character development. Coaches said one could understand gymnasts' character by making connections with their coach's personality traits.

4.2.1.2.3.2.1.2. Coaches' Talent-Labeling

The coaches commented that they label their gymnasts in their team as "talented" and "less talented." They believed that this talent-labeling would provide a competitive environment in which gymnasts could perform better. Two coaches argued that in this way, 'less-talented' ones may become more ambitious and train more than other 'talented' ones to compensate for the skill-level deficiency.

> *… more often our less-talented gymnasts become more ambitions when we label them. They try to compensate their lack of talent with hardworking by comparing themselves with the best. (C3)*

The coaches stated that they set higher goals to those they labeled as "talented" and much limited goals to "less-talented." The coaches admitted that they set goals according to their approximations of gymnasts' limits that can reach in future in their mind. They argued that competition results prove the skill level of each gymnast and "they know their place" by trying to legitimate their decisions of setting limited goals for developmental-level gymnasts.

> *... and also competition results reveals children's level of skill. Then they, too realize their skill levels and talents. They learn to respect to their teammates because if their teammate is in a better skill level, they enter into the national team and they cannot. In other words, they know their place a little. (C1)*

Another coach legitimated talent-labeling by giving example of setting goals by their perception of gymnasts' talents:

> *.. deciding on the limits of gymnasts determines the talent-labeling. Talented gymnasts are promising and we lead them to national competitions while for others, less-talented, are set lower standards and goals such as competing at local competitions at best. Then the preparations will be based on those goals since not every gymnast in the team can reach the same point. (C3)*

Another coach gave credence to what the coach commented:

> *It is impossible anyway. It is just like in the schools. Teacher comes to the class and lectures, and some of them get it but some of them not. (C2)*

During the discussion, some of the coaches started to realize that they might cause a feeling of helplessness in those labeled as "less-talented." Two coaches admitted to discriminating in favor of "successful gymnasts" by putting them in the first place every training activities and giving them a central role all the time.

We decide the place of a gymnast in the team. For example, when starting an apparatus, firstly the talented ones start to train, and they are unfortunately always at the forefront. (C1, C6)

The coaches also said that the gymnasts labeled as "less-talented" were more likely to drop out of gymnastics because they repeatedly compare themselves with the best gymnast in the team. More experienced coaches commented that they both experienced and witnessed mediocre gymnasts becoming very successful at their later careers. They added that they experienced their apparently successful gymnasts dropped out of sport while mediocre ones becoming national-level gymnasts in the long run.

4.2.1.2.3.2.1.3. Aligning Training Regimen for the Best Gymnast in the Team

Being in connection with labeling gymnasts based on their skills, coaches admitted that they align the training regimen for the best gymnast in the team. They commented that they have been doing it intentionally to increase the success rate of the team. For them, the main reason behind this strategy was to get 'fast' results in 'talented' gymnasts' skill development. They did not want to decelerate these talented gymnasts' learning process by decreasing the level of the skills to the degree that might be more appropriate for less-talented gymnasts in the team.

… we all interfere the process. The reason for attending to talented gymnasts is not to decelerate their learning progress. They are capable of learning skills fast while others in the group are comparably slow learners. So, we aim to accelerate the talented gymnasts' learning and take their development as an example for the rest of the team. (C1)

The coaches also admitted that they lose enthusiasm to participate in training sessions when the best gymnast is not present.

For example, we take children and among them two or three are talented naturally. This is a matter of talent. When talented gymnasts do not come to training we halfheartedly coach, at least I am like that. If talented ones not present we continue training but it happens carelessly. (C2)

The facilitator stated that aligning training for the best in the team may pose a discrimination between teammates; also gymnasts can feel that coach has a favorite and may get jealous. More experienced coaches commented that these gymnasts may not be able to react until their adolescence, and may consequently drop out of sport when they grow older.

110

Of course, they feel that coach has a favorite. But they cannot react openly until their adolescence. We recently witnessed in one of our gymnasts. Ali (pseudonym) would always comment that Berk (a talented gymnast in the team; pseudonym) is a good gymnast and say everyone in the team always talk about Berk and take him as an example. Now Ali does not come to trainings anymore. He had also tried to thrust himself to the forefront but failed. (C2)

The coaches believed that this practice may either positively or negatively affect gymnasts depending on their personality. They commented that although gymnasts can feel this discrimination and feel jealous of the labelled ones as 'talented', they cannot react until they reach adolescence. The analysis revealed that antisocial behavior can be in the form of leaving the sport or becoming jealous of the talented ones in the team.

this may both negatively and positively affect gymnasts. It depends on their character. Some of them may become more ambitious after seeing the talented in front of him while some do the opposite and leave. They are seven-eight age group, so they do not externalize it to their coaches even if they could understand it. But gymnasts who are about fifteen years of age ask the coach 'why are you showing greater interest to him? (C2)

4.2.1.2.3.2.1.4. Forcing Gymnasts beyond Their Limits

Apart from the influence of skill complexity and adolescence on gymnasts' injuries, more importantly, the coaches commented that many coaches in the field overload their gymnasts to their limits, which usually leads to physical and psychological problems in gymnasts. They argued that when coaches perceive a gymnast skillful, they start to greedily overload him/her. These coaches were hurrying to rush these gymnasts because of an approaching major competition or a qualification for the national team. The coaches claimed that they have been observing such coaches who overly identify themselves with their gymnasts and harm them by trying to realize their ambitions during the training and competitions. They believed it harms the gymnasts' personality while also leading to injuries. One coach admitted that sometimes he also overly identifies himself with his gymnasts and overload them:

Coaches overload gymnasts to a big competition or the national team. Then, injuries and different things happen. We have unfortunately done it several times. We become more excited than them and feel that as if we compete there. (C2)

For the experienced coaches in the group, the "talented" gymnasts are more likely to be in danger of becoming dropouts. The experienced coaches highlighted that

a considerable number of coaches in the field are very ambitious and they often force their "talented" gymnasts beyond their skill level by overloading them to obtain fast results in competitions believing that gymnasts can continuously learn and perform skills, which in reality lead to injuries, burnout and consequently dropout. In relation to this issue, one more experienced coach said:

> *... younger coaches are more eager to overload their gymnasts to get fast results; however, as coaches get experienced, some of them start to prioritize gymnasts' overall health if they take lessons from their negative experiences. (C2)*

Another more experienced coach commented about coaches' overloading gymnasts and its related consequences:

> *... for example they (coaches) make a 12-year-old gymnast perform a skill movement that belongs to youth gymnasts' level. Then, that gymnast may not be able to protect himself/herself when he/she falls. A grownup gymnast can survive when falling from five meters' height, but they cannot. So, coaches need to period the movement skills based on gymnasts' categories. But it is not the case. They usually overload them early to make gymnast ready for national team auditions or ranking in a competition higher. There are many examples in the field. Then gymnasts get injured or burnout, and they get nothing when they could have something very good. It significantly affects gymnasts' career. (C1).*

4.2.1.2.3.2.1.5. Coach-Created Antisocial Climate

The coaches stated that coaches usually prevent gymnasts from socializing with other gymnasts especially when their relationship with the coaches of those gymnasts is not well. For the coaches, they are bad role models to their gymnasts and argued that these coaches teach their gymnasts hostility, which causes antisocial behaviors among gymnasts in the context.

Another point that the coaches do and observe in the context was making gymnasts feel guilty by commenting on how much their parents and them (their coaches) sacrifice to make his/her (gymnast) sport participation possible. The coaches said they used it when their participation rate or performance decreases.

4.2.1.2.3.2.1.6. Coaches' Roles in Increasing Gymnasts' Consciousness (Intellectual Dimension of Character)

The coaches argued that gymnasts need to be conscious of the effects of their behaviors on their performance and behave responsibly in and outside of gymnasium, accordingly. They stated that many unconscious gymnasts were making irrational

decisions of their lifestyle, posing a significant decrease in their athletic performance. The coaches believe gymnasts behaving responsibly by aligning their lifestyle with an understanding and responsibility is directly related to the ethical approach to the sport. The coaches commented that this point is problematic in the field:

I will talk about something important: For example, there is a need for gymnasts to protect themselves out of gymnasium such as at school, home and so on. They need to know how to live out of gymnasium. Or for example, it also happens in teammate relationship. After a very tiresome training day some of the gymnasts take a good rest but some play around. For example, our one of gymnasts comes with a new bruise on his body parts every week, and we come to a halt to continue a healthy training with him. (C6)

In connection to the abovementioned issue, the group discussed about gymnasts' responsibility of searching for ways to better perform. By giving an example from track and field athletes, the facilitator suggested that athletes need to know their sport and search for sources to learn about how to become better than her/his opponents. Therefore, to excel, they need to investigate with their coaches about what is lack in their training. The coaches argued that since gymnasts start artistic gymnastics at early ages, mostly they cannot find the means to improving their effectiveness; therefore, this duty belongs to coaches. They commented that gymnasts start to be more actively concerned about the parameters that affect their performance during adolescence.

... the age level determines that. In small gymnasts who are 7 to 9 years, this does not happen; but in older gymnasts, the goals are much higher and so their maturity. As goals get more serious gymnasts start to think about how to become better than their teammates or other competitors. For example, his teammates may be his main rival to be selected as an Olympic gymnast. If there are four gymnasts in the team, then they are his/her opponents. (C2)

The coaches said that they try to raise gymnasts' awareness of their skill performance by having them benefit from visual sources provided by the federation, which involves skill performance improvements based on their skill levels. Additionally, they said they shoot their performance and discuss the technical aspects of these video records together. The coaches stated that most of the experienced coaches are also good referees; therefore, gymnasts are well informed about their technical mistakes and the ways to improve them. In this way, the coaches argued that they become very competent in finding and correcting mistakes as they get experienced.

*Experienced coaches are also referees. They can easily determine gymnasts'
mistakes. So, gymnasts become like referees in correcting their mistakes in time.
If we cannot determine the problem well, then they cannot reach higher levels.
(C1)*

4.2.1.2.3.2.2. Parents

The coaches emphasized parents' critical role in developing gymnasts its effect on their character development. They mainly discussed parents' roles on gymnasts' sport participation, their influence on gymnasts' relationship with their coaches, and their interference with sport development. I presented the findings under their subtitles below.

4.2.1.2.3.2.2.1. Parents as Financial and Logistical Providers

The coaches stated that parents are highly influential in their children's development in sports. For instance, they play a crucial role in gymnasts' sport participation. Particularly in artistic gymnastics, parents decide the participation of their children and provide logistic service to them for their sport participation. The coaches said that they sacrifice from their social life by bringing their children to gymnasium four to five days in a week, and provide finance and logistics for their children.

*Social life of parents ends when their children transfer to competitive context.
We work five days in a week from 7 p.m. to 9.30 p.m. They are with us. There is
no chance to do another thing for them because their children are about seven-
eight-year-old. (C2)*

The coaches argued that since most gymnasts are dependent on their parents, parents' misfortunes or misconducts in these two aspects interrupt gymnasts' sport participation. One coach comments:

*It is also hard logistically. For instance, our starting competitive gymnasts are
8-to-9 year-old and they train five days in a week. Parents need to bring their
children. They either take time off from work or one of them needs to be idle.
(C6)*

One coach commented that parents with higher socioeconomic status and who have their own business can bring their children easier to training.

4.2.1.2.3.2.2.2. Parents' High Expectations

The coaches complained that usually, parents who bring their children to competitive artistic gymnastics have high expectations from their children, and

naturally, from coaches, which negatively affect gymnasts' character development. The coaches argued that parents' greed (e.g., to be the most successful one in the team) cause a high pressure on gymnasts' psychology. The coaches stated that they could easily sense and witness this pressure especially when their children are perceived mediocre or below. The coaches argued that this parent pressure bring about more failure in gymnasts' performance and consequently cause an alienation from the sport.

> *… besides the behaviors there is an oppressive parenting type. You should be better, should do this and that… And their behaviors cause a backlash in their children's sport performance. Parents are more ambitious, actually when the child may be a mediocre or below mediocre. They oppress this kind of children. (C2)*

The coaches believed that parents in competitive context regard artistic gymnastics as the only way to be highly successful for their children and are stubborn to accept coaches' suggestions of directing the child to other sports in which they could have been more likely to be successful. They commented that generally, those parents are from low-to-middle socioeconomic status (SES).

> *... also this happens with parents: once they bring their children to artistic gymnastics, they have to be successful! We cannot make them understand that gymnastics is also a basic sport that also make it easier for their children to be more successful in other sports. For example, the child is skillful in taekwondo. We tell parents that gymnastics can provide a good foundation for this purpose and your child can be more successful in that sport. But, parents cannot perceive this truth and insist on bringing their children to gymnastics and expecting them to be highly successful, to enter the national team. (C6)*

The coaches also stated that there were also conscious parents who were aware of the fact that gymnastics provide their child the necessary skills to be more successful in other sports and welcome this suggestion when it appears that their children cannot perform well in artistic gymnastics. The coaches added that these conscious parents are usually highly educated and from higher SES and more open to communication as compared to stubborn ones. Other parents, however, were mostly from low to middle socioeconomic status, and the coaches claimed that this increases their expectations of their children's participation. For the coaches, these parents view their children's sport participation as a future occupation where they can earn their living from it in future, either being as a national level gymnast or a coach at the end. Also, some parents want

their children to reach the national level to benefit from scholarship opportunities provided by high schools and universities.

Parents' also have other expectations of their children. They see sport participation as a source of earning money and having an occupation in the future. I had a talk with a parent from a low SES on this issue. He said 'we see you coach, you are young and gymnastics become your occupation since you have been here as a gymnast in the past. I do not expect from you to raise my child to be a very good gymnast. But please support him if he likes to stay and choose it as a profession so that he can earn his living in future. They also view their children's sport participation as building their future profession. (C4)

These factors, the coaches argued, affect gymnasts' character negatively resulting in egoism and antisocial behavior in their surroundings.

4.2.1.2.3.2.2.3. Parents' Influence on Gymnasts' Separation from Their Coaches

The coaches argued that parents have a high influence on gymnasts' leaving their coaches when parents choose another coach in the field. The coaches conceived it as a disrespectful action for their labor and believed that family culture negatively influences gymnasts' character development.

... and there is a parent factor. This is the reason for I chose character development as a precondition. For example, you accept a gymnast and train him/her ten years in order for him/her to enter in the national team. And that gymnast leaves you after ten years of effort if he/she has not got a developed character, and everything goes in vain. Your gymnast starts to fall apart from you. We witness many examples of it in the gymnasium. For instance, if parents look other coaches with admiration it negatively affects the gymnast and starts to think like their parents in time. So, parent attitude is very important. (C1)

The coaches argued that parents trigger gymnasts' leaving especially when gymnasts' performance starts to decrease or fluctuate, which usually coincides with gymnasts' adolescence. For the coaches, parents become impatient when witnessing their children's differing performance in this stage of gymnasts' development. In such cases, parents accuse coaches of the decreased performance. One other reason for parents' decision for choosing other coaches over the current coach was that in the setting, parents can easily observe the training of different coaches, and can make quick decisions on whom to work with depending on the coach who is seemingly successful to them at that time. Additionally, changing coach occurs especially when another coach has better club resources (e.g., facilities and financial opportunities).

Parents watch our training and can make arbitrary decisions based on their watching trainings. They think they learn gymnastics and when something goes wrong, they may start to look for another coach who seems to be more successful. Also, the resources of clubs are very important. For example, if a club has a private gymnasium in which gymnasts can comfortably train, then parents do not want to stand the disturbance of this gymnasium anymore. (C1)

One coach shared his experience when he used to work in a sport club which offers many opportunities for gymnasts:

... for example, we used to be at ASKİ (a club). It used to be the best club in Turkey. We were two coaches with another coach. So many gymnasts wanted to work with us, not because we were the best coaches, but the club had numerous opportunities from a good gymnasium to providing monetary support to gymnasts. (C2)

For these reasons, parents influence and sometimes force their children to work with another coach even when gymnasts do not know and trust another coach.

... of course! They usually do not want to work with another coach but they mostly listen to their parents. Although gymnasts do not like their new coach, they are forced to collaborate with the new coach. (C1)
The coaches commented that while leaving the coach is an example of an unethical act, it also harms coach-gymnast relationship in the long run, and therefore gymnast may consequently drop out of gymnastics. The coaches highlighted that coach-gymnast relationship starts at gymnasts' very early stages of development; therefore, the efforts and service given will have been enormous by the time a gymnast enters into his/her adolescence. When a gymnast leaves, coaches' long years of efforts go down to drain. The coaches stated that there is a number of examples in the field and there is not any gratification or royalty system to protect the rights of the coaches who developed these gymnasts spending long years.

Although cannot compensate coaches' services, there should be a protection system such as a reward of raising or something. Because coaches have a huge amount of service to those gymnasts. The important thing is giving the foundation to gymnasts, bringing them to that level. However, there is not any reward system for previous coaches who did most of the work. Let alone recognizing previous coach, the system rewards the coach who attended the formal competition with gymnasts. (C1)

The coaches urged the need for raising awareness among parents regarding developmental issues in artistic gymnastics to prevent parents' negative influence on

their children's development, specifically character development in the first place. They argued that parents need to be informed about the key points of how skill development occurs to have realistic expectations from their children and coaches. For the coaches, it would also prevent parents from thinking that their children are untalented and quit being oppressive and impatient about their skill development. Such information may also enable parents to realize the fact that gymnastics can well form a basis of fundamental skill development needed for future success in other sports.

4.2.1.2.3.3. Other Contextual Factors
4.2.1.2.3.3.1. Coach Development Programs

For the coaches, coach certification and development programs do not provide the necessary and relevant knowledge concerning how to develop character in gymnasts. They stated that they only provide a superficial information about fair play displayed for team sports, but do not provide specific information that might include how to improve character development in competitive artistic gymnastics.

> *There were some courses on fair play but they were lectured and forgotten. Not like we talk about the character in here. They give lectures of fair play about team sports, but we do not go deeper like this. We do not talk the real problems there. (C1, C2)*

4.2.1.2.3.3.2. The Effect of the Coaching Culture on Facilitating Gymnasts' Character Development

The coaches believed that the sport culture created in the context, no use of doping, and having no physical contact between gymnasts have a positive effect on gymnasts' character development.

The coaches argued that the presence of a maintained sport culture in the gymnasium (unwritten codes and rules) support gymnasts' character development since the culture impose them on assets such as respect, sincerity, and honesty. For example, every gymnast greets each other and all of the coaches in the gym every time they enter and leave.

> *We have rigid cultural things that sport brought. All of the coaches teach gymnasts the shared values. Actually, we teach things that they sometimes*

cannot learn from their parents. For instance, we handshake and say welcome Ahmet how are you today? And he says I am good. And we say 'I am also good.' and we sometimes say that you need to ask about people how they are doing. (C1)

The coaches stated that there was no use of doping in Turkish artistic gymnastics. Especially in Men's gymnastics, a need for strength is enormous, and it is appealing to use drugs to shortcut the process of strength development. However, the coaches insisted that only ergogenic substances such as protein powder be used as supplements to rather young gymnasts' daily nutrition.

Because of the nature of artistic gymnastics, gymnasts are not likely to have physical contact with their peers. Therefore, for the coaches, they are more likely to be prosocial with their teammates and opponents compared with sports involving physical contact.

4.2.1.2.4. The Coaches' Strategies to Facilitate Gymnasts' Character Development

To support gymnasts' character development, the coaches said they teach them codes of ethics and monitor their lives.

The coaches argued that they be highly influential in their gymnasts' life. Therefore, they aim to be role models in teaching shared unwritten ethical codes and etiquette of the gymnasium that had been passed down from generations to generations. These were, for example, handshaking with everyone, helping others, showing sincerity and respect to everyone. They said they teach their gymnasts to be timeliness by being role models of being so. They also give their gymnasts small duties during the training to make them feel responsible for their acts because they believe that many parents are overprotective to their children and this prevents them from doing their responsibilities.

For example, there are many protective families that I can understand from my gymnasts' behaviors. We pull off socks to train on some apparatuses such as rope climbing. Some of them pull on their socks in sport but for some it takes for ages. I give homework to them about pulling socks on and off, by saying them 'you should do it yourself'. (C3)

The coaches argued that they are responsible for controlling and regulating gymnasts' lives in and out of gymnasium especially before adolescence. They believed that gymnasts' lives out of gymnasium highly affect their performance in training and

competitions, and this necessitates gymnasts to be responsible for their lifestyles. Coaches said that they were in close connection with gymnasts' parents regarding gymnasts' nutrition and sleep patterns. To effectively regulate their way of life, the coaches stated that they need to be in cooperation with parents. Therefore, coaches need parents who are highly supportive of coaches' approach. Coaches take care of gymnasts' dietary habits and make suggestions to gymnasts. They added that they also try to regulate their personal lives such as checking their rooms to be sure gymnasts are tidy during competitions. In this way, they said that they aim to teach gymnasts to take responsibility of their own life.

4.2.1.2.5. Discussion on the Findings of NA for Character Outcome

After the coaches developed an understanding of character development and shared what they have experienced about character domain so far, the facilitator introduced the results of the NA for a discussion to obtain in-depth information from the coaches. In the findings, mainly, male gymnasts' scores were lower than female gymnasts, and as gymnasts' age increase, a significant decrease in gymnasts' character outcome scores was observed.

Three coaches disagreed the finding "female gymnasts perceive more prosocial than male gymnasts" arguing that more problems occur between female gymnasts and their coaches. They added that more experienced competitive female gymnasts even display more antisocial behaviors.

> *I think it is total opposite. They are antisocial. Maybe when they are little, it can be the case, but when they become more competitive, a secret agonism arises between female gymnasts and their coaches. We (as male gymnast coaches) always get together, discuss and talk about things, we have never seen female gymnasts getting together and talk together. They cannot. (C2)*

However, the coaches agreed with the result "antisocial behavior increases as gymnasts get experienced." They argued that an instinctive feeling of winning may explain gymnasts' wrong attitudes and antisocial behaviors. The coaches attributed gymnasts' antisocial behaviors to the long years of investments starting from very early ages. They stated that they wish for their gymnasts' opponents fall from an apparatus at international competitions. The coaches believed that gymnasts would also wish the same. The coaches argued that there be a false outward sportsmanship among elite

120

gymnasts that would apparently hide the reason for increasing antisocial behaviors among more experienced gymnasts.

> *... they are really doing long years of training. At least ten years of heavily loaded training. For example, there was an audition for Olympics, and as coaches we could feel the tension between the two finalists who are also close friends. They must wish that the other would make a mistake and fall from an apparatus. Even us as coaches wish for the fall of the opponents while watching the competitions. There must be an antisocial thought, but they just try to conceal it. They unmount from the apparatus and shake hands but their nervousness is obvious from their faces. When I watch the young gymnasts' competition other gymnasts greet the gymnast performed on an apparatus, but it is debatable how sincere they really are. Because if that gymnast would fall, maybe one other gymnast become the first. They just pretend, but we cannot understand their sincerity. (C1)*

One less experienced coach alleged that there is a strong sportsmanship among elite gymnasts, but the majority of the group strongly doubted the sincerity of those gymnasts' outward behaviors.

4.2.1.2.6. Discussing Relevant Scientific Recommendations to Facilitate Gymnasts' Character Development

So far, the group has developed a conceptual understanding of character development in sport, and they shared their experiences, observations on this outcome while also sharing their practices, and strategies to improve it. Moreover, they discussed the scientific findings concerning gymnasts' character development by mostly approving the NA findings. In this final part of the discussion of character domain, the facilitator introduced the scientific information to the coaches about how to develop athletes' character development. He first explained the coaches the dimensions of character as the moral character, intellectual character, civic character, and performance character (Shield, 2011). Based on the dimensions of the character, the discussion focused on four main themes of scientific suggestions to facilitate character development in a sport context. These were "creating task-oriented climate instead of ego-oriented climate during training," "taking collective responsibility to ensure positive morality," "creating a democratic training environment," and "discussing an ethical issue on cases." Additionally, the facilitator discussed about "developing intrinsic motivation" as a suggestion for facilitating character development in sports. I presented the relevant findings of thematic analysis related to each suggestion below.

121

4.2.1.2.6.1. Create a Task-Oriented Climate Instead of Ego-Oriented Climate in Training

Drawing on achievement motivation theory (Nicholls, 1984) and its link with moral behavior (e.g., Kavussanu, 2008; Shields & Bredemeier, 2007), the facilitator shared with the coaches the suggestion of "creating a task-oriented coaching climate" instead of "ego-oriented coaching climate" during their training (Shields & Bredemeier, 2014). Specifically, the facilitator stated that many studies indicate that task orientation in coaching settings is associated with high moral functioning, whereas ego orientation in the field would most probably to produce antisocial gymnast behaviors.

Five coaches agreed with the scientific information the facilitator shared with them, and by reflecting on their experiences, they stated that many egoist gymnasts end up failing in time.

> *... the egoist successful gymnasts that we mentioned a little while ago are like this. That is to say, when a gymnast is ego oriented, no matter how much he is successful at a time they fail at some point, and everyone dislikes his/her personality. (C2)*

However, one comparably less experienced coach advocated the benefit of using ego orientation. He argued that it would bring more ambition to a gymnast for not to be fallen behind:

> *... but I bet some gymnasts get more ambitious in order not to fall behind when one becomes ego oriented by making all teammates work more ambitiously. I believe this also can have a positive for certain gymnasts. (C3)*

However, all of the other group members agreed that gymnasts need to compete with their records and skill levels, not with other gymnasts', and considered ego orientation detrimental for long-term success. The facilitator added that if the skill level difference is high between gymnasts, ego orientation would have catastrophic effects for the gymnasts with lower skill level.

After this point of the discussion, most of the coaches in the group said that gymnasts need to develop an understanding of losing, and take lessons from it. They believed that ego oriented gymnasts would not allow them to take these valuable lessons.

> *... both as a person and a gymnast, they need to learn from their failures. Every time success is not good. (C6)*
> *Failing is in the nature of sport. If one gymnast cannot absorb it, it is a big loss! (C2)*

4.2.1.2.6.2. Take Collective Responsibility to Ensure Positive Morality

The facilitator introduced the term "collective responsibility" (Power, Higgins, & Kohlberg, 1989; Shields & Bredemeier, 1995; Shields & Bredemeier, 2014) and suggested that every gymnast be responsible for the enforcement of the team's norms for the coaches to help promote gymnasts' moral action.

The coaches agreed with the recommendation and argued that immoral behaviors not be usually observed among coaches and gymnasts when gymnasts are younger. However, field observations revealed the prevalence of coaches exhibiting antisocial behaviors towards gymnasts as well as parents and other coaches in the context.

4.2.1.2.6.3. Create a Democratic Training Environment

The facilitator suggested coaches create a democratic training atmosphere, arguing that sports participation be expected to nurture civic character appropriate to democracy since gymnastics teams are also small communities, having different roles, power relations, modes of social organization, decision-making processes, and means of participation (Shields & Bredemeier, 2014). Therefore, they need to learn about their rights and responsibilities in their team for a healthy training environment.

The coaches stated that coaches in the field do not approach their gymnasts democratically, but this trend is gradually changing with the advent of new generation coaches and gymnasts. The coaches stated the dominance of conservative coaching culture, in which gymnasts are not allowed to freely express their opinions, and everything is under coaches' control. For the coaches, it used to be impossible to even respond to a coach let alone giving them suggestions as a gymnast; however, nowadays, the new generation of gymnasts are freer to express their feelings to their coaches.

> *I was ten. Our coach would throw a glance at us and it is over. We could not even stand up from where we sit. Let alone making suggestions, it was not even possible to tell anything to our coaches when we were gymnasts. But nowadays it is changing. We now hardly control new generation gymnasts. They are spoiled and more talkative. (C2)*

When the facilitator asked about the type of gymnasts that they would prefer to work with, the coaches found gymnasts who can take a stand and confront difficult to work with since they believed that at younger ages coach discipline is needed to ensure

smooth skill development. However, they commented that when gymnasts reach to an elite level, they need to express themselves openly by talking about their needs with coaches. Therefore, the coaches argued that at this later stage, a more democratic training environment is required.

> *... it has both positive and negative sides depending on their age. When gymnasts are newly developing, discipline is needed, but when they become more mature, they need to state their opinions, since it is necessary to talk about their several important distresses. Some gymnasts even cannot tell their injury to their coaches. Or they are overtraining and have a risk to burnout, but they cannot talk, and coach is not aware of that. (C2)*

Some of the coaches stated that they like self-expressive gymnasts more who can talk about their needs with coaches. When it is the case, for the coaches, it pushes and motivates them to teach more to those gymnasts.

> *For me, if a child (a gymnast) express his opinions, I actually like it. I like this kind of gymnasts because they encourage me to teach them more. (C1)*

However, the coaches claimed that many gymnasts cannot not openly communicate with their coaches about their physical needs or incidences such as tiredness or injuries they have, and consequently it may bring on overtraining and more severe injuries. The coaches argued that older coaches' (old school) gymnasts are less knowledgeable of this issue and face this problem more often. The reason was that gymnasts have a lack of communication between their coaches because they cannot express themselves easily toward them or cannot communicate the same language. For instance, a gymnast can criticize these coaches' practices in training by comparing them with their knowledge of sports science.

> *Many old-schools do not know overtraining or burnout. They have no academic knowledge about it. Now many gymnasts are students in physical education and sports major, and it makes them to be more critical to their training. Gymnasts learn some stuff about workout and criticize their coach of doing it wrong based on what they learned. And because these coaches were raised from pure experience, they cannot communicate with gymnasts using same language. (C2)*

The coaches added that although the practice coach follow may be more beneficial in the long run, coaches cannot communicate it with their more educated gymnasts and cannot persuade them. They commented that recently, more educated

coaches are prioritized by the federation when recruiting new coaches in the field who are supposedly more understanding and democratic.

4.2.1.2.6.4. Discuss an Ethical Issue on Cases

Apart from the abovementioned suggestions based on coaching literature, the facilitator, lastly, shared a scientific recommendation about 'promoting moral reasoning development' (Shields & Bredemeier, 2014) to facilitate gymnasts' character development. He stated that promoting moral reasoning may most probably lead to less aggression (Bredemeier, 1985, 1994), better sportsmanship (Horrocks, 1977), and more prosocial beliefs about fair play (Stephens, Bredemeier, Shields, 1997). He argued that sports participation does not automatically promote moral reasoning, and coaches need to promote moral reasoning development deliberately. Based on the recommendations of Shields and Bredemeier (2014), he advised coaches to use 'dialogue' as an educational tool for talking about moral issues take place in artistic gymnastics context. Specifically, the facilitator highlighted that the moral reasoning cannot develop if coaches use unidirectional conversation, which is usually the case in sports settings. He advised that gymnasts talk about ethical topics in sport and make comments about what is right or what is wrong.

This part of the group discussion revealed that coaches usually make comments about gymnasts' behaviors:

> ... rather we either positively or negatively talk about what they (the gymnasts) do during training or competitions. (C2)

However, they started to come up with critical cases from the context to discuss with their gymnasts. The coaches stated that they mainly comment on gymnasts' behaviors via one-way communication (from coach to gymnast), but realized that there are many significant cases to take lessons from the field, with an appropriate communication.

4.2.1.2.6.5. Develop Intrinsic Motivation

At the end of the discussion, the facilitator proposed that using strategies to develop gymnasts' intrinsic motivation can be another important point for facilitating gymnasts' character development. He explained the intrinsic motivation as when children (gymnasts) automatically want to take action instead of waiting for a stimulus

125

from coaches. Then he gave an example from his coaching experience related to a factor that decrease intrinsic motivation in athletes:

> *When I was coaching I would always align the training for the best athlete in the team. But it is not right for their character development. Each athlete has a unique developmental path. Some of them would seem to be talented at first, but if they have not got enough persistence, talent is useless. (F)*

The coaches responded that they behave selfishly and plan training for the best gymnast in their group. One of the coaches commented:

> *We become selfish because in there we plan workouts for the best. Because his success becomes my success. We do it as coaches. (C1)*

This coach also commented about the changing talent of previous competitive gymnasts in the field:

> *... for example, we observe it in the national team. For example, Murat (pseudonym). He used to be the fifth when he was younger. Our gymnast Ali (pseudonym) would score much better from him at that time. However, Murat gained a medal in the rings apparatus in the world when he became a young gymnast while Ahmet dropped out. It is also to do with working hard.*

4.2.1.3. Third Meeting (Connection)

Thematic analysis of the meeting revealed six themes in line with the outline of the discussion worksheet designed. These were 1) the coaches' understanding of connection, 2) developing a shared understanding of connection, 3) discussing the factors that affect gymnasts' connection development based on the coaches' experiences and observations, 4) the coaches' strategies to facilitate gymnasts' connection development, 5) discussion on the findings of NA for connection outcome, and 6) discussing relevant scientific recommendations to facilitate gymnasts' character development. I presented the findings under these themes below (Figure 4.4).

126
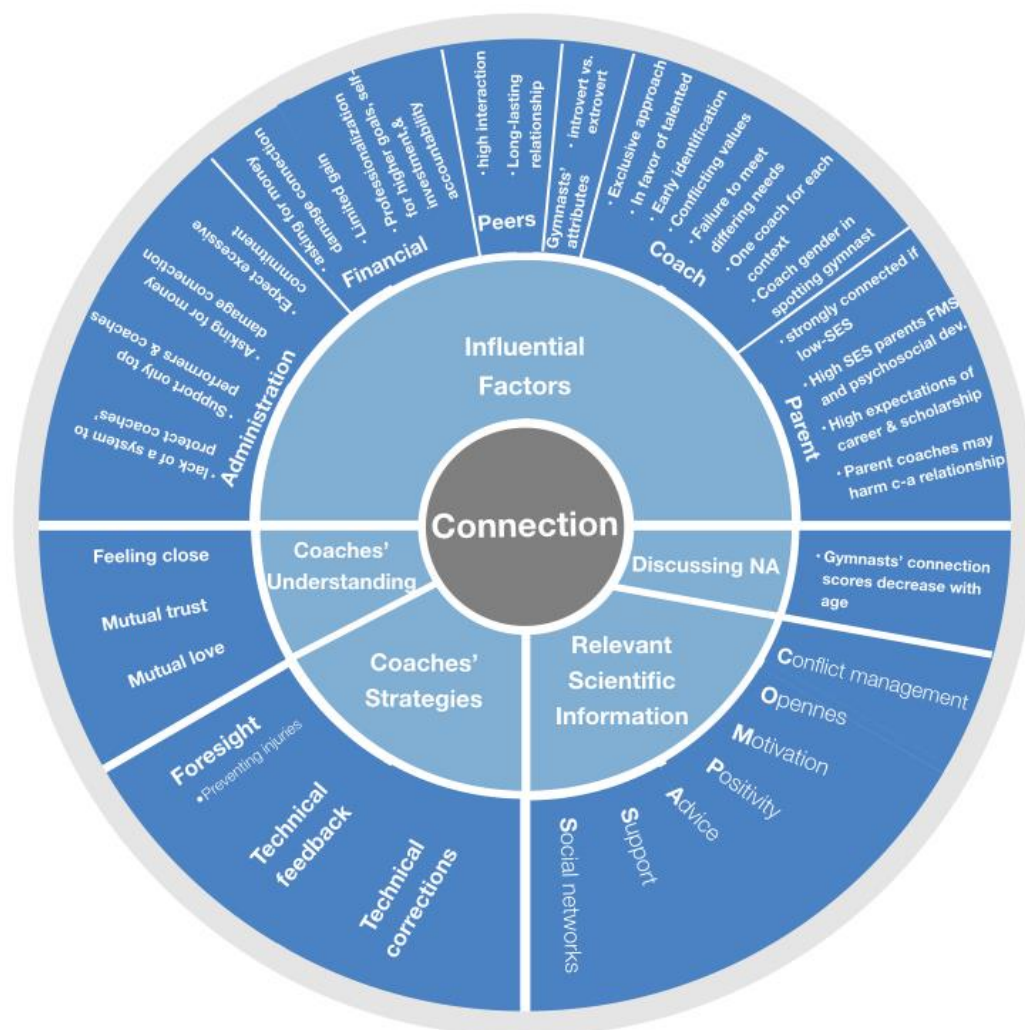
Figure 4.4. *Wheel chart for the themes appeared in the third meeting*

4.2.1.3.1. The Coaches' Understanding of Connection

The facilitator firstly opened the discussion with the coaches' understanding of "connection" in sports context by asking them the meaning of "connection" in artistic gymnastics. The analysis indicated that for the coaches, generally, the feeling of love and trust were the two important determiners of a strong connection between coaches and gymnasts. They stated that artistic gymnastics is quite demanding, and therefore, gymnasts need to feel close to their coaches to consistently overcome the burdens of this sport. Therefore, they argued, coaches need to endear themselves to their gymnasts. For the coaches, when gymnasts feel close to their coaches, they participate in training more regularly.

Gymnasts need to trust and love coaches. The connection is must because our job is very difficult. We completely force gymnasts to be competitive starting from early ages. To do that, we need to endear ourselves to gymnasts at early ages. If they love you they will regularly come to training. However, if not, they do not want to. (C1)

The coaches added that there needs to be a trustful relationship between coaches to maintain a healthy long-term relationship.

4.2.1.3.2. Developing a Shared Understanding of Connection

The facilitator firstly introduced the definition of connection and its key aspects to the group. These were "coach-athlete" and "peer-to-peer" connections. Then, focusing on coach-athlete connection, he defined a coach-athlete relationship as "a social process in which coaches and athletes' feelings, thoughts, and behaviors are interconnected and interdependent (Jowett, 2005). After that, he introduced the Jowett's (2007) conceptual model of coach-athlete relationship and explained its constructs of "closeness," "commitment," and "complementarity" to the group. All of the coaches in the group agreed on the presence of these three constructs in competitive artistic gymnastics context.

4.2.1.3.3. Discussing the Factors That Affect Gymnasts' Connection Development Based on the Coaches' Experiences and Observations

The coaches stated that there is a high prevalence that gymnasts abandon their coaches during their adolescence, which they considered this phenomenon as destructive and discouraging for coaching. Thematic analysis revealed several factors affect the coach-gymnast relationship.

Thematic analysis of the coaches' experiences and observations on connection revealed factors that were grouped under these topics: a) personal factors, b) significant others (coaches, parents, and peers), and c) other contextual factors (type and competitiveness of sports, amateur approach to professional work).

4.2.1.3.3.1. Personal Factors

4.2.1.3.3.1.1. Gymnasts' Attributes

The coaches also stated that gymnasts' personalities affect the coach-gymnast relationship. They said that each gymnast has different personalities such as being extrovert or introvert, and it affects the relationship. The facilitator exemplified the different personality of athletes from track and field context:

> *I do not know how it is in gymnastics but in track and field, long-distance runners were always calm, and sprinters were more aggressive and extrovert. It also relates to hormonal levels of athletes. Some of them were more agreeable and addressed the problems some were unaware and put the burden on their coaches. Some of them are emotionally stable whereas some mood swing. Some of them can comprehend when you explain something one time whereas others may need more examples and time. How do these attributes would affect your relationship? For instance, are they extrovert or introvert? (F)*

Although the coaches stated that gymnasts are usually introvert, most of them preferred to work with extrovert gymnasts. They argued that they can better understand whether a gymnast understands a skill or not, since they openly response to us when a need arises.

> *I feel more comfortable when training extrovert gymnasts. I can understand their reactions as well as whether they could understand what I taught or said. (C6)*

However, a coach in the group expressed that extrovert gymnasts may become problematic when ethical issues are not taken into consideration.

> *I think we need to define being extrovert. A gymnast can be extrovert, but if you developed his/her character well, you could control his/her. Therefore, it is the coaches' duties, but if you become too familiar with them, especially in adolescence, the relationship is put into danger and separations happen. Okay, we want them to be extrovert, smart and receptive but certainly, respect and discipline are needed in it. (C1)*

They said that there are examples of unique coach-gymnast relationship in the western regions of Turkey in which people have a more liberal point of view. The coaches commented that the coaches in the western Turkey want to keep close to their gymnasts since they are very talented and in the elite level, and this cause them to ignore their gymnasts' disrespectful behaviors for fear gymnasts would leave them.

> *When we look at the gymnasts in İzmir, they are very talented and but somehow their character development lags. To keep having them, their coaches compromise because there is a danger of the gymnasts going to the rival club. Ahmet (pseudonym; an Olympic gymnast) is Coach Ferhat's (pseudonym)*

129

gymnast. If he feels negative approach from his coach, he can easily change to the rival club. Even these coaches compromise, the separations happened, and we are back to square one. (C1)

The group concluded that as long as gymnasts have good manners, being an extrovert gymnast is beneficial. The coaches argued that as it is the case in western gymnastics culture, a coach should both be a friend and a disciplined coach depending on the situation. One coach exemplified the issue with his observation of training in a European sports culture:

... for example, I saw British coaches in the camp. They were like friends with their gymnasts. They were joking with one another and so on. However, when the training comes, there is an unbelievable discipline. It is the cultural difference. Everyone knows what to do next and where to stop. (C2)

4.2.1.3.3.2. Significant Others

4.2.1.3.3.2.1. Coaches

4.2.1.3.3.2.1.1. Differing Coach Connection with Gymnasts from Different Skill Levels

The facilitator asked the coaches whether they build a different level of connection with some gymnasts over others and differentiate their behaviors according to these different connections. The coaches admitted that they build stronger relationships with the gymnasts they perceive to be more skillful and that they show much more interest in them.

When there is a talented gymnast, we cannot help but show interest and face to him/her. (C2)

They argued that they have equal distance between gymnasts regarding emotional closeness by giving affection to all gymnasts, but they only get closer to the gymnasts with higher technical abilities to improve their skills further.

In a social context, our behavior is the same to each gymnast regarding closeness and respect to each other. However, it becomes different in training. There is a significant difference between the best, the mediocre and the gymnasts without talent. Then we focus more on the talented ones regarding their technical development. (C2)

130

They also advocated that when a gymnast cannot perform a skill, he/she realizes his/her limitations and do not feel bad when coaches focus on more talented gymnasts in the group.

> *... there is a different approach, but I think they (the gymnasts) do not feel it as discrimination. I mean, they can already see their skill level difference from the best in the team. While one can do it, they cannot. They realize their level of skill, and it does not negatively affect our coaching environment. (C1)*

In connection with the abovementioned issue, the facilitator commented that one of the biggest mistakes made in a sport context is labeling athletes as talented or untalented early. He added that the definition of talent is not that easy, and the athletes that you least expected can become very successful in time. On the facilitator's comment on the topic, the more experienced coaches in the group stated that gymnasts' skillfulness might change in time, and gave examples reflecting on their own experiences with gymnasts who once perceived as mediocre became very successful later on, and vice versa. The coaches also stated that there are talented gymnasts who become frivolous, irresponsible, and undisciplined after gaining small successes. They attributed those gymnasts' deterioration mostly to their parents' spoiling them by boosting their children's success all the time.

> *Sometimes if talented gymnasts have succeeded in some competitions, people from his/her immediate environment including coaches may congratulate them and exaggerate his/her success. Then, they give themselves airs and start to train less and less. That negatively affects their sport development. (C1)*

4.2.1.3.3.2.1.2. Coaches' Exclusive Approach to Gymnasts in Transition from Participation Context to Competitive Context

The coaches stated that the newcomers spend approximately two years to understand artistic gymnastics, and during that period they develop the fundamental skills of gymnastics. They often start to participate twice a week, and training load is much lower. Once coaches regard gymnasts as talented or promising, they contact with their parents and lead them to participate in competitive gymnastics in which training time increase from three to five days in a week with comparably much higher training load. The coaches argued that coaches lead parents' expectations and bring a discipline to children's lifestyles by having them to participate in competitive gymnastics. More experienced coaches in the group added that there is a high number of mediocre

gymnasts, and they said they also include them in the competitive groups for the purpose that they continue their participation a bit further as a social activity. However, they commented that many coaches exclude those gymnasts who seem to be inadequate for competitive context.

4.2.1.3.3.2.1.3. Differing Sociocultural Values between Coaches and Gymnasts

The discussion on the issue revealed that one of the reasons for this separation was gradually appearing sociocultural value differences between coaches and gymnasts. The analysis showed that coaches from different cultures might react gymnasts' responses or needs differently. For example, a coach who values compliance may regard a gymnast's questioning and ways of expressing herself/himself as a disrespectful behavior.

> *For me, raising gymnasts from the beginning is important. The upbringing of gymnasts differs from region to region. For example, nobody disrespects to his or her coaches who are from Ankara, but when I look at the gymnasts from Izmir, he or she can respond to his or her coaches during competitions. (C4)*

The coaches indicated that when gymnasts continue their gymnastics careers with the same coach, they better adapt to their coaches' coaching culture since the interaction begins from very early ages. Otherwise, the likelihood of the separation increases.

> *Since they start very early ages building connection with gymnasts is easier because they learn their coaches. The reason for the long togetherness is also this. We face problems with their adolescence. That is to say; gymnasts experience different personal problems with their coaches. However, in other sports athletes are already older, and the connection would be different there. (C2)*

4.2.1.3.3.2.1.4. Coaches' Failure to Keep up with Gymnasts' Differing Needs

Another reason for coach-gymnast separation was that coaches could not keep up with gymnasts' differing needs as they grow older. The coaches said that adolescence was a turning point for a coach-gymnast relationship, and they behave more tolerant to gymnasts as long as the relationship does not cross the respect line. However, they added that is not enough to have strong ties between them at this stage of development.

In that period (adolescence) we do not push their buttons much. Contrarily, we leave them well alone. We think that they are prone to drift away from us. They seem to behave defiantly to everyone like their parents and so on. To be able to make their participation go on, we ignore some of their defiant behaviors as long as they do not cross the respect line. Otherwise, coaches cannot stand. (C1)

The findings indicated that when gymnasts derail from their linear developmental path, the likelihood of coach-gymnast separation increases. The facilitator commented that the career of a coach goes parallel with that of their gymnasts', and athletes may become more interrogative of their coaches' professional knowledge to make sure whether his/her coach is professional enough for his further career aims in this stage of development. On his comment, the coaches argued that gymnasts indeed become more interrogative and inclined to get separated when especially they hit a plateau to their performance and cannot break it.

Gymnasts, for example, are becoming like coaches as they grow up. They start to evaluate their coaches whether their coach has enough knowledge and skills. Gymnasts start to think about it as they grow up. Then separations can happen because of that. (C1)

A more experienced coach stated that gymnasts are more compliant to their coaches' negative comments or yelling when they are much younger, but once they reach a certain age, they start to talk back to their coaches and criticize their behaviors that they dislike.

They are adolescents. From time to time we yell at children, and they do not say anything. However, when they come to a certain age, maybe you cannot realize since you are together from their childhood as a coach, you continue to yell at them and what happens, this time the gymnast asks 'why are you yelling at me?' (C2)

The coaches emphasized the need for professionalization as a club in meeting gymnasts' various needs. They gave examples of such clubs in abroad, which successfully develop elite gymnasts. The coaches attributed their success to having a coach for each skill development level and apparatus in addition to having a private gymnasium. The coaches argued that they have to deal with diverse needs of gymnasts alone such as teaching skills in six different apparatuses. The coaches believed that working as an only coach is possible when the coach has the professional competencies in all skills of the apparatuses. They believed that when it is the case, bonds between gymnasts and coaches become stronger. However, they commented that there is a need

for a professionalized group for developing gymnasts and there are many examples of this structure from successful countries.

> *My coach had told me one of his memories in abroad. He said there were nineteen gymnasts and their nineteen coaches standing in front of them before training. (C2)*

One coach emphasized the importance of professionalization on an apparatus as a coach:

> *Of course there is a specializing on one apparatus in abroad. For instance, a Chinese coach came to work in Bolu (a Turkish city), and when we ask about a technical detail in the high bar he says 'you have better knowledge than me in that apparatus.' They specialize in one apparatus, everyone's work is defined and limited. (C1)*

In addition to specializing on an apparatus, the coaches also put the importance of having different coaches for gymnasts' different developmental stages. One coach shared his observation of a working principle in one country which is highly successful in artistic gymnastics:

> *... one coach gives the basics; then other furthers it to developmental level until adolescence. Then other coach takes care of him/her. Sometimes different coaches take care based on an apparatus. (C2)*

4.2.1.3.3.2.1.5. Coaches' Unidimensional Approach to Development

During the discussion, the facilitator stated that coaches' feeling of responsibility for every aspect of gymnasts' development would determine the quality of the coach-gymnast relationship. He added that this educator approach to coaching is rather difficult. In line with that, more experienced coaches in the group supported the facilitator's remark and said that the philosophy of coaching affects the quality of the connection. One coach claimed that the coaches who mostly focus on the physical aspect of development could be comparably more successful. On this allegation, one experienced coach commented that the definition of success is not confined to developing physically skillful gymnasts:

> *... success is debatable based on what is important. Now as a coach, I both want to have successful gymnasts and develop individuals who are beneficial to the society and have a culture and respect and so on. My point of view is no longer aiming at Olympics and discarding everything else. However, it depends on the view of coaches. (C2)*

Most of the coaches in the group devalued only winning medals but doubted that other coaches in the field think the same. The experienced coaches emphasized that coaches' role needs to be similar with an educator's; therefore, it is broader and consequently more challenging.

4.2.1.3.3.2.1.6. Coach Gender

The coaches stated that coach-gymnast relationship is negatively affected when a female coach trains a male team. For the coaches, one of the reasons for this was that as male gymnasts become much heavier in adolescence, it becomes next to impossible for a female coach to spot a male gymnast in the apparatuses.

> *There is such factor in our sport: male gymnasts get very heavy in adolescence. Therefore, there is no chance for a woman coach to spot them on an apparatus in their adolescence.(C1)*

For the coaches, getting heavier is also an issue in female gymnastics, and more or less, woman coaches become disadvantageous when their gymnasts enter into adolescence, and it may pose confidence problems in entering into movements that need coach spot.

Also, the coaches commented that female gymnasts and coaches do not get along well. The coaches said they observe female gymnasts resisting to their female coaches more often.

> *Women do not get along well each other much. Both gymnasts and coaches are prima donnas. For instance, when going there and tell something about skill, gymnasts enthusiastically try to do it, but when their woman coach tell the same thing, they become reluctant and resistant. (C1)*

4.2.1.3.3.2.2. Parents
4.2.1.3.3.2.2.1. Parents' Influence on Coach-Gymnast Relationship

The coaches stated that children start gymnastics either by chance or by their parents' purposeful decisions. For the coaches, the parents usually bring their children to the gymnasium and randomly ask for a coach to begin gymnastics. There are, however, also interested parents who had researched the coach beforehand and decided with whom to work before entering into the gymnasium.

The coaches argued that if parents believe their children are developing well, then the relationship between coaches and them strengthens. However, after parents

selecting which coach to work with, and working with them for a while, they may change their mind to work with another coach. When it is the case, gymnasts do not want to participate in gymnastics because of the connection that they built with the previous coach is destroyed. When a coach develops a gymnast well, however, the bonds between coaches and parents strengthens.

4.2.1.3.3.2.2.2. Parents from Different Socioeconomic Status

Thematic analysis of the discussion indicated that socioeconomic status of parents has a critical influence on gymnasts' connection with their coaches and the sport. The coaches stated that coach-gymnast relationship is much stronger with gymnasts whose families are from low socioeconomic status (SES). The reason for the strong ties with competitive gymnastics was that these families have high expectations for their children's participation. They regard this context as a future for their children, for example, being successful in here facilitates winning scholarship and university entrance. For the coaches, being a gymnastics coach is another career option that parents have from their children's sports participation. When parents regard that they cannot fulfill their expectations, generally they make their children drop out of the sport. One coach's statement gives insight on the issue:

> *Parents usually see here as a future for their children. So, their expectations will be high. Although not regarding having a financial benefit, they think that in this way their children can enter academy of sports and graduate from here, then they can work as a coach after graduating and so on. They take us as an example. So, we can have a higher control and stronger relationship with these parents and their children especially when we start to give something to them. However, when we cannot, they tend to drop out. (C1)*

As for gymnasts from relatively wealthy parents, the coaches said, they do not usually have these expectations, and contrarily, their children's academic career is their priority. The facilitator commented that artistic gymnastics is a very demanding and challenging sport, and this may make competitive participation discouraging to them. He gave an example of his experience as a coach with one of his athletes with high SES:

> *I could not keep my one of very talented athletes in the competitive sport. His father was the boss of a big company. He said to me that 'my son will wear you out, he goes to skiing in summer to Australia for example, and cannot continue as you expected' and took his son from me. (F)*

136

On his reflection, the coaches said that competitive artistic gymnastics is dissuasively hard to participate and parents from high SES have their children to leave either to participate in other sports or to drop out of the sport after allowing them to master fundamental movement skills in artistic gymnastics.

I have twin brothers. Their father is a contractor, a wealthy contractor. In every public holiday, they travel to other cities. We do training five times a week, and they do not come two of them. We somehow cannot persuade them to participate fully. (C4)

Another coach illustrated gymnasts' changing direction after learning basic skills:

... for example, I had a child, and their parents brought them to gymnastics for him to gain basic skills. He was good, but one day their parents said that he would continue with tennis, and they left. (C6)

The coaches added that even if it is not common, there are such wealthy parents who support their children to the end, and gave an example of the recent Olympic gymnast who had been privately sponsored by their parents.

Apart from that, the coaches referred to the difficulty of working with gymnasts from different SES together. One coach exemplifies this hardship:

From time to time, we face problems. I say parents to buy some equipment; then the rich ones buy the best product in the market. Then it creates problems between the gymnasts. (C1)

Also, for this coach, many competitions are held in various cities throughout the year, and parents with lower SES have difficulty in participating those events. The coaches said that to solve this problem, they put parents a limit to take part in the events.

... for example, some parents can participate in all of the events in different cities and others who are from low SES also try hard to participate in those events, then again it creates problems. It often happens. Then, I set up a rule on this problem. I told the parents not every parent can come to each competition. I resolve this problem with this rule. (C1)

4.2.1.3.3.2.2.3. Parent Coaches

When the facilitator asked whether any parent coaches are coaching their children in the field, the coaches replied that although not common, there were parent coaches in the field and believed that this harms the relationship between the child and parent in time because of parents' role conflict.

There are some old coaches, such as coach Ali (pseudonym). He and his wife was his coach and their children reached to the level of the national team. However, there are not many examples like that. Coach Ayla (pseudonym) also raised her daughter as a gymnast, but they were not doing well. Finally, she changed her daughter's sport to diving because of continuing arguments. (C2)

The coaches said that these coaches become less tolerant of their children when they make mistakes and believed that coaches' coaching their children could be less harmful when children are in their youth.

... I also tried to train my child. When your child makes mistakes, you cannot tolerate much and interestingly get angry easier. We somehow could not bond the connection, and I left training him at the end. (C1)

4.2.1.3.3.2.3. Peers

The coaches argued that there is a high level of interaction among peers and usually there is a healthy relationship among gymnasts except for small arguments. More experienced coaches stated that these friendships usually become sustainable and there are some gymnasts still in touch with their peers and coaches after long years. One coach commented that gymnasts watch each other and see their peers as opponents to themselves.

4.2.1.3.3.2.4. Other Contextual Factors
4.2.1.3.3.2.4.1. Type and Competitive Level of Sport

The facilitator stated that sport type influences coach-athlete relationship. He asked the coaches if they agree the idea that coach-athlete relationship is stronger in individual sports since in team sports, coaches frequently change. They all agreed and stated that they build much stronger bonds with their gymnasts and consequently have stronger connection compared with coaches of team sports. They said that they spend much more time with their gymnasts starting from their early ages, which can allow for building a closer relationship. The experienced coaches added that at their younger ages, gymnasts do not have the consciousness to question their coaches' views and personality, either. Therefore, coaches and gymnasts usually do not have difficulty in understanding each other well.

The facilitator stated that based on the literature, the competitive level also influences coach-athlete relationship. The coaches replied that it is tough to disconnect from a coach at competitive level especially if gymnasts are successful.

> *... of course! The connection between an Olympic athlete and a coach would be solid. Because the athlete blindly believes the coach. (C1)*

Another coach remarked that gymnasts could continue with their coaches although they do not emotionally feel close to their coaches as long as they develop and continue to be successful.

> *... even if there is no emotional connection between the two, they can continue their relationship because of the continuing success. A gymnast would not want to leave a coach when he/she is successful. For younger gymnasts, the relationship continues based more on emotional connection. (C3)*

On this comment, all of the coaches agreed that gymnasts could tolerate their coaches although they do not like them or respect them. The facilitator stated that in the beginning, developing gymnasts would be easier, but as the developmental level gets higher coaches may face hardships in discovering ways to unlock gymnasts' potential.

4.2.1.3.3.2.4.2. Amateur Approach to the Professional Work (Policy Level)

During the group discussion, the facilitator stated that increased complexity of current skills in sports must necessitate increasing training time, too. He said that when time investment increases significantly, the approach to coaching needs to be professional. One coach commented the general program of a competitive coach's weekly program:

> *... gymnasts participate in training five days in a week and around three hours for each. The training hours and days increase based on gymnasts' competitive levels up to six days in a week and six hours in a day. They do heavy training there. Their significant amount of time is spent in the gymnasium. We must see it as a professional work. (C2)*

However, the coaches stated that although they work like professionals by investing much time to develop elite gymnasts, when it comes to financial gains, they have to be like amateurs. The reason for that was when a gymnast is considered promising; the coaches do not demand a financial benefit from their parents thinking that it would cause problems such as a decreased sense of belonging in both gymnasts and parents, and discrimination between rich and poor parents.

... that would prevent their feeling of belonging. Parents also invest their children by bringing them every day to training that is already a financial burden. Some parents have not enough financial capability to support their children. We witnessed families not being able to find money for public transportation to bring their children to gymnastics. (C1)

The coaches commented that parents are from low-to-middle socioeconomic status and coaches do not demand anything for fear parents cut gymnasts' ties with them. Besides, they commented that they provide financial support to gymnasts if they are helpless. The coaches believed that although earning money is essential; moral values come to the fore.

... I have a gymnast Emre (pseudonym), we provide money for him to have his hair cut and offer lunch before training. He needs to eat well, but he comes to training with an empty stomach. When he comes from school to training, I provide lunch to him. (C1)

I witnessed parents who cannot find money to send their children to training. I would give money to my some of the gymnasts for them to be able to participate in training. Murat (pseudonym) would say I do not have money and we would cover his commuting expense. (C2)

Consequently, the coaches said, coaches working in elite context are reduced to work in participation context to support themselves financially. The coaches stated that they have no strong clubs or sponsors that could support them or their gymnasts. However, they claimed that the gymnasts from abroad are supported very well having enough support from sponsors and clubs that strengthen their connection with their coaches.

For instance, I am a full-time coach and do not have a decent salary. With this money, it is hard to make a living. I have to work with participation groups. However, if I spend my energy on them, how can I adequately work with competitive ones? We do not have strong clubs. We usually try to support ourselves with our clubs, for example, to be able to participate in competitions (C1)

In line with the experienced coaches' abovementioned comments, although the less experienced coaches in the group advocated amateurism, more experienced coaches thought the opposite. The less experienced coaches advocated that amateur approach increase the connection between coach and gymnasts, prevents parents' intervention, and keep parent connected to the coaches.

I am also on the side of amateurism because when there is a materiality, we may look at it as a job. Ours is much more dependent on a voluntarily act. In this

way, we like coaching much more. Moreover, children get connected to us not because of money, but from their heart. We see in professional sports, coaches change and so on. In our context, it does not happen much when gymnasts fail. Therefore, amateurism is better for connection. (C4)

... it creates problems in connection. Gymnasts would think that my coach trains me because of money. I would do taekwondo, and they were asking for money from my parents, and this decreased my feeling of belonging to my coach. (C6)

The less experienced coaches also believed that parents would have also intervened with what coaches do and had much higher expectations if parents had provided financial support.

They would have the role of a boss and feel that they have a voice in interfering coaches. (C6)

However, the more experienced coaches in the group argued that to make gymnasts reach an elite level of competitiveness, coaches need to earn enough, which in turn helps invest in their professional development. They gave an example of a recent Turkish Olympic gymnast's coach who had privately been hired by the gymnast's parents with a decent salary. The facilitator asked whether professionals or amateurs are more accountable for their acts, and feel responsible for their professional development. The more experienced coaches said that professionalism brings stronger relationships and accountability on the part of the coach because earning money will be in return for clearly defined commitment. Therefore, they stated that they need financial gain to reach higher goals and meet expectations of both gymnasts and coaches, which consequently strengthen the connection between coaches and gymnasts. The group concluded that earning money is needed for a quality coaching in competitive context; however, this needs to be handled without confronting with parents. Coaches offered that via government support and clubs; this can be handled without confrontation.

The coaches also argued that the expectations of administration from elite coaches excess the boundaries of elite sports context, which allegedly complicates the issue of professionalism and negatively affect competitive gymnasts' development. They claimed that administrative bodies expect higher commitments from the coaches compared with their limited salaries and work priorities. Specifically, the coaches said that elite coaches are forced to take part in participatory activities such as summer schools and winter school projects that provincial directorate organizes for free. Additionally, they argued that the financial assistance they obtain from participating in

formal organizations such as national team camps leave much to be desired. One experienced coach exemplified the issue by reflecting on his one of experiences of attending one:

> *In wrestling, elite wrestlers and their coaches earn satisfactorily good money from their club, and there is a success. Their everything such as camps they participate in, accommodations, their nutrition, everything is qualified. Everyone knows what to do; there is professionalism in there. For example, I went to a twenty-day camp and in return for it I get a ridiculously small amount of money and participating in this organization became a punishment both to my gymnast and to me. However, I brought a national-level gymnast to that camp. They were supposed to promote me instead! (C1)*

Also, the coaches highlighted the importance of financially supporting promising gymnasts who are at the beginning of their competitive careers as well as their coaches. The facilitator argued that current sport policy only allow monetary support to top-level athletes. The coaches said that they face major challenges along the way of reaching that level. The coaches argued that Olympic gymnasts already have strong ties with their coaches because these coaches had already gained trust by developing them to reach Olympic level. Also, a gymnast may continue with a coach although they do not respect him/her at this level. However, at the developmental level, the coaches argued, gymnasts can easily leave coaches in the most critical period of coaches' career in which they can start to gain benefits mutually, and this ruins those coaches' career. The coaches urged a professional approach to competitive gymnasts' development and asked for a mechanism that protects coaches who develop gymnasts from the beginning to the level of elite performance to help strengthen the bonds between the two parties. The coaches argued that in other cultures with a well-developed artistic gymnastics system, coaches' rights are well-protected. For example, any coach who has contributed efforts to a highly successful gymnast are rewarded by either their governmental administration or by their clubs. When the facilitator asked about the situation in abroad, the coaches gave examples from the United States, Romania, and Russia related to opportunities and rights provided to coaches and gymnasts in their development system:

> *In Russia, there are Olympic centers. In these centers, talented athletes are gathered, but when they do this, there is a system. For instance, if I have a talented gymnast, they take this gymnast from me to raise for Olympics, and when this gymnast reaches success, the system also remembers me and rewards me five percent or ten percent of the reward gained. In America, each club has*

private gymnasiums like our gymnasium which belongs to the government. In Romania, gymnasts have a military rank for each achievement, and their salaries are guaranteed once they enter national team. However, in here even a gymnast enters in the national team... Recently, there is a project that supports competitive athletes. It is not very significant amount though. (C1, C2)

4.2.1.3.4. The Coaches' Strategies to Facilitate Gymnasts' Connection Development

The experienced coaches in the group stated that one aspect that they were careful about was building trust between gymnast and them. For them, gaining gymnasts' confidence is quite important since artistic gymnastics involves many kinds of injuries. To do so, they claimed that gymnasts need to be made understand that their coaches are foresighted and experienced in providing protective feedbacks on gymnasts' wrong skill performances that may most probably lead to injuries in the future. The coaches claimed that, if coaches can build such trust, then it most likely leads to a stronger coach-gymnast relationship.

Giving the gymnasts the sense of security is very effective in our sport. Because it includes many injuries and coaches can detect gymnasts' erroneous techniques and foresee that they could injure themselves if they continue like that. I, personally, warn my gymnasts when I detect such erroneous movements and warn them that if they continue to do like this, they may injure themselves in the future. Then, when it happens; gymnasts confide in me and their connection to me gets strengthen. (C1)

4.2.1.3.5. Discussion on the Findings of NA for Connection Outcome

By adhering to the standardized worksheet, the facilitator started to open a discussion on the one significant finding of the NA concerning connection domain, which was "younger gymnasts perceive a higher connection with their coaches compared with their older counterparts." The coaches confirmed the finding and stated that they experience and observe the same tendency in the context. They assumed that one of the reasons for this result was the success factor. They speculated that when gymnasts become less successful, they and their parents start to feel less connected to their coaches.

Although the analysis did not yield a significant difference (p = .070) between the coaches' and the gymnasts' connection scores, the coaches stated that they also feel less connected to their gymnasts as their gymnasts grow older. They said they do not

143

trust their gymnasts and also their parents in maintaining a long-term relationship with them, and considered them usually "ungrateful." They had experienced and witnessed many emerging gymnasts' leave for the sake of gaining small benefits such as a salary offered by a different club or giving justification of their academic responsibilities, by easily disregarding their coaches' years of work.

> *… but gymnast does not consider at all, his parents, either. They can leave when they see a financial gain in somewhere else or parents can say that their child is preparing for higher education, and can say they do not want to bring him/her anymore. At one side your ten to fifteen years of service, but they may not care about it at all and leave. We experienced it. Gymnasts are more comfortable than coaches in that sense. (C2)*

The coaches (especially the more experienced ones) expressed their distrust by stating that they already experienced gymnasts' leaving before, and they just do not want to be abandoned by them again. They said they keep on their guard against gymnasts and their parents, and approach to them more cautiously when building a relationship.

> *Firstly, I will give Ali's (pseudonym) example. In the beginning, he came to me from participation group. We regarded him talented and transferred him to the competitive group. I trained him for two years, and I had built an emotional connection with him. One day, the child had to leave gymnastics because of his mother's job schedule, and I saw his leaving in my dreams for one week. I had felt connected to him so much and regarded him as if he was my brother. However, after him, I could never establish such bond with any gymnasts. This is a precaution to protect myself. (C4)*

4.2.1.3.6. Discussing Relevant Scientific Recommendations to Facilitate Gymnasts' Character Development

The facilitator lastly put forward the relevant scientific information to the coaches concerning how to strengthen and maintain the connection between coaches and gymnasts. He introduced the COMPASS model of relationship maintenance in the coach-athlete relationship (Rhind and Jowett, 2010), which are conflict management, openness, motivation, positivity, advice, support, and social networks. Then he discussed each dimension of the model with the coaches to enhance the closeness, commitment, and complementarity between their gymnasts. Lastly, he stated that in track and field, there is a problem with being open to one another. Specifically, coaches and athletes do not openly put forward their expectations openly. He emphasized that each party need to state their expectations of the coaching environment openly. He gave

144

an example of being open by reflecting on his one experience with a group of competitive athletes.

Let me give you an example from my life when I was a coach. I had five athletes and each one aimed at becoming an elite athlete. They were between sixteen to eighteen. After training two to three years, I said to one of them to continue with this sport. Moreover, I said to another that your capacity does not allow to reach elite context, but you can become a good coach. Because that one was passionate and thinking how to do it better. He would search for answers, and guess what is missing. I told the other one that he could become a good manager because he had different social skills. I told every one of them different points to focus on. Then except for one, the others turned against me. And still, we could not mend the fences with them. They are now in their thirties. One of them was in the world ranking in the sport. Others became successful in different roles but they could never reach elite level because I could see their potential genetically from the beginning. (F)

On the facilitator's statement, the coaches commented that they are usually positive to their gymnasts since they deal with children their psychology is critical to them. Therefore, regarding being open, they have an inclusive approach to gymnasts to keep them connected to the sport. The more experienced coaches in the group stated that although they view some gymnasts as untalented, they said that they do not negatively comment on their talent. They argued that those gymnasts love gymnastics and facing the truth would ruin their emotions. They believe that this would negatively affect gymnasts' future lifestyle outside of sport in addition to their current sport participation. The coaches explained that they patiently wait until these gymnasts come to understand their limits, especially during their adolescence.

He will understand what he is and where he is in sixteen to eighteen years of age. They love gymnastics. If we approach our expectations and their situation openly to a ten-year-old gymnast whom we started working from his early ages, this would harm their feelings and can cause negative things in his life. Also, this would negatively affect their future life. I can never be open to telling a untalented gymnast that he is untalented into his face or his parents. We patiently wait until they can see their limitations themselves. In time, they understand from the competition scores that they cannot reach the national team. (C1)

4.2.1.4. Fourth Meeting (Confidence & Creativity)
4.2.1.4.1. Confidence

The themes appeared from the discussion were reported under the titles of 1) the coaches' understanding of gymnasts' self-confidence, 2) building a shared

145

understanding of self-confidence in sport, 3) the coaches' experiences and observations on the factors that affect gymnasts' self-confidence development, 4) discussing NA findings on gymnasts' self-confidence, and, 5) discussing relevant scientific recommendations to facilitate gymnasts' self-confidence in sport. Additionally, "creativity" as a new dimension to the 4 Cs of athlete outcomes was discussed under these titles: 1) what coaches do to develop gymnasts' creativity, and 2) discussing the suggestions of scientific information provided to develop creativity. I presented the findings under these themes below (Figure 4.5).
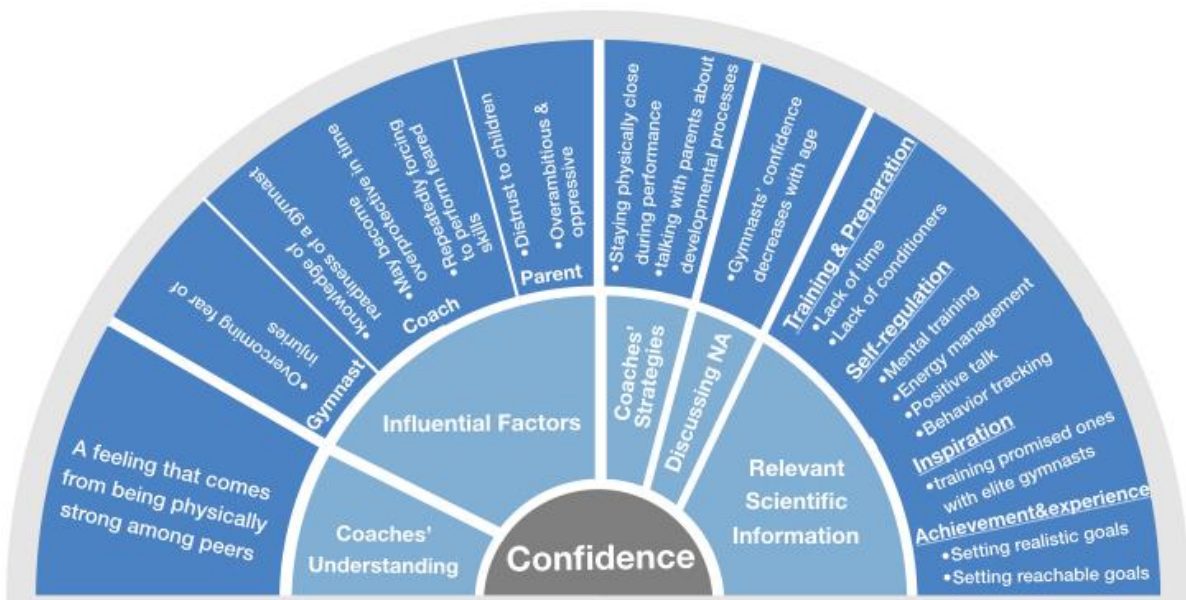
Figure 4.5. Wheel chart for the themes of confidence

4.2.1.4.1.1. The Coaches' Understanding of Gymnasts' Self-Confidence

When the facilitator asked about the self-confidence levels of gymnasts, the coaches stated that artistic gymnastics participation has a positive impact on children's self-confidence since they grow stronger, more flexible and agile relatively earlier than their peers at school. This athletic advantage provides them a higher self-confidence. The coaches added that they also take part in school shows and athletic organizations that make them feel more confident. As for sport-related self-confidence, the coaches explained that competition experiences help increase gymnasts' self-confidence. For the coaches, gymnasts in the context they work in are self-confident.

For me, they are self-confident. Since it is an individual sport, and involves competition, they become self-confident. Also, they physically become stronger in their early years of development. This also brings self-confidence. They become more flexible, stronger and agile. They come to their peers' attention. They are easily recognized in school. The PE teacher use our gymnasts when preparing a school show. These also bring them the feeling of self-confidence. (C1)

4.2.1.4.1.2. Developing a Shared Understanding of Self-Confidence

Rooted in the Vealey's (1986) work and based on Vierimaa et al.'s (2012) definition in the context of the 4 Cs, which is concerned with trait sport confidence, the facilitator firstly defined sport confidence as "the belief or degree of certainty individuals (generally) possess about their ability to be successful in sport" (Vealey, 1986). The coaches stated that they agreed with the definition. The facilitator stated that he observed that if a child is successful at school or in a group, even his walking reflects his self-confidence. But when an athlete participates in bigger competitions and get together with the athletes like him/her, the situation changes. Therefore, contextual differences affect athletes' self-confidence.

The coaches agreed with the facilitator's statement and commented that self-confidence is indeed directly linked to success, and it is also the case with coaches' self-confidence. The more successful their gymnasts are, the higher their gymnasts and their own self-confidence will be.

4.2.1.4.1.3. Discussing the Factors That Affect Gymnasts' Self-Confidence Development Based On the Coaches' Experiences and Observations

Thematic analysis of this phase of the discussion revealed that mainly coaches and parents have a significant impact on gymnasts' self-confidence development.

4.2.1.4.1.3.1. Significant Others
4.2.1.4.1.3.1.1. Coaches
4.2.1.4.1.3.1.1.1. Coaches Sensing Gymnasts' Readiness to Perform Higher

The coaches said they know when gymnasts become physically ready for performing a greater degree of skill, and they stated that they talk with gymnasts that they have become ready to perform it. They argued that most of the time gymnasts cannot completely feel they are ready for a new skill performance. The coaches stated

that after determining that they become capable, they inform them and help them to make it. In this way, the coaches said, gymnasts' self-confidence sharply increases. The coaches stated that they could feel when their gymnasts are ready, and they make sure their gymnasts are physically and technically ready for a new skill. In this way, they said, they protect them from injuries, and this helps them to earn gymnasts' trust.

The coaches, especially the more experienced ones, also emphasized the difficulty of overcoming a fear of particular skills (e.g., finishing movement in the high bar) especially when gymnasts have previous negative experiences. The coaches argued that many coaches make gymnasts repeat the same movement that they could not perform and fall. They gave several examples of those coaches forcing their gymnasts to perform a new skill that they fail each time of trial. The coaches argued that it significantly decreases gymnasts' self-confidence while increasing their fear. They said that during the competitions, they usually witness gymnasts hesitatingly waiting on an apparatus who are afraid of beginning a skill. They said that sometimes referees intervene them to stop the performance in case of a serious injury, otherwise coaches frequently force them to perform. The coaches argued that there be a substantial number of gymnasts who have consequently dropped out because of the fear of performing the same skill that they have never managed to perform on an apparatus successfully. The coaches emphasized the importance of selecting the appropriate skill level for gymnasts based on their readiness.

4.2.1.4.1.3.1.1.2. The Coaches' Negative Experiences Affect Their and Gymnasts' Self-Confidence

The coaches stated that younger coaches are more courageous in taking risks for gymnasts regarding skill execution, and often ignore gymnasts' health by overloading them. However, coaches' significant negative experiences such as a serious injury happened to their gymnasts previously, affects coaches' self-confidence negatively, and they may become overprotective, which prevents them from furthering gymnasts' skills to more complex levels. The coaches said that when they experience a past injury with their former gymnasts, they feel anxious whenever teaching the same skill to new gymnasts although they reach excellence in that skill.

148

The more experienced coaches in the group said that experienced coaches in the field, including them, always advise younger coaches to stay physically close to gymnasts while they are performing on an apparatus, which they believe gives gymnasts confidence as well as enable coaches to prevent possible injuries. They added that although gymnasts seem to be ready for a new skill, and even can perform it very well, coaches still need to stay close to them at all time since gymnast may make a mistake and it would be very costly.

4.2.1.4.1.3.1.2. Parents
4.2.1.4.1.3.1.2.1. Parent Involvement

The coaches stated that in the competitive context, most of the time, parents have a small degree of trust of their children, and preconceived negative opinions of their performance. The coaches argued that this affect both gymnasts and coaches negatively by firstly decreasing gymnasts' self-confidence. The coaches said many over-ambitious parents lead their children to drop out. They insisted that there be many examples of this situation in the field. For the coaches, to make matters worse, coaches may also adopt parents' oppressive approach. The coaches claimed that there are coaches who force their gymnasts above their skill levels, leading to injuries, less self-confidence, and consequently dropout, and parents' contribution to it is significant.

The coaches said that whenever they feel this parent oppression to their gymnasts, they interfere this process by talking with parents to not to be overwhelmed by their ambitions over their children. However, the coaches pointed out that most of the time it was too late to intervene to prevent and reverse the situation by the time they sense or hear it from the gymnasts.

4.2.1.4.1.4. Discussing the NA Findings on Gymnasts' Self-Confidence

When the facilitator shared the finding concerning self-confidence "gymnasts' self-confidence is significantly decreased in older age-group of gymnasts," the coaches agreed with the finding. They argued that the increase in difficulty of movement skills and fear of injury by extension, must have significant roles in this decreased perception of gymnasts' self-confidence. The coaches stated that in the beginning, the skills are easier and safer to perform for gymnasts, but gradually they get more and more challenging and risky. Also, in the beginning, they mostly perform with the help of

coaches during competitions. When they grow older, the skills become more complicated, and risk of injury also increases correspondingly. The coaches also argued that when gymnasts are less experienced, they are more courageous to perform the movements with higher self-confidence.

> *The skill movements get harder and their fear increases in line with that. In the beginning, the movements have no or little risk of injury. When skills get harder and risky, gymnasts may leave even if they are ready physically and technically. It can also be observed in gymnasts who are physically capable. For example, they cannot start to move on an apparatus, waiting and waiting. Girls also encounter this, on the balance beam, they cannot begin to perform and waiting for minutes to start. (C1)*

C2 commented that repeatedly negative experiences in an apparatus, especially when a coach forces gymnasts to do so when gymnasts fail, may cause a serious psychological problems such as a decreased self-confidence. He argued that coaches in his setting practice this kind of practice.

4.2.1.4.1.5. The Coaches' Strategies to Facilitate Gymnasts' Self-Confidence Development

As mentioned under the previous titles, the coaches mainly voiced two strategies in facilitating gymnasts' self-confidence development, which are firstly staying physically close to gymnasts during the training and competitions, and intervening the over-ambitious and doubtful parents to prevent them from discouraging their children by explaining the nature of developmental processes in artistic gymnastics.

4.2.1.4.1.6. Discussing Relevant Scientific Recommendations to Facilitate Gymnasts' Self-Confidence Development

In this part of the discussion, the facilitator shared the scientific information about developing gymnasts' self-confidence in the sport. He introduced the "model for building confidence in athletes" proposed by Vealey and Vernau (2010) that is composed of four main strategies to improve athletes' self-confidence in the sport. The discussion continued on these four aspects which were 1) physical training and preparation, 2) self-regulation, 3) inspiration, and 4) experiencing success. At the end of this part of the discussion, the facilitator shared with the coaches the figure that simplifies self-confidence development model (Vealey & Vernau, 2010), and continued

the discussion for the group to have a general picture of what they have discussed so far. Coaches also defined their felt needs in increasing self-confidence in gymnasts. I presented the findings of thematic analysis under these dimensions below.

4.2.1.4.1.6.1. Physical Training and Preparation

Training time, genetics, and lack of conditioners were the main topics that thematic analysis revealed from this part of the discussion. The coaches argued that gymnasts in abroad are better in physical training and preparation. They claimed that they were not able to work enough, with having limited training time. This time limitation forces them to push gymnasts to perform certain skills prematurely although they knew they were not ready especially regarding strength and conditioning. Therefore, they argued, gymnasts could only inaccurately perform the skills, and a desired progressive skill development cannot be completely realized.

The coaches also stated that genetics is also a limitation to reaching high performance. They claimed that talent selection is made better in cultures that reached international success. In addition to the genetics, they also pointed out the importance of gymnasts being clever in terms of having analytic thinking capability that enable them to learn about the critical aspects of skills.

The coaches complained that although there is an enough experience and knowledge in the context, there is no professional conditioner who can take care of gymnasts' physical preparation. The coaches emphasized that Turkish gymnasts had a lack of conditioning compared with their counterparts from other cultures and argued that there be a particular need for professional support for coaches in physical preparation and conditioning, especially for national team gymnasts' physical development.

4.2.1.4.1.6.2. Self-Regulation

Under this dimension, the group discussed the strategies of mental training, positive talk, energy management, and behavior tracking to enhance self-regulation.

4.2.1.4.1.6.2.1. Mental Training

After the group discussed the issue, the coaches stated that they make more experienced gymnasts to teach skills to their younger peers, but do not use mental training at all. By reflecting on their athletic experiences as gymnasts, the more experienced coaches in the group said that they used to benefit from this strategy as a gymnast thanks to their coach who was a sports scientist at the same time. The group strongly agreed that this method might help increase gymnasts' self-confidence. After finishing the discussion of the topic, the coaches said they would use this technique to increase gymnasts' self-confidence since it is a critical issue in their context. However, they added that they did not know how to do it. Also, the coaches believed that this method could only be applied to gymnasts with certain age but not to children arguing that this technique would be too abstract for them.

4.2.1.4.1.6.2.2. Positive Talk

After discussing the role of mental training in developing gymnasts' self-confidence especially during competitions, the group started to speak about the importance of 'positive talk.' After discussing its influence on self-confidence, the coaches admitted that they talk to their gymnasts by firstly emphasizing their mistakes. During the discussion, they started to believe that they may have directed their gymnasts to failure by overly emphasizing their mistakes all the time. Additionally, they said they do not teach their gymnasts positive self-talk. One experienced coach reflected on his learning experience of an international seminar and stated that he learned not to talk negatively toward gymnasts from that seminar.

At the end of the discussion, a visual material was shared with the coaches, in which elite gymnasts' serious falls were compiled as a short video to help the coaches reflect on the negative impact of focusing solely on mistakes and negative talking. After watching the video, coaches said that they could now better imagine how much gymnasts are being affected by their negative talk and comments.

4.2.1.4.1.6.2.3. Energy Management

The coaches argued that it is essential for gymnasts to use their energy economically when performing skills one after another. The coaches stated that during the performance, gymnasts sometimes overspend their energy to one skill and become

too tired to complete the following skill. Additionally, performing skills to fast is also undesirable for the coaches. When gymnasts use their energy unwisely, they lose accuracy of their skill performance, and this may lead to a decreased self-confidence.

4.2.1.4.1.6.2.4. Behavior Tracking

Based on the scientific information, the facilitator explained behavior tracking as creating a positive climate, increasing self-confidence by starting from an example or an inspiration. He added that it was about tracking a behavior that is negative and turning it to positive. The coaches did not comment on this point.

4.2.1.4.1.6.3. Inspiration

After the facilitator informed the group about what scientific knowledge suggests about inspiration, the coaches started to reflect on the issue. They stated that they make promising gymnasts train with elite gymnasts, and argued that it enables promising gymnasts to increase their self-confidence, and consequently their skill development significantly, on the condition that coaches well manage the process. The coaches claimed that when a developing gymnast start to train with elite gymnasts, whose capabilities overestimated by them, the developing gymnast starts to perceive that elite gymnasts' capabilities are reachable and normal. Consequently, thanks to this socialization process, they become inspired and start to believe themselves that they can reach the same level of performance. The coaches argued that it is also the case for the coaches. The more experienced coaches also inspire them in the context.

The coaches emphasized the important role of international preparation camps in inspiring gymnasts and coaches. They said that recently, the federation provided this opportunity to gymnasts and coaches. The coaches attributed this positive approach to the current president, who is a former well-known competitive gymnast. His previous experiences as a gymnast allegedly allow him to understand the needs of the context better.

By reflecting on the facilitator's previous suggestion on motivational climate, the coaches stated that if a coach confuses inspiration with ego orientation by aligning the training environment for the best gymnast, it will most probably have a negative impact on other gymnasts' self-confidence development.

4.2.1.4.1.6.4. Experiencing Success

The facilitator firstly introduced the scientific recommendations on the topic of experiencing success. Then the discussion continued with coaches' comments on the issue. The analysis revealed that for the coaches, setting realistic goals to gymnasts is needed for them to be able to experience success in their career. Comparably less experienced coaches advocated that in younger gymnasts' practices, there is no goal setting as they only develop their fundamental skills. However, the more experienced coaches in the group argued that gymnasts can set reachable goals by choosing right skills, and their sequences. They added that gymnasts can know their capabilities as well as limits, and can set realistic goals for themselves. In the end, they said, the ultimate goal for gymnasts is to reach a level that allows them to participate to competition.

4.2.1.4.1.6.5. Coaches Defining Their Own Needs (Discussion on the Figure of Self-Confidence Developmental Model)

During the discussion, the coaches highlighted that they need professional help in mental training. They argued that many techniques in artistic gymnastics entail gymnasts to mentally focus on learning and performing them flawlessly. The coaches cited a highly successful Turkish elite gymnast who uses mental training and appropriate goal setting thanks to one of the coaches in the field who was also a sports scientist. The coaches said that he transferred his scientific knowledge into the field and enabled the gymnast to have the much higher self-confidence to reach his goals.

The coaches also talked about goal setting. They stated that reaching higher goals are largely dependent on their gymnasts' long-term participation. Therefore, finding a skilled gymnast and keeping him/her in artistic gymnastics are critical for the coaches. Coaches believed having high-level professional knowledge that can lead gymnasts to elite level has a major role in realizing that ultimate goal. They said that coaches' career develops with their gymnasts', and realized that it is important to set the goals progressively for both parties. The more experienced coaches argued that if coaches do not continually develop their professional knowledge to meet gymnasts' higher demands, a talented gymnast's talent may become useless, or they will eventually split up. The comparably less experienced coaches said that they develop as a group of members of a club by working together under the supervision of elite coaches. In this way, they stated that they could learn from the group and conduct training more

consciously, which protects them from failing to develop talented gymnasts. However, the coaches also complained about the non-existence of scientific approach in the field. They argued that gymnastics coaches, especially ones with high experience, are so distant to a scientific approach that they do not adopt it even if they witness its positive impact on gymnasts when knowledgeable coaches use it. The group argued that these coaches are too much dependent on their field experiences, and that causes problems.

4.2.1.4.2. Creativity

In addition to the 4 Cs of athlete outcomes framework, the coaches have highlighted that "creativity" was a critical factor for gymnasts in reaching success. After discussing self-confidence dimension, the group started to discuss what creativity was, and how it can be developed with the facilitator's definition of creativity and opening the issue to discussion. The coaches said that creativity is needed to achieve higher ends, and stated that gymnasts create unique movements and they have become to be known by their movements. The coaches believed that the difficulty of movements triggers creativity, and suggested that creativity of coaches be at the forefront at the beginning of gymnasts' career while gymnasts' creativity should become of priority when they grow up to adolescence.
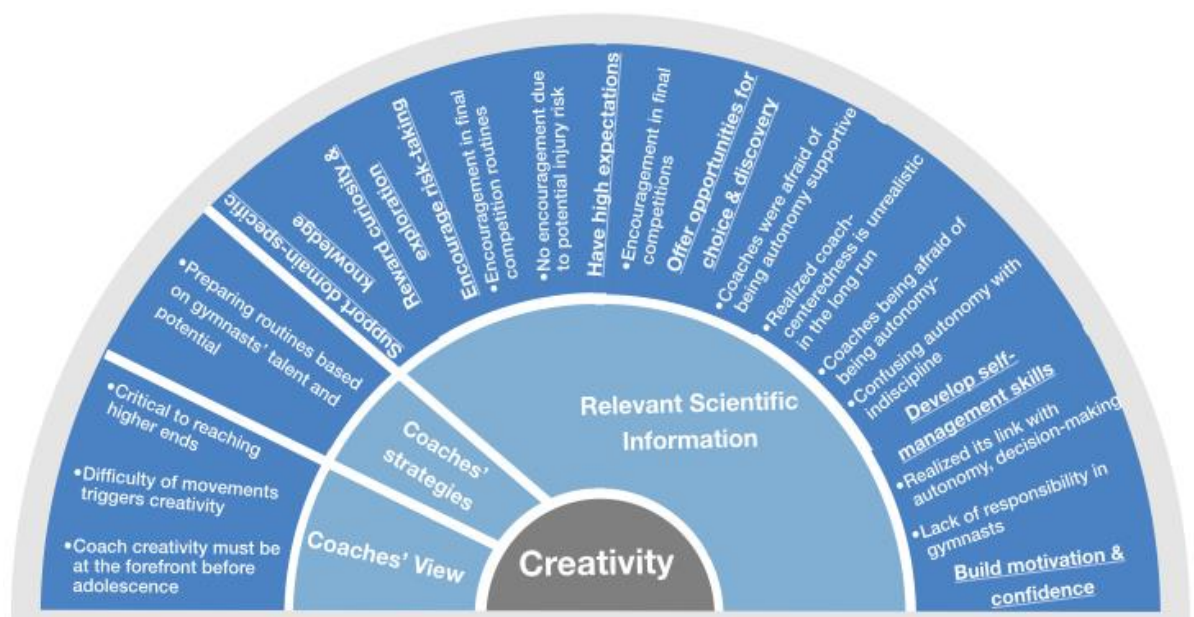
Figure 4.6. *Wheel chart for the themes of creativity*

4.2.1.4.2.1. What Do Coaches Do to Develop Gymnasts' Creativity

The facilitator continued the discussion by directly asking whether they use any strategies to develop their gymnasts' creativity. They responded that they prepare gymnasts' performance routines based on their talent and potential. There were no additional comments from the coaches.

4.2.1.4.2.2. Discussing Relevant Scientific Recommendations to Facilitate Gymnasts' Creativity

Drawing on Griggs and McGregor's (2012) work that used mediational and scaffolding techniques to support the development of creativity to develop teaching and learning of gymnastics, the facilitator led the discussion under the titles of seven aspects that Nickerson (1999) proposed and regarded as "key developments underpinning creativity." These were 1) supporting domain-specific knowledge, 2) rewarding curiosity and exploration, 3) encouraging risk-taking, 4) having high expectations, 5) developing self-management skills, 6) offering opportunities for choice and discovery, and 7) building motivation and confidence. I presented the findings under these aspects below (Figure 4.6). The coaches did not comment on the last aspect.

4.2.1.4.2.2.1. Supporting Domain-Specific Knowledge

The coaches stated that they provide necessary technical knowledge to their gymnasts.

4.2.1.4.2.2.2. Rewarding Curiosity and Exploration

The coaches stated that they feel gymnasts' sense of curiosity. They exampled many gymnasts who like to do the skills they are beyond their capabilities. Even though this pleases the coaches, they said they explain to the gymnasts that they are not ready yet, and do not allow them to try higher level skills. The coaches said that coaches in the field do not arouse their gymnasts' curiosity and sense of exploration because of the potential risks that may bring with them.

156

4.2.1.4.2.2.3. Encouraging Risk-Taking

The coaches argued that movement skills are already difficult in artistic gymnastics; therefore, they naturally necessitate courage and risk-taking. Taking much higher risks may be quite dangerous for gymnasts. The coaches said that gymnasts ask them to take risks by for examples desiring to perform a skill without a mat or demand from them to perform a newly learned skill in a competition. The coaches stated that they decide how much gymnasts can freely take risks based on their readiness. Contrary to what they have argued, however, the coaches also argued that they encourage gymnasts to take risks in final competitions.

4.2.1.4.2.2.4. Having High Expectations

The coaches said that they motivate new gymnasts by promising them to give a chance to compete at local competitions if they work in a discipline.

4.2.1.4.2.2.5. Offering Opportunities for Choice and Discovery

The facilitator discussed with the coaches the important role of developing autonomy and responsibility in gymnasts to develop their creativity based on educational psychology and athlete development literature. Specifically, he emphasized the necessity of being athlete-centered in the context to reach those aims. The coaches said that younger gymnasts are more investigative, asking many questions during training. However, they admitted that there is a coach-centered education based on imitation in the context in which coaches decide everything during training, and gymnasts follow what they are told. Some coaches in the group stated that they started to give small responsibilities to their gymnasts such as carrying the apparatuses on their own. The coaches highlighted that they could only give small responsibilities as the gymnasts are not mature enough.

Some coaches in the group argued that gymnasts can better express themselves when they are set free while other coaches in the group would regard it as turning them adrift. Those coaches, they said, do not want their gymnasts to walk or run freely in the gymnasium, but want them to obey them by waiting for their instructions.

Although appreciating the benefits of athlete-centeredness, the coaches insisted that it would be more appropriate to use coach-centered approach at younger ages and more athlete-centered approach as gymnasts grow older. They said they were afraid of

giving autonomy to gymnasts, firstly, because they fear for increasing the risk of injury. Secondly, they tend to identify autonomy with turning gymnasts adrift. After taking the coaches' opinions on the issue, the facilitator informed the coaches that the scientific recommendations contrasted with their beliefs and practices. He explained that gymnasts need to gain autonomy starting from early ages, and athlete-centeredness is not turning gymnasts adrift but allowing them to think about and make decisions about their training (learning).

4.2.1.4.2.2.6. Developing Self-Management Skills

Another topic that the group discussed after autonomy was gymnasts' responsibility. The coaches compared Turkish gymnasts with the gymnasts from western cultures regarding having responsible behaviors by reflecting on their experiences at international events they participated. They argued that Turkish gymnasts derail from what they are supposed to do while others work with responsibility and internal motivation without any controlling environment. The coaches attributed this to cultural difference. By exemplifying the autonomy-supportive relationship between two highly successful Turkish gymnasts (one of whom is an Olympic gymnast) and their coaches, the group came to realize the significance of developing gymnasts' autonomous decision-making ability which may lead to responsibility, and coaches' critical role of instilling them into their gymnasts. The coaches admitted that at the beginning of this discussion they regarded those coaches and their gymnasts as undisciplined and loose since those elite gymnasts could freely express their feelings and thoughts during training. However, after the discussion, they said they completely changed their mind and started to think that the coaches may be behaving autonomy-supportive to their gymnasts to help gymnasts develop autonomy and responsibility. At the end of the discussion the group concluded that the sustainability of coach-centered approach becomes unrealistic when considering gymnasts' long-term development, and if the aim is to develop self-reliant, thinking and responsible gymnasts, it is better to be also athlete-centered when needed.

4.2.1.5. Fifth Meeting (Competence)

The group lastly focused on the 'competence' dimension as a last developmental outcome to discuss. As the coaches were the experts of the technical, tactical, and physical aspects of competence dimension, the facilitator did not delve into their definitions. He mainly discussed the technical and tactical aspects of competence in gymnastics (Figure 4.7).

4.2.1.5.1. Developing a Shared Understanding of Competence Development

In suggesting what the scientific approach offers to enhance technical and tactical development, the facilitator drew on Martens's work (2012) in which these two aspects are scientifically described in detail.

4.2.1.5.1.1. Teaching Techniques

Firstly, the facilitator shared the information with the coaches about the three main phases of learning (cognitive phase, practice phase, and automatization phase), and asked whether they follow the same phases when teaching gymnasts techniques. The coaches stated that they also follow these main stages when teaching technique. They said that they teach skills stage by stage by using supporting movements and demonstrating skills on a model gymnast and also on a technological device. Concerning modeling skills, the coaches argued that coaches' modeling the fundamental skills be essential at the beginning of gymnasts' development since coaches are primary sources for gymnasts to understand skills, and therefore, coaches are very influential models for beginners in this case. The coaches stated that when the skills get complex, coaches need to find other ways to provide modeling by using technology and a model gymnast.

4.2.1.5.1.2. Teaching Tactics

At the beginning of the discussion on teaching tactics, the facilitator introduced the "tactical triangle" (reading the situation, gathering relevant information to make an appropriate tactical decision, and using decision-making skills to solve a problem; Martens, 2012; p. 185) to the group. The coaches approved of the tactical triangle and stated that they develop their gymnasts' tactics after determining their needs. Therefore, for the coaches, being able to determine the problem in a routine, and developing tactics with gymnasts during the competitions are essential. For gymnasts to be able to use

tactics they learned, the coaches said they follow certain strategies. These were first, discussing the routine with gymnasts by asking them questions related to the reasons for problems, and trying to find solutions to different probabilities together by working on the routine more and discussing it again.
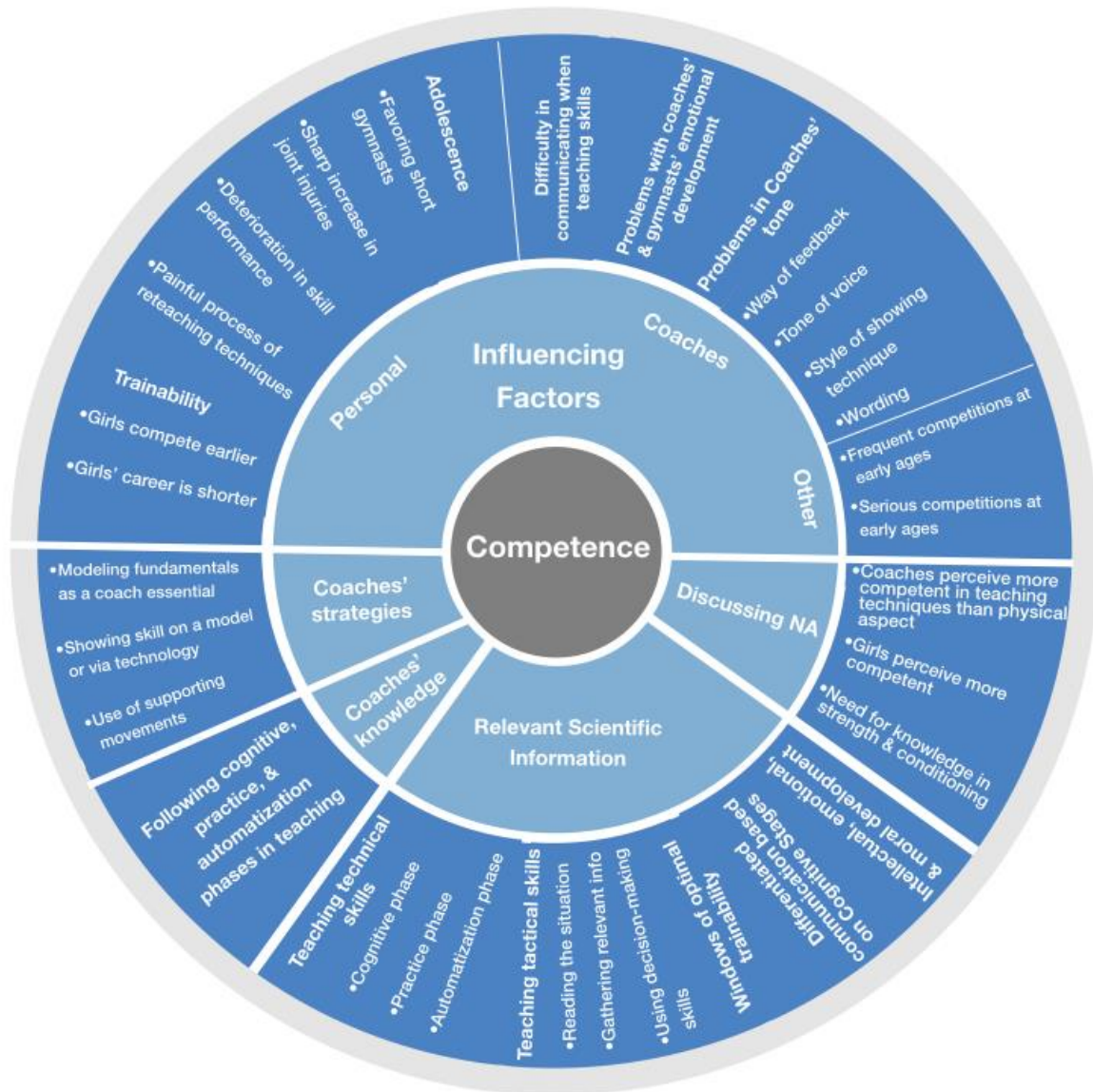
Figure 4.7. Wheel chart for the themes appeared in the fifth meeting

During this process, coaches said they also try to reveal the source of the problem, being either physical or psychological. The coaches stated that they align gymnasts' routine based on their will if possible, but it can only happen in elite youth and adult artistic gymnastics.

The coaches also said that young and adult gymnasts might change the movements in their routine during the competition depending on the situation. For instance, a gymnast can spontaneously choose his/her finishing to be easier if his opponent lost points by falling from an apparatus. Additionally, he/she may feel that he/she will fall because of exhaustion, and choose to perform an easier finish. The coaches argued that through this learning process, young gymnasts get to know their strengths and weaknesses very well and know how their body works better. Therefore, in this way, they can make comments on what to work on, and find and adopt new exercises to improve their strength. The coaches added, however, it is not the case in developmental gymnastics. The gymnasts in this context are obliged to follow their predefined routines decided by their coaches, and naturally, there is no discussion on tactics with these gymnasts.

4.2.1.5.2. Discussing the NA Findings on Competence

The facilitator opened the discussion with asking whether coaches seem to be more competent in developing gymnasts' technical skills than developing their physical skills" (e.g., strength). The coaches stated that while coaches in the context, including them, view themselves more capable in technical aspects, they need professional knowledge of developing gymnasts' physical development, especially regarding physical fitness. They believed that strength and conditioning are prerequisites to developing gymnasts' technique. The coaches argued that coaches in the field try hard to teach technical aspects to gymnasts one after another without providing necessary physical preparation, and consequently, gymnasts' skill learning become defective or interrupted. They also contended that a considerable number of gymnasts in the context have an inadequate level of strength and conditioning, and this causes them to have difficulty in successfully interconnecting the movement skills. Consequently, it negatively affects them to complete their routines successfully both in training and in competitions. The coaches also attributed this result to gymnasts', especially women, significant weight gaining in adolescence that complicates skill performance by demanding more strength and conditioning.

> *For example, girls put on weight enormously in their puberty. They became all overweight and can hardly perform certain movements. Actually their technique is good, but they become physically limited. There is such problem among women gymnasts. (C1)*

After coaches gave in-depth information about the technical and physical issues of the competence occurring in the context, the facilitator shared the finding of the NA with the coaches, which is "female gymnasts perceive significantly more competent (techniques, tactics, & physical aspects) than their male counterparts." The coaches agreed with the finding and attributed it to females' and males' different growth rates. They argued that female gymnasts' growth rate be faster than that of males. Based on this argument they speculated that this must be the reason why female gymnasts perceived more competent in technical and physical aspects.

4.2.1.5.3. Discussing the Factors That Affect Gymnasts' Competence Development Based on Coaches' Experiences and Observations

So far, the group had discussed the physical factors that influence competence with the facilitator's lead of the discussion with using the critical scientific material about the issue. In this part of the discussion, the group started to talk about their experiences and observations of psychosocial factors that affect gymnasts' competence development. Thematic analysis of the discussion yielded three main issues relevant to competence development that were 1) coaches' failure in approaching to gymnasts appropriate to their cognitive development, 2) the coaches' tone, and 3) emotional development.

4.2.1.5.3.1. Personal Factors
4.2.1.5.3.1.1. Gymnasts' Trainability Based on Their Physical Growth and Development

After the group discussed the findings of competence, the facilitator continued the discussion with introducing the trainability figures from Balyi et al.'s (2013) work one by one. They included 'six phases of growth', 'key biological markers for girls and boys', 'windows of accelerated adaptation to training', 'windows for strength training in girls and boys', 'optimal trainability', and 'long-term athlete development stages and their relationship between cognitive, emotional, and ethical development'. These figures showed the coaches the aspects of critical trainability points based on age and gender.

Firstly, the group discussed developmental issues in early ages (5-12 years of age) in which the physical growth is comparably slow and stable. The coaches stated that girls could reach national level in five years while boys can barely reach the

competitive level in that period. They argued that since girls grow faster, they can reach high performance earlier than boys. However, they claimed that their career also ends as soon as at nineteen or twenty years of age while male gymnasts continue their career much longer.

Comparing their field with the general trainability diagram (when to train which skills) that the facilitator introduced to the group, the coaches stated that specialization in physical skills is earlier than the diagram suggests. In order to improve performance earlier, they said, coaches start overloading gymnasts approximately two years earlier. They added that it also depends on the differing physical needs of gymnasts. For example, when a gymnast grows faster, agility becomes more important for them, and therefore, they start to focus on this skill to develop it earlier. The group claimed that there is at least two-year difference between male and female gymnasts about growth, and females nearly complete their growth at about sixteen, two years earlier to what the diagram suggests.

At the beginning of this part of the discussion, the facilitator had stressed that coaches also need to be knowledgeable in social, cognitive, and emotional development of gymnasts, based on their age. The coaches stated that when gymnasts approach adolescence, psychosocial problems also start to appear. They also claimed that working with boys at this stage is much more manageable compared to working with girls.

4.2.1.5.3.2. Significant Others
4.2.1.5.3.2.1. Coaches
4.2.1.5.3.2.1.1. Overemphasis on Technical and Strength Development during Adolescence

The coaches argued that when gymnasts are at about their twelve, they start to overgrow and this brings about problems in their competence. When body parts grow longer than usual, this negatively affects gymnasts' technical and physical competencies. Because of the fast rate of growth, they said, generally joint injuries rapidly increase, so the need for strength. They stated that they have been observing their gymnasts' decreasing strength, which leads to deterioration in the mastery of movements. For the coaches, it is the stage in which technical skills are retaught since the gymnasts' changed body sizes make it necessary to revise and realign all reflexes in the previously learned skills, and this put a burden on coaches since it takes much more

time to reteach all of them. The coaches contended that this painful process might most probably damage gymnasts' self-confidence while wearing out coaches.

Specifically, one of the issues that coaches face was gymnasts growing tall at this stage of development. They said that when gymnasts grow tall fast, their competence significantly decreases while their likelihood of failure in performance is increasing. The coaches argued that the winners in adolescence are always the shortest gymnasts. They said that a considerable number of gymnasts either drop out or change to another sport during their adolescence because of that reason. The coaches stated that the gymnasts transferred to other sports are mostly very successful in those sports. The more experienced coaches in the group indicated that they try to maintain these gymnasts' long-term participation and wait for the right time for increasing training load that is at about sixteen years of age. Then, they argued, these gymnasts excel at their competence when they are at about nineteen years of age. They added that there are such rare examples of highly successful gymnasts both in Turkish context and in other cultures. The coaches argued that there is a problematic timing of strength training in the field. One experienced coach in the group exemplified the situation by his experience with one of his gymnasts. He said that while his gymnast started to grow tall faster between twelve and fifteen years of age, he applied a much heavier strength training, but achieved no positive result in his performance. However, after the age of fifteen, he said, the gymnast's technical competence started to rapidly increase in line with the fast increase in his strength. The coach claimed that tall gymnasts might have an advantage in certain apparatuses such as high bar although other less experienced coaches in the group had advocated that gymnasts need to be short to be successful.

When discussing the issue of optimal trainability of strength, the coaches stated that they develop gymnasts' physical fitness by mainly using their body weight. They claimed that they do not expose them to weightlifting until they are fifteen. They said that they use only 250 gram small handbags. They attributed this lack of using weights to having insufficient equipment in the gymnasium. The facilitator remarked that scientific sources suggest not do strength training at early ages though it is prevalent in artistic gymnastics. The coaches argued that no injury occurs sourced from strength training at early ages. They claimed that gymnasts mostly injure themselves on the apparatuses or when they are idle. They said that since gymnasts start to get strong at

very early stages of their development, their body adapts to higher stress and the likelihood of injury decreases. The group concluded that the generalized knowledge about strength training might not apply to artistic gymnastics context. However, one experienced coach claimed that even though gymnasts use only their body weight in training physical fitness, it is already difficult for small children. Therefore, gymnasts, in reality, train under heavy weights considering the stress their total body weight put on their muscular system. Other coaches in the group agreed with him.

4.2.1.5.3.2.1.2. Coaches' Communication with Gymnasts in Teaching Skills

The coaches stated that they usually have difficulty in making younger gymnasts understand sports skills. When gymnasts fail in performing a skill, they said that they use an able gymnast with a similar age to explain and show the skill, and in this way, they can get better results. Additionally, the coaches said they could ask for help from a more experienced and knowledgeable coach regarding communication, independent of their coaching level. The facilitator provided a scientific information from cognitive theory of learning (Piaget) stating that each explanation needs to be concretized for gymnasts who are between seven and twelve years of age to facilitate their understanding of the concepts. He highlighted the criticality of considering gymnasts' cognitive developmental stages and aligning training according to these levels of stages. The group also believed that asking for help from coaches who work in different developmental contexts may help coaches to better understand how to approach to their gymnasts.

4.2.1.5.3.2.1.3. The Coaches' Tone

The coaches admitted that coaches' approach when teaching skills need to be aligned based on gymnasts' developmental needs. For instance, the coaches emphasized the importance of how coaches use their tone of voice, style of showing movements, words they used, and the way of giving feedback when teaching skills, especially to developmental level gymnasts. Based on their field experiences, the coaches argued that elite coaches in the field mostly have difficulty in how to appropriately interact with younger gymnasts. They contended that being a coach in elite sports context does not always guarantee the ability to work with younger participants. The coaches argued that teaching technical skills to younger gymnasts necessitates different approaches;

therefore, not every elite coach can manage to take the role of a developmental level coach easily if he/she does not have the necessary pedagogical skills.

4.2.1.5.3.2.1.4. Problematic Emotional Development

When discussing Balyi et al.'s (2013) diagram introduced on the relationship among LTAD stages and emotional development that the facilitator introduced to the group, the coaches argued that both coaches' and gymnasts' emotional development are way fall behind. The facilitator emphasized the importance of emotional developmental stage of gymnasts and explained the emotional stages they need to go through such as hope, will, purpose, competence, and fidelity. The experienced coaches in the group stated that they monitor their gymnasts' emotional state and behave accordingly when teaching skills. Specifically, they said that some gymnasts like a pat on the back all the time while another one better learns with winding him up. Therefore, based on their personal emotional needs that they perceive, the coaches said they give feedback and change their behavior. The coaches stated that there are gymnasts who have low-level in their emotional development, and this negatively affects their sport competence.

4.2.1.5.3.2.1.5. Being a Former Gymnast

Another topic was whether coaches' previous career determines their coaching effectiveness regarding teaching techniques. The coaches believed that coaches without previous athletic career might become effective coaches. They attributed their effectiveness to their being more patient and interrogative since they were not the gymnasts. They also argued that formerly mediocre gymnasts may also become very effective coaches and are well-respected as a coach in the field. They said that these coaches focus more on the small details to reach high performance much more than coaches who were once gymnasts. For the coaches, although the federation values the past sporting experience, the hierarchy between coaches with or without a gymnastics background is not significant. The coaches said that other coaches from other sports careers or having no past gymnastics experience are also welcome on the condition that they are successful in teaching techniques.

4.2.1.5.3.2.2. Other Contextual Factors

4.2.1.5.3.2.2.1. Competition Policy at Early Ages

The coaches said that gymnasts start competing as early as seven years old, and there are leagues in which they compete three times in a year. For a gymnast to become competitive, he/she needs to start artistic gymnastics when they are five years old at most. The facilitator argued that competing at early ages is not appropriate for children. The coaches said that little gymnasts have to confront the physiological, psychological, and sociological pressure of competition, and they sometimes cannot deal with this pressure. The coaches complained that the format of the competitions for little gymnasts are the same as those organized for young and adult gymnasts. The group argued that in some other cultures, competitions at early ages have participation emphasis, not winning. The coaches added that international competitions start at the age of 11, and an Olympic participation starts at the age of fifteen and sixteen.

4.2.1.5.4. The Coaches' Discussion with a Sports Psychologist on Their Perceived Professional Needs

During the previous discussions, the coaches had admitted their several erroneous practices when trying to improve their gymnasts' performance, and had expressed professional needs in several topics that were in the territory of sport psychology. In response, the facilitator invited a sport psychologist who works within competitive youth sport context to take part in the discussion to meet the coaches' felt professional needs. Thematic analysis revealed seven issues that the coaches voiced that they further need for a professional support. These were: 1) problems in coach-gymnast interaction, 2) mental training, 3) gymnasts' fall and their psychological recovery, 4) overcoming gymnasts' competition anxiety, 5) developing gymnasts' responsibility and goal setting, 6) making competition meaningful for gymnasts, and 7) coaches as educators. I reported the findings under their relevant themes below.

4.2.1.5.4.1. Problems in Coach-Gymnast Interaction

The coaches argued that generally, there is a communication gap between their gymnasts. They claimed that there are no rude behaviors that they observe in the field, for gymnasts learn manners from their coaches. However, they stated that gymnasts sometimes conceal their injuries or use them as an excuse. The psychologist

recommended coaches to provide an open-communication environment, which involves non-judgmental approach, and discuss the real intentions or wants face to face between them to build a stronger relationship. She added that fake injuries might be the result of a jealousy issue between gymnasts based on coaches' behaviors and advised the coaches share their gymnasts' unique needs and strengths to the whole team of gymnasts, otherwise they could feel jealous and resented towards them not knowing the reasons for their coaches' specific behaviors.

4.2.1.5.4.2. Mental Training

The coaches said they find mental training critical both for teaching gymnasts skills and having gymnasts perform successfully during competitions. They stated that their gymnasts have difficulty in learning new skills, and being calm and focused during competitions. The psychologist introduced the "imagery" technique, which she has been using to enhance skill learning and rate of success in competitions. She explained that the mistakes gymnasts make can be reversed during the imagery sessions. One of the more experienced coaches stated that his coach would use imagery to their team when he was a competitive gymnast. In contrast to coaches' thinking that mental training techniques cannot be applied to younger gymnasts, she stated that it conversely, it become easier for children to implement them.

The coaches asked about how to learn mental training skills to use them for their gymnasts arguing that reaching out for a specialist all the time would be impossible. They also claimed that they know their gymnasts best; therefore, their intervention would be more appropriate to get better results. Contrarily, the psychologist argued that to get successful results from imagery there should be a distance between athletes and the specialist who conduct mental training techniques. She explained that there are drawbacks to being from the "family"; therefore, there has to be a distance between the specialist and athlete, that the close relationship between coaches and athletes prevents coaches from starting and maintaining a successful mental training process. However, she added that psychologists and coaches need to work collaboratively and be open to sharing information for psychologists to better understand athletes.

4.2.1.5.2.3. Gymnasts' Fall and Their Psychological Recovery

The coaches state that when gymnasts fall from an apparatus while performing a skill that they have done it thousands of time successfully, they feel disappointed and helpless. They said they warn gymnasts 'not to fall' repeatedly. The psychologist argued that negative warnings remind of negative results by making gymnasts feel more scared and conditioned to act negatively. She emphasized the need for warning gymnasts in a more constructive manner. The coaches stated that they begin to warn them positively during their training, but somehow it turns out to be a negative interaction between them and the gymnasts. For example, they said they warn their gymnasts during a training saying "you will get injured if you repeatedly continue to make the same mistake!", Then, when they hurt themselves afterward, they would say "I had warned you not to do it!" The psychologist argued that coaches may condition their gymnasts to negative outcomes. The coaches stated that they tried to protect their gymnasts but realized that gymnasts needed positive comments. The coaches admitted that they might become very stressful during training because they need to take care of many gymnasts; therefore, this puts stress on them. Because of this, they said, they may become punitive when evaluating gymnasts' mistakes, especially when they fall. However, the psychologist advised the coaches to regard "falling" as a natural occurrence and act to gymnasts accordingly. Since it is very likely to fall in artistic gymnastics, this cannot be a reason for feeling disappointed. She suggested that gymnasts need to understand the fact that falling develops them. She advised the coaches to tell stories of highly successful gymnasts who have fallen many times but consequently achieved success at the end.

The coaches also asked the psychologist how to respond to a gymnast when he/she falls while performing a risky skill and developed fear afterward. The coaches said they have both experienced and observed in the field that when gymnasts fall during such performances, coaches make him/her do the same skill over and over again with the intent to help them conquer their fear. An experienced coach stated that when he was a competitive gymnast, he would always hit his legs to the high bar when finishing his performance, and yet his coach would force him to try the skill again and again, but having no specific comment about it. In the end, he said that he had become unable to perform that apparatus at all. Another experienced coach argued that coaches in the field usually scold gymnasts when they perform wrong or when they fall from an apparatus.

169

He said that they usually yell at like "Okay, enough, stop doing it! It sucks! How many times will you hit yourself like that? You will get injured soon, so leave it right now!". The psychologist suggested the coaches behave based on gymnasts' personality when trying to help alleviate the adverse effects of falling. She advocated that approaching all gymnasts same would be harmful. Suspending of learning of that skill for a while might work for some gymnasts. She added that determining the area of need for improvement by doing a reflection on the movement and analyzing the mistake together in a constructive manner is necessary. The psychologist said that allowing gymnasts to evaluate their body condition from one to ten at the time of fall would allow coaches to understand their gymnasts' physical and psychological state better. Also, making them feel that falling is natural may help very much for gymnasts to recover from their fear faster.

4.2.1.5.2.4. Overcoming Gymnasts' Competition Anxiety

The coaches stated that gymnasts become anxious and feel stressed during competitions, and this negatively affects their performance. They said that they do not know what to do when they face this problem. Many apparatuses in artistic gymnastics necessitate a great focus; therefore, providing a high level of stress to gymnasts. One of the coaches said that in one coach seminar organized by the federation, a drug had been suggested to use to prevent gymnasts' anxiety, but he disapproved of using it. Additionally, the coaches said that they usually use child aspirin or candy shaped like a drug to motivate their gymnasts by giving them to gymnasts before a competition. The group also stated that coaches in the field are also directly or indirectly oppressed by governing bodies to win and gain medals, and this makes coaches to increase gymnasts' anxiety to win.

To help gymnasts to overcome their competition anxiety, the psychologist suggested several suggestions to the coaches. Firstly, telling gymnasts that their opponents also experience similar hardships and situations would help them feel relieved from their stress. She also advised the coaches to be emphatic towards their gymnasts' feelings and to give confidence to them during competitions by defining personal success to gymnasts. Also, she suggested the coaches make their gymnasts understand that emotions such as anxiety and crying are normal occurrences during competitions. Regarding drug use to preventing competition anxiety, she strongly

suggested not use any drugs that would both cause serious health problems, and negatively affects gymnasts' personal development in that they may become a dependent personality. Instead, she suggested the coaches keep gymnasts away from competition area before it starts. She said that this helps decrease the risk of raised anxiety caused by early interaction in the competition area with opponents. Also, she advised coaches the use of music in increasing gymnasts' focus and motivation as well as low-intensity exercises such as jogging to release stress.

4.2.1.5.2.5. Responsibility and Goal Setting

The coaches stated that some gymnasts do not feel responsible for the consequences of their behavior and act accordingly in the gym. When they behave irresponsibly, the coaches said that they try to make gymnasts feel responsible by making gymnasts remember their parents' sacrifices to make their sport participation possible. The psychologist argued that this would cause gymnasts to feel extra pressure on their shoulder and make them work harder to satisfy their parents' expectations. However, when they feel that their parents are satisfied, gymnasts may have no other goals to pursue since they do not own their success. The group argued that the lack of individualization in gymnasts be a cultural issue to be solved. She also argued that if coaches set an ultimate goal to a gymnast such as "being a national gymnast" or "earning the right to be a physical education teacher," then that may limit them to those goals and they may stop trying to reach further after reaching these aims. Therefore, she suggested, gymnasts should have the ownership of their success, and to make it happen, coaches need to make them to be aware of the fact that they are responsible for the consequences of their behaviors, not anybody else does. To help gymnasts take on their responsibility, she advised coaches that gymnasts keep their diaries. She said this would help give the responsibility of tracking their athletic development.

4.2.1.5.2.6. Coaches as Educators

The discussion between the coaches and the sport psychologist ended with talking about what coaches' role should be in an early specialized sport context. The psychologist emphasized the starting age of gymnasts and argued that it is critical for ensuring gymnasts' holistic development. Therefore, she suggested that coaches take the role of an educator. The coaches agreed with the psychologist and argued that they

develop persons as well as gymnasts, and this necessitates taking care of their personal life out of gymnasium as well. For instance, the coaches said they deal with their gymnasts' relationships with opposite sex, and may become very protective especially when a gymnast is female, behaving like a parent.

4.2.2. Research Question 2 (b): How does a 6-week learning community program affect coaches' perceptions of the 4 Cs and the learning community program experience?

4.2.2.1. Sixth Meeting

Firstly, a descriptive account of the focus group interview with the coaches and interviews with the facilitator and the sports psychologist were defined, then a thematic analysis was conducted. The main themes appeared were 1) motivating factors, 2) evaluation of delivery and content, 3) reflection and change, and 4) the coaches' suggestions

4.2.2.1.1. Motivating Factors

Although some of the coaches had initial hesitations, the coaches become motivated to participate in the program. The coaches' feelings and motivations for participating in the program were different based on their coaching experience. Also, the coaches emphasized the significant role of the facilitator in keeping them motivated throughout the program.

The comparably less experienced coaches stated that they had hesitations about their adequacy of knowledge and experience, as well as the transparency of exchanging knowledge and experiences in the group. One coach with vast coaching experience in elite context, however, stated that his primary aim to participate in the program was to contribute to the process.

A coach initially had hesitations about the learning environment. She thought that she did not have the adequate knowledge and experience to participate in such a program.

> *I was very motivated to participate in the program. Only, I had a hesitation since I am not as experienced and knowledgeable as other coaches in the group. Originally, I thought that I might not be able to participate the conversations. However, I have learned a lot of things, and am happy participating. (C5)*

172

Another coach commented that in the beginning, he had a hesitation about the transparency of sharing knowledge and experiences among the group members, but thanks to the environment created his thought has changed during the first meeting:

I was wondering if coaches share the knowledge they have as well as openly talk about their mistakes in front of everyone. However, in this warm environment, everything went well. When there was a problem to discuss, nobody hid what he or she knew about it. Also, the coaches who had wrong ideas about the problem could explicitly talk about them. I could easily express my thoughts on a problem during the discussions either right or wrong and learned my mistaken practices. Things got better as we (the group) addressed the things that we needed to address together. (C6)

One experienced coach participated in the program stated that his motivation to participate in the program was to contribute to the knowledge production process by sharing his experiential knowledge in the field with his colleagues:

I heard about the meeting from one of my colleagues and was positively influenced by his eagerness to participate in the program. After participating in the first meeting, I liked the learning climate created by the facilitator otherwise would not have participated. I also wanted to contribute to the group as there is not adequate Turkish source in gymnastics such as book and so on. So, I also came here to be beneficial for science. (C2)

From the comments of the coaches, it is understood that one of the significant motivators for the coaches to participate in the program was the facilitator. They said his extensive field experiences and scientific knowledge in competitive sports, and skills in leading the discussions made them feel motivated. The coaches also commented that the facilitator created a comfortable and an inclusive learning climate in which they could be able to communicate their positive as well as negative experiences easily and to be able to talk about their aspects that need for improvement in their practices.

We did not know him when we first came to the first meeting. We had cold feet. We did not know what to do and what to talk about specifically. However, he (the facilitator) motivated us very well. He practically obtained information from us very smoothly. Without realizing, we found ourselves talking to each other very well. There was a climate of an intimate conversation. Everything was natural and good. Because of that, I think we were all open to share and motivated. (C1)

All coaches stated that they liked the way of contextual scientific information shared during the meetings. The coaches started to feel satisfied from the beginning

173

when realizing that they were discussing the topics relevant to their problems and that they started to learn also from the other coaches in the group.

> *... it was important in the name of defining the needs and deficits, and we were able to express them in here bluntly: we could exchange what we have lived, our experiences. In the end, they were our needs. We are in the same boat. (C6)*

The facilitator's evaluation of the program was in line with the coaches' statements. He stated that the meetings started as an exploratory study, and a group of coaches begun to meet with extrinsic motivation. The coaches were worried at the beginning of the program. They had many question marks in their minds. However, their motivation started to increase during the meetings. He said that the coaches began to ask questions more and more as the meetings continued. They also started to increasingly share their personal coaching experiences about discussion topics as the meetings continued. The facilitator argued that the coaches have become capable of being able to easily express their own professional needs thanks to the trustful environment built throughout the meetings. The facilitator also attributed this to the coaches' self-confidence.

The facilitator and the sports psychologist also had reservations. The facilitator said that he was also worried at the beginning of the program. The group of coaches included elite-level coaches, and he was thinking that facilitating such a professional group regarding sport-specific technical areas would be difficult. He said that he overcame this difficulty by starting to discuss psychosocial aspects of coaching effectiveness instead of specific technical issues. As for the psychologist, she stated that at the beginning, she thought the coaches would be going to behave negatively towards her. What made her think as it is was that some of the coaches in the group had vast experience and expertise in their field of sport. She thought that it would be very difficult to change those coaches' mind regarding any issue related to her specialty. Additionally, she said that the intervention of sports psychologists is a new trend in Turkey. However, the main reason for this negative opinion was her experiences in the field. She argued that those coaches want to be the most influential person in athletes' lives and try to keep psychologists away from their relationship. Additionally, they usually find athletes problematic and demand from her to fix them.

The facilitator stated that he could see the question marks in the coaches' minds at the beginning of the program. However, when he very well discussed with the coaches

about the weekly programs and gave contextual examples from his experiences as a former athlete and coach in track and field, that helped them to understand the concepts better, and the facilitation process had become easier and more efficient. He stated that when he discussed the weekly content of the program with coaches and had them decide the priority areas, the facilitation process worked very well. In this way, the coaches started to get more engaged in the discussions as the weeks passed. For example, silent coaches began to ask questions from the second meeting.

4.2.2.1.2. Coaches' Evaluation of the Learning Community

When asked the coaches to evaluate the learning environment created during the meetings, they replied by comparing their previous experiences of formal development programs with their learning community experience. The findings were grouped under the subthemes of "delivery" and "content" of the coaches' learning community program experience.

4.2.2.1.2.1. Delivery of the LCP

Mainly, the coaches compared their LCP experience with their previous formal development programs regarding the environment created (physical structure, and psychological safety), the way of knowledge dissemination (lecturing assuming that coaches are familiar to the concepts lectured, familiarization of concepts), and the type of knowledge shared.

4.2.2.1.2.1.1. Environment Created (Physical and Psychological)
4.2.2.1.2.1.1.1. Physical

The coaches firstly talked about the formal coach development programs regarding physical structure. They stated that these programs that aim to increase their professional development were too crowded to get benefit from. A coach's comment gives clues that the learning community approach is perceived way better than the traditional professional development opportunities they have experienced before regarding the physical structure, content structure, and the way of dissemination of that content. The coach added that, however, finding resources would be a limitation of organizing such opportunity to a large number of coaches:

There are seminars that the federation organizes for example, and 150 to 200 coaches participate to them. In there, professors come and only give their lectures and leave the huge meeting hall. However, the things were different in here. There was a knowledge exchange. The things we know true could be wrong, and we could discuss them with the group. For example, you can learn from what other coaches said. It becomes different when there are a reciprocal question-answer environment and a specific topic to focus on. Having this kind of meetings is much better. The seminars that the federations or the Directorate organize provide superficial information. However, their resources must be limited to organize such an interactive environment for two hundred coaches. (C2)

4.2.2.1.2.1.1.2. Psychological

The coaches also evaluated their experiences regarding psychological safety for sharing ideas and information. For the coaches, there was a convenient learning environment allowing for free expression of ideas and problems. One coach's comment implies that an interactive, nonjudgmental and nonhierarchical environment was built during the LCP meetings, which created trust and openness among coaches:

… and I was relaxed throughout the meetings since our experienced coaches and the facilitator were there. I knew that I could get an answer my questions and correct my mistakes. There was a cozy environment in which I did not escape from and hide my mistakes in here. I said to myself that I could do wrong this and that, and later I shared what I think and know easily. I believe we could build the connections between the things that we could not do before and made up our shortages. (C6)

An experienced coach's comment also implies the presence of the exchange of information regardless of coaching experience:

I think that everyone in here learned from each other independently of their coaching experiences. I think C4 or C6 also had valuable experiences that I took lessons from. The important thing is to be able to learn from each other's experience as much as we can. (C2)

The coaches stated that they both learned from the group experiences and the scientific information that the facilitator provided regarding the topic each week. One coach stated that this process helped him reflect on his own experiences and understand the reasons for certain practices in the field:

The facilitator had many contributions to me. He revealed and put the hidden things that we could not see in front of us. I also learned a lot from other senior coaches' experiences. I did not use to understand the reasons for their certain practices in the field. After listening to the group, I started to give meaning to my observations and thoughts. Now I can make better connections between the practices and their goals. (C4)

Other coaches' comments imply that the coaches, especially the less experienced ones, could find an opportunity to learn from other experienced coaches by exchanging ideas and experiences during the meetings:

> *I am at the bottom of the ladder as a coach. I knew that this learning environment was going to contribute to my coaching. There were very experienced coaches in the group. I have never had this opportunity to talk about the issues with them before although we have been working in the same gymnasium for years. I have learned from them a lot. I did not use to understand the reasons for many practices in the field. After listening to the group experiences, I started to make meanings of my observations and thoughts. There were many things that the facilitator contributed to my learning, too. (C4)*
> *We could easily imagine the examples given and learned a lot from the experiences of C1 and C2. (C5)*

For example, one coach also commented that she recognized the criticality of parent involvement in gymnasts' development by the information the group provided:

> *... and there are parents. Even they, alone, can become a critical factor. As C1 mentioned, it is absolutely complex, and we cannot separate them easily. Even parents can impact gymnasts' sport career significantly. It may be seen simple, and coaches may say 'parents can be handled,' but it seems that it is better for coaches to better collaborate with parents. (C5)*

The facilitator also stated that there was a strong group learning throughout the meetings. The group was heterogeneous, and this helped the facilitator to lead the group easier. Towards the end of the program, the group had become an excellent learning community with asking good questions and making many contributions by sharing their experiences with other coaches. He said that they started to answer each other's questions based on their experiences while revealing their learning expectations from the group and the meetings.

4.2.2.1.2.1.2. Making Scientific Information Comprehensible

The coaches also commented on the facilitator's familiarization of the concepts at the beginning of each discussion. They highlighted that the knowledge provided in other formal courses were usually disseminated in the form that coaches cannot easily comprehend:

> *A professor came and talked and talked and talked. Then he left. I did not learn anything in there. (C6)*

One coach commented that there was a knowledge familiarization process at the beginning of each LCP meeting before discussing the related topic. It is understood from his statement that he believed this process helped the coaches contextualize the concepts and build the information on them later:

The facilitator very well explained those, for example, competence, and then we could make connections between this information and our experiences later. This produced a knowledge special to our sport. There are not many Turkish sources special to our sport to look for anyway. If we had searched for the things we learned, probably we would have only reached the general, unrelated knowledge again. (C1)

Another coach also commented on the familiarization process of the scientific information regarding the framework discussed during the meetings. Also, he highlighted the critical role of the facilitator in the realization of it:

Even if we can feel the meaning of the concepts like competence or connection, we cannot put them into words and understand theoretically. The facilitator made them clear for everyone, and we could adapt them to our sport. When we were participating during the meetings, we were in the comfort that the facilitator was going to lead the discussions very well by giving the information about what we need to learn and examples concerning the topic discussed since he has a strong background in sports coaching and science. Thanks to him, we could easily understand the concepts discussed and make connections between the information and our sport. (C2)

The facilitator stated that in facilitating the learning of the group, he firstly introduced related concepts from coaching and athlete development literature in the form that the coaches can understand. Then, he said that he made the coaches to discuss these concepts by reflecting on their prior experiences as a gymnast and a coach. As a facilitator, he highlighted the importance of making discussion topics and their concepts clear to the group; otherwise, the focus of the group may easily derail from their main purpose since every one of the members may have different interests and motivations. Therefore, for the facilitator, the introduction of the concepts to be discussed, and making the meaning of these concepts clear is essential to keep the coaches focused on the related topic. He stated that throughout the meetings everyone in the group agreed upon the concepts introduced and were able to discuss them with having a shared understanding of them. The facilitator added that when a coach could not understand a concept, it became apparent that this lack of understanding seriously hinders the learning process. When it was the case, the facilitator said that he tried to make the concept as

clear as he could for those coaches to realize a complete shared understanding of the group about it.

4.2.2.1.2.2. Content of the LCP
4.2.2.1.2.2.1. Relevant Content

The coaches stated that the topics of the meetings focus on the particular problems that belong to their sport context. The coaches argued that since the meetings were based on specific problems, they were able to reflect on their erroneous practices and find ways to improve them via related in-depth information provided both by the coaches in the group and the scientific information that facilitator introduced.

4.2.2.1.2.2.1.1. Relevant Content – 4 Cs of Athlete Outcomes

In the first meeting of the program, the coaches had approved the soundness of the 4Cs of athlete outcomes in their sport for developing gymnasts, and they had found "creativity" as an additional important outcome for their sport context in increasing gymnasts' competence. During the meetings, they had contextualized each of the developmental outcomes by amalgamating their coaching experiences with the scientific information provided. After completing the program, the coaches stated that their consciousness of gymnasts' psychosocial development has raised and their understanding of the scope of coaching responsibilities have increased. They realized that developing successful gymnasts is also linked to psychosocial factors in addition to physical ones:

> *I saw how hard coaching is. We may know that fact in general, but when we saw them in detail, I realized the difficulty of it. For example, in character development, you (coaches) shape gymnasts' character in a certain time and gymnasts spend most of their time with you. Therefore, coaches bear tremendous responsibility in this issue, but there is also family, school and so on but the most responsible agent is the coach. I realized that some things are very important in the path to success. I saw that not only the talent of gymnasts and training load but also, for example, connection, character development, self-confidence is critical for success. When there is an absence in some or all of them, I saw that we face trouble on the road. We have such bad examples in front of us in the field. I realized their importance. We rather want to do more training, work more, increase the training hour to five hours if it is three, and load more; but that is not the case. Everything is connected to each other, and if there is any lack of ring in the chain, troubles will appear in front of us. (C1)*

The coach's additional statements on the relevance of information and the developmental framework of 4 Cs of athlete outcomes also further proves the perceived validity of the framework as well as the importance of introducing context-specific knowledge that are based on scientifically predefined professional needs:

... also the topics that we discussed were very good. The topics that we discussed get to the heart of the things. I felt that the topics and the discussions concerning them defined our problems and put them in front of us. That was what I liked most. Because I saw that the things that the facilitator put on the table were our problems we have been confronting in the gymnasium and we found the answers together. I saw our deficiencies in detail. It was amazing in this respect. For example, I have never seen in any other development program to tell me anything about coach-athlete and athlete-athlete connection before. (C1)

One coach commented that she realized the criticality of character domain on gymnasts' development:

I liked character domain very much. I realized that character development is a precondition along with performance development of a gymnast. I did not use to think that character development would affect gymnasts' career that much. As I told before, I am an inexperienced coach, but I realized how important it is during the discussions and from other coaches' experiences. The others are also very important, but I think character development is very important. (C5)
Another coach also stated that he discovered the importance of the connection domain via the group discussions and found it critical to his situation:

For example, the topic of connection: I saw that if the coach-gymnast relationship is not well managed, it may get slack and they may get separated, or gymnasts can change their coaches. I used to assume that they (coaches and gymnasts) would not have a possibility of getting separated since the relationship starts from when gymnasts are five years of age, but realized that it is also an important part of the game. (C6)

The facilitator emphasized the importance of using a conceptual framework for coaching effectiveness. He believed that using the framework was very enlightening and instructive for the coaches' professional development. He said that the coaches added the fifth aspect (creativity) as an important outcome for effective coaching in artistic gymnastics. He stated that the coaches highlighted the importance of coaches' creativity as well as gymnasts' creativity that helps go beyond reproduction, and provides them with designing new working styles such as creative ways of learning or teaching as well as preparing a choreography. The facilitator stated that he also learned from the group throughout the process.

The psychologist also highlighted the coaches' improved awareness of their needs. She said that she realized they were supported with concrete scientific materials (relevant information) while other programs do not have concrete supportive material that may improve learning.

4.2.2.1.2.2.1.2. Relevant Content – Meeting the Sports Psychologist

In addition to the framework, the coaches found their meeting with the sports psychologist meaningful and effective regarding developing gymnasts' self-confidence as well as for other important developmental issues. They commented that the discussion was based on their contextual needs and also they found an opportunity to realize and correct their false facts. One coach's comment shows the perceived effectiveness of the meeting:

> *In seminars, knowledge is superficial. For example, I have not seen any psychology seminar as we did with the psychologist in here. She provided what we asked for. (C1)*

An experienced coach emphasized that he noticed his needs in sports psychology and he showed a further enthusiasm to work with the sports psychologist as with the rest of the coaches did:

> *I believe that we are rather illiterate in sport psychology not only in our sport but in many sports. What she (the sports psychologist) said and recommended were very interesting to me. I took many lessons from them. I hope we can work together with her in future. We learned a lot during the meetings. Coaching is not confined to the gymnasium. Mental training is very interesting to me. When I was a small gymnast, we were benefiting from it. However, nowadays, it is not applied in the field. It is very important. (C2)*

A coach's comment implies that he grasped the importance of the necessity of working with other professionals in competitive context when needed:

> *They are connected each other. Moreover, I realized that it (coaching) needs teamwork. For example, in the previous meeting, I realized that coaches could not take the role of sports psychologists at the same time. There needs to get help from other professionals. When coaches are on their own, they may become helpless. I noticed that I could not meet gymnasts' every need alone. I need to get help from others when appropriate. (C6)*

He also stated that he became aware of the complexity of mental training and realized its critical role in developing gymnasts:

I was only telling that, for example, a child was doing another skill when he was supposed to do something else. He was supposed to do a front handspring but was suddenly doing a cartwheel. I was telling him that think about the movement and live it in your mind first, then start to do the skill. However, I see that it is not that easy to make it happen. I came to realize that mental training is a completely different thing. I was only telling him to concentrate, but it actually is in itself training. (C6)

The coach also commented that the psychologist has an important role in making him be aware of his erroneous practices, and helped him to develop empathy towards their gymnasts:

She underlined many critical points that we have lack of knowledge and the things we do wrong, especially in building gymnasts' confidence. She made us notice these things. Now I could better see what children feel. (C6)

During the post-interview with the facilitator, he highlighted the importance of making coaches work with specialists by increasing their awareness of their own professional needs. He said that coaches reached to a state of awareness, which made them feel their needs and enabled them to ask how to solve them. He believed that these coaches became more open to working with specialists when needs arise. He stated that this process also helped determine the extent of professional support that coaches can obtain. The psychologist's statements also approve the facilitator's comments. The psychologist was impressed with the coaches' valuing her as a specialist. She said that they were highly valuing her ideas related to topics they discussed. Even though they may not accept an idea, they waited for her opinion until the end of the discussion. She said that they were open to communication and development, and curious about her potential contribution to their contextual problems with having a close eye contact with her. She said they built a close relationship with her within a short period of time.

The sports psychologist's comments on her experience with the coaches during the last meeting were in line with the facilitator's. She stated that, surprisingly, she felt a warm and welcoming environment as soon as she integrated into the group. She said that the coaches seemed to have built a trustful relationship among them, and were open to communication. She argued that the coaches could easily share their negative practices and approaches and were ready to share information from their coaching experiences. She thought that they found her field experiences relevant to theirs, and this helped them to trust her more. She believed that the coaches were aware of the

potential gains of this group they participate in. For her, the coaches had a scientific perspective and were ready to put forward their professional needs clearly. She attributed the coaches' readiness to their LCP experience, which she thought have developed their conceptual understanding, openness to learning, and being able to express their professional needs much easier.

The findings indicated that the coaches became aware and knowledgeable of the developmental framework of 4 Cs of athlete outcomes and realized its critical role in reaching long-term success. Also, the coaches become able to define and communicate their specific needs with an expert to improve gymnasts' self-confidence. The coaches become able to work with professionals (i.e., a sports psychologist) in meeting their contextual professional needs.

The facilitator thinks that the LCP helped coaches to improve their professional knowledge in some ways. The most significant contribution of the LCP to the coaches was making the coaches aware of their professional needs and making them move towards their needs. He stated that (based on previous research in the context) coaches normally cannot use scientific information produced or cannot build a connection and a shared understanding with the specialists (e.g., psychologist). However, for him, this study showed that when 1) bringing a group of coaches together who meet on a common ground, 2) building an environment that appeals to their curiosity, and 3) creating a shared and definite understanding of the discussions; the group started to learn actively, and the members began to support each other's learning. During the meetings, the coaches became curious about how a psychologist can meet their needs concerning improving gymnasts' self-confidence. When they met with the psychologist during the discussions, the coaches were able to discuss the issue in-depth with her, and consequently, had a refined understanding of it. In this way, the specialist (i.e., the psychologist) also had an opportunity to understand coaches' contextual needs. The facilitator regarded this process as a future direction for those coaches. Similarly, the psychologist stated that she observed coaches as happy, satisfied, open-minded, and interacting each other. She attributed these states to the interactive communication built in the learning environment. She said that she did not disseminate knowledge one-way. Contrarily, the coaches were also contributing to the learning process with their coaching experiences and were honestly revealing the realization of their deficiencies in the topics that they felt need for improvement.

4.2.2.1.3. Reflection and Change

4.2.2.1.3.1. Reflections on LCP Experience

When asked to the coaches whether their views towards the gymnast development have changed after participating to the program, their answers implicated that each coach in the group had many shared opinions and also lessons learned in different points specific to their needs and interests. Specifically, the coaches' statements indicated that they had raised a consciousness of holistic approach to coaching by reflecting on their practices considering the experiential and scientific knowledge put forward during the meetings. That allowed them to notice their mistaken practices as well as the ones in line with scientific suggestions. Two coaches' statements illustrate it:

> *I certainly think that I saw my weak points in here. Then, I changed my wrong practices with the right ones and applied them in my training. I also realized that some of my practices were right, the facilitator showed me that we were applying what the theory said without knowing it. (C1)*
> *I saw what I have been doing right during training: communicating with gymnasts according to their individual differences. I realized how important it is. (C5)*

For one coach, however, this experience was a realization of his right practices as well as a reminder of being an ideal coach. For example, comparing his experiential knowledge with the scientific knowledge provided during the meetings, one experienced coach commented that he realized that some of his practices were in line with the scientific suggestions. He added that the program reminded him of the ideal coaching that he knew once but forgot to apply it because he argued that his coaching have been assimilated by the mainstream coaching culture in time:

> *Most of the results and recommendations of the topics, that we looked at them with him (the facilitator) are more or less related to some part of what I know. Maybe we do not do them consciously but I realized that some of the things were going right. There are also things that I knew and forgot. It was also remembering what I have forgotten. I was not doing some of them in the field, but the meetings evoked them and reinforced my knowledge. Although I knew most of them, the training we follow becomes automatized and static in time. It is more of a waking up and shaking off. With participating in the program, I remembered the things again. (C2)*

All of the coaches stated that participating in the program raised their awareness of what they do and how they need to do it in the field. The coaches commented that

184

participating in the program raised their consciousness of their practices regarding gymnasts' holistic development, which they realized its significant role in developing gymnasts.

> *I realized that we do not only raise physically skillful bodies. We raise individuals. We have an impact on children's future and have an influence on how they will become a person. Therefore, I understood that we could coach better by considering them (the psychosocial aspect). I believe that we will get the rewards for our efforts if we do it. (C4)*

They also emphasized the critical role of the sports psychologist in realizing that. Some of the coaches stated that they changed some of their coaching practices in the field accordingly while others said they noticed that some of their practices were also in line with the scientific recommendations that facilitator provided. The coaches that made changes in their practices during the meetings claimed that they even started to observe changes in their gymnasts' behaviors based on their changes they have made in their practices.

4.2.2.1.3.2. Change in Coaching Practice

The coaches stated that they changed some of their practices based on what they learned during the meetings. Specifically, the coaches stated that they changed some of their practices to develop gymnasts' feeling of autonomy and responsibility, build a healthy coach-gymnast interaction, and set shared goals. From the coaches' statements, it can be inferred that their coaching practices started to become more 'athlete-centered.'

One coach stated that he realized the importance of holding gymnasts accountable for their acts and make them understand the result of their behaviors. He added that the psychologist also had a critical role in making him realizing it:

> *... for example, in psychology, maybe we do things wrong. We tell children 'your parents bring you here and you are responsible to them' and make them feel bad and less responsible. The psychologist told something about it, and it changed my mindset completely. She said that we always teach children to do things for somebody else and I completely agreed with her. I learned to teach taking the responsibility for their own acts. I agree that children must take their own responsibility for their life in sport. (C2)*

Two coaches stated that they applied what they learned after each meeting in their training. One coach said that he changed his practices to facilitate developing gymnasts' sense of responsibility, autonomy, and goal setting during the program:

... for example, developing children's sense of responsibility and freedom became critical to me. I used never to let them be alone during training. Now, I am taking a back seat and watching them. I am happy doing it. Our little gymnasts (8-9 years of age) started to come and say 'I want to do this and that' and it is very important to me especially in goal setting. Previously, only I had goals for them in my mind, but now we started to set goals together. (C1)

From the statement of another coach it is understood that he also focused on increasing his gymnasts' sense of responsibility and autonomy by realizing their importance on gymnasts' development, but he believed that the impact of his change in his practice would take effect in the long run:

... for example, there were aspects that I neglected to focus on. However, when I recognized their importance, I started to focus on them. I used to be a protectionist coach. I wanted to try the things I learned week by week. For example, in a strength training session, I gave my gymnasts the program and started to watch them from the corner. I gave some other duties such as bringing some equipment and putting them away after using them. Now, I try to make them feel relaxed and active in the gymnasium. It certainly showed its positive effects in the field. However, we cannot see tremendous changes in two weeks; we need time to see it. (C6)

One comparably less experienced coach stated that he improved the way of communication with his gymnasts by asking their needs as well as asking them questions to trigger their thinking about skills:

I increased the communication with my gymnasts. For example, at the beginning of the training I started to ask them personally whether anything bothers them or they have any discomfort. During the training, I started to ask questions like 'in your opinion why you could not perform it?'. I started to make them think about their skill performances. I was losing the most delicate parts, but now I do not. Now, children can approach to me easier. At least they do not have a feeling that I do not care about them. For example, when their legs hurt, now they can come and share it with me. I emphasized to my gymnasts that they can talk to me about their any kind of problems. I made it clear to them that they can to talk to me openly when they need to. (C4)

The facilitator argued that it would have been much more effective to have 12 to 16 weeks' meetings as long as the coaches have the intrinsic motivation to continue. He said that coaches have already given clues to using the knowledge they obtained from the meetings; however, it would be more beneficial for coaches to apply what they have discussed at the meetings. The facilitator highlighted the need for following the coaches' practices in the field. He believed that there had been significant learnings occurred that

would affect the coaches' practices positively. Therefore, he emphasized the importance of conducting follow-up studies to understand the effect of the program on the athletes' developmental outcomes via observations or other instruments. For the facilitator, understanding changes in athletes' attitudes, perceptions, and their practices will be more valuable for understanding the effectiveness of the program.

4.2.2.1.4. The Coaches' Suggestions

One of the relatively less experienced coaches suggested that practice session be added to the programs. Additionally, some coaches in the group suggested that coaches from different cities participate, which thought to bring different perspectives to the discussions. Adding parents and gymnasts to the group was another suggestion from an experienced coach, to learn their perspectives. The coaches said that they are curious about what parents think about gymnasts' development. Several coaches in the group argued that they may not obtain objective information due to coaches' presence. However, one coach argued that this would make parents realize their mistaken approaches. The coaches argued that there be a need for raising parents' awareness in gymnasts' development and alignment with coach expectations. The coaches said they need parents not to interfere with their job and not to oppress their children.

The coaches demanded a technically detailed and multidimensional source. They said that the source needs to be multidimensional, technically detailed, instructionally staged, and having relevant psychosocial information included.

4.2.3. Research Question 3: What are the long-term effects of the LCP on the coaches' practices and their athletes' sport outcomes?

After the LCP conducted, with the role of a coach, I stayed approachable to the setting in which the participant coaches work. I have observed the coaches' practices throughout that time and took field notes. Without any researcher attempt, two of the participant coaches approached and reflected on their coaching experiences after approximately more than two years they participated in the program. They provided experiential information in the effects of participating in the LCP on their subsequent coaching practices and their gymnasts' outcomes. Some of these experiences were directly observed in the field by the researcher. On the coaches' demand, I conducted unstructured interviews with C1 and C6.

Thematic analysis yielded the themes "changes in the coaches' perspectives and practices" and "transformation of a gymnast within one year." The findings are presented under these titles below.

4.2.3.1. Changes in the Coaches' Perspectives and Practices

The coaches explained that the LCP helped them realize and adopt the broader perspective of coaching. With this new lens, they were able to find answers to the reasons for the long-standing problems and failures regarding athlete development in their setting. They realized that most of their former practices in the field caused problems in gymnasts' sport development by either experiencing them or reflecting on other experienced coaches' careers they closely work with.

4.2.3.1.1. Realizations (Ecological)

The coaches talked about how they changed their perspectives to coaching and accordingly practices after participating in the LCP. Both of the coaches reflected the perspective of a developmental approach to gymnasts' development. They realized that there is a need for looking at athlete development from an ecological point of view.

> *For example, parents want to intervene in the training sometimes. I try to keep them away from it and want them only to support their children. When a child thinks his parents will get angry after training because of his poor performance the life of that child turns to nightmare. He comes to the gymnastics hall and coach yell at him. He goes home, and his parents scold him, and he goes to school with depression. Crown it all, when his teacher scolds him at school, he now has no place to hold. They suffocate. These gymnasts are at play age. They become afraid and do not want to participate. I realized there needs to be a supportive environment in every place and try to make them supportive. (C6)*
>
> *The child has a bad day in school or becomes very tired at school. His PE teacher may tire him on the day being used as a physical role model in extracurricular activities. He may have had a problem with his family on that day. Even the slightest problem in these factors may affect him negatively. For example, he cannot perform the skill at the time, and I try to tell him how to feel the movement using my past experiences as a gymnast. I mean, I started to try to understand the gymnast more and the factors affecting him from a broader window. (C1)*

C1 also has a coach educator role in Turkish Gymnastics Federation, and he reflected on his realizations based on his experiences in the field of coach development. He emphasized the lack of psychosocial aspect in the field. He argued that nowadays, the technical aspect of coaching is somehow manageable for their sport, but there appear

to be complex problems that are sourced by misconducts about the psychosocial development of gymnasts.

> *It is not 'Competence' very much. Technical details are not secret anymore. For example, there are camps and technological advances that instruct you from the beginning to the end of a movement skill. You see who is working on what technique thanks to the technology. But what is missing? We have Olympic level gymnasts who fail in big organizations. Maybe he was not ready for the game psychologically. Or maybe his relationship with the coach was the reason. I observed a gymnast at this level have had a bad relationship with his coach and they consequently separated. There is a considerable amount of service from the coach to this gymnast, from beginning to the Olympics. However, a gymnast can easily leave his coach. When I witness this reality, I more realized the importance of character development and a developed coach-athlete relationship. These are huge problems in our field.(C1)*

He also realized that the coaches in the field need to be knowledgeable about goal setting and increasing intrinsic motivation. He argued that gymnasts become demotivated and passive learners in time. Additionally, they withdraw themselves from gymnastics in time because of coaches' unidimensional approach.

> *… moreover, we already cannot set goals for the child. He (the gymnast) became a robot being in the mentality that 'I will go there and do it although I do not want to do it, and leave there.' Because we cannot increase the children's internal motivation, we are not able to make them attend the thing. As children grow up, they withdraw themselves. Coaches disgust gymnasts from gymnastics by continuously overloading them for the sake of winning medals, rewards and so on. (C1)*

He stated that he started to warn other younger coaches in the field whenever they misbehave their gymnasts, by explaining the consequences of their behavior to those coaches drawing on the concepts in the 4 Cs. He emphasized the negative effect of lack of character development on coach-athlete connection and gymnast's self-confidence. He added that not every coach is approachable and open to criticism.

> *I watch other coaches in the field and warn the coaches who are newly developing thinking of what we discussed during the meetings. Of course, I warn the coaches whom I believe can understand me. There are some coaches you cannot approach. They can snap at you so you cannot tell anything. For example, one day one coach slapped a gymnast's head only half in jest. I drew him aside and told him "never hit a gymnast's head by no means. You harm his confidence and character by doing that!" We had talked about it during our meetings (The LCP meetings). If this child becomes characterless when he grows up, he will side against you because of what you did in the past. It is about*

character and confidence development because, after a certain age, these gymnasts do not like their coaches, and do things with less confidence. (C1)

As a result of abovementioned issues, the coaches argued, he witnessed gymnasts becoming dull and demotivated in learning skills and becoming antisocial persons who ended up with deteriorated relationships with their coaches and break-ups in the long run.

4.2.3.1.2. Strategies Coaches Adopted After the LCP Participation

After participating in the LCP, the coaches have begun to use several strategies to increase gymnasts' developmental outcomes. These strategies they mentioned were 1) becoming a reflective coach, 2) connection and character development, 3) skill learning, 4) increased autonomy, responsibility, and interaction, 5) encouraging positive parent involvement. C1 shared his one year experience with a gymnast regarding how he transformed him throughout a season by using the strategies he learned from his LCP participation. The information he shared was reported under the title "transformation of a gymnast within a year."

4.2.3.1.2.1. Becoming a Reflective Coach

From the statements of the coaches, it was apparent that they have become reflective practitioners, but one of the coaches articulated it by his statements. C1 stated that he became a reflective coach who continuously thinks about his coaching behaviors and interactions with gymnasts, especially during training.

> *I learned to observe myself during training. Like an outsider, I am observing what I am doing there, how I behave to my gymnasts. Am I using slang to them? Or am I yelling at them when I get angry at them? Am I hitting their legs? When the child could not perform well, I used to get very angry. I realized that by thinking about my behaviors. I started to ask the question that "why he cannot do it? There must be technical and psychological reasons for it." Now, instead of getting angry at a gymnast, I try to search for the physical and psychological reasons of his decreased performance or failure. (C1)*

C1 stated that he was always alert in his behaviors and gestures during training making sure that he behaves right based on what he learned in the LCP. He started to focus more on developing gymnasts' outcomes with an awareness of the holistic approach to coaching (i.e., 4 Cs).

4.2.3.1.2.2. Connection and Character Development

C6 stated that he started to use several strategies to increase gymnasts' prosocial behaviors as well as strengthen the relationship between teammates. The coach said that he was encouraging gymnasts to display prosocial behaviors such as shaking hands among teammates, congratulating each other and celebrating on their teammates' good performances during training. Additionally, he has been organizing social events for the team to develop friendship among teammates and the coach.

> *When we finish training, the gymnasts would shake hands with me. Then I decided that they shake hands each other and make positive comments about each other's performances. For example, I make them watch their teammates and congratulate them whenever they achieve a movement skill that they have been trying to perform. That, I believed, allowed for positive thinking among the gymnasts and prevented the feeling of loneliness. They like it and have the positive feeling of succeeding in something. When feeling lonely, gymnasts may adopt a negative mindset. However, when they think as a team, they become positive and supportive. To strengthen both our relationship and the relationship between teammates, I started to organize dinner meetings. Of course, there is always individual competition among them. However, they still support each other by becoming close friends. (C6)*

C1 stated that he realized the importance of building trust with gymnasts since it is an individual sport. Therefore, for the coach, building a strong connection with a coach may positively affect gymnasts' confidence during the competition. He attributes this to artistic gymnastics being an individual sport in which each gymnast need for special care.

> *In here, psychology is of utmost importance. I realized that if a gymnast trusts his coach completely, he can confidently compete in there although his coach is not with him during his performance. Because gymnastics is an individual sport, no matter how well you trained your gymnast, he will be alone together with the apparatus during competition. You can be with him to an extent. After that, you cannot intervene. Gymnastics is like that. So, there needs to be more special care to these children. You need to be closer. (C1)*

4.2.3.1.2.3. Skill Learning

The coaches stated that they started to use several strategies in enhancing gymnasts' skill learning after participating in the LCP. The first strategy was creating a meaningful learning environment. The coaches started to ask reasons for learning a skill and explain them afterward and, they argued, helped gymnasts learn skills better. C1

added that having gymnasts explain a technique in front of a group both help them to reinforce their learning and develop their self-confidence:

> *For example, I make them do a ballet work. I started to ask why we are doing this. They provide different answers, wrong or right, not important. I immediately tell the right answer after their responses telling them "to be more tight and correct in skill movements. Knowing what is lacking and the reason why they learn skills became beneficial to them. I explain now, for example, the reason why they learn to do a handstand, telling that this is the necessary skill to learn to do a handspring. Then they start to learn it better. Moreover, for example, ten teammates are listening to one who explains one aspect of technique. We talk in the sports hall. I make them watch one another's performance and encouraged them to give feedback to one another. For example, they do a handspring. Every one of them does it one by one and others give feedback to the performer. I ask, for example, "why he could not do that?" They reply right or wrong; it is not important. I provide the right answer at the end. I saw that they gain confidence and team friendship is getting strengthened. (C6)*

C6 argued that gymnasts also started to ask questions to understand the reasons for doing things in certain ways along with offering different options for their development.

> *I encouraged them to question. For example, we have three conditioning movements for the three parts of deltoids. The child tells me "Coach, we did this before two sets and again we do this. Why?" They began to question the things they do. Moreover, they began to offer some other movements with a motivation. I was forcing them to do things, but now they started to ask more, which forces me to think about more. (C6)*

Another strategy the coaches used was being tolerant and patient as a coach toward skill development. C6 stated that he started to teach his gymnasts making mistakes is natural and constructive.

> *I started to say them "do not be afraid of making mistakes. Sport is making mistakes and the gymnasts who do it less in time will be more successful. When you make mistakes, I will be there to help you learn from your mistakes. The aim is to correct our mistakes. It is okay." I realized that when a gymnast becomes afraid of making mistakes, he makes mistakes. In the past, I was saying them 'you must not make any mistakes!' However, now I convey the idea that if we do not make mistakes, the training has little meaning. (C6)*

The coaches also mentioned the hastiness in gymnasts' skill learning process caused problems. Reflecting on their setting, they argued that the coaches behave in an intolerant and aggressive way towards their gymnasts when they have hardship when

learning and performing skills. C1 stated that he became a tolerant coach who also utilizes techniques from mental training.

I could see it many coaches in my setting was hustling gymnasts in performing skill saying "Come on do it that way and be quick! I cannot wait for you all day!" Instead of being like that, I started to let gymnast use time and take it easy. For example, when they begin to perform a skill, they hastily did it because of our oppressive manner. At that time, for example, he is not ready to perform the movement, and he fails. I say "we have no hurry, first do the movement in your head and then when you feel ready, start your movement or routine. I will be waiting for you." I instruct them to do the skill in their mind before sleeping, draw it on a paper and so on. I started to do that. (C1)

The coaches added that they also started to provide visual feedback to gymnasts when they cannot understand their mistakes. In correcting mistakes during skill performance, they said that they started to use a positive language of all times. Instead of emphasizing what gymnasts do wrong, they started to tell them what they are expected to do.

Instead of telling them "you cannot do it, do not bend your knees!" I now tell them "knees are straight!" I realized that when you tell the child "don't do that," he bears in mind the thing he should not do and go on bending his knee. (C1)

4.2.3.1.2.4. Increased Autonomy, Responsibility and Interaction

The coaches made statements of how they used to view and do coaching and changed their views about athlete development and behaviors towards gymnasts after the LCP participation regarding autonomy and responsibility. The coaches used to be much more controlling and commanding towards their gymnasts. The gymnasts used to do as the coaches say, and could not ask reasons for doing things and learning skills. There had been a one-way communication between the two parties.

When they started to change their approach, the athletes started to actively involved in decision-making processes during training and develop a sense of responsibility in their learning.

I have changed it a lot. For example, I was feeling as if I was pulling the wires of children. I would take all the responsibility for training. At least I changed it. After giving information about what to do in conditioning, I sat down and watched them from a distance. Then they realized that they have to do it by themselves. They started to raise their consciousness about responsibility. (C6)

C1 used to quickly get angry and intolerant when a gymnast did not do as he said during training. This situation caused gymnasts to fear for communicating with them, which had severe consequences such as gymnasts hiding injuries from coaches. When he started to encourage autonomous behaviors, gymnasts started to get engaged more in training and increased their creativity. He let the gymnasts explore the skills without criticizing and interfering with them very much while they are performing the skills. Gymnasts began to explore and create their styles instead of trying to do what they are ordered.

> *I recently experienced that with a child, which is directly related to our meetings. For example, I used to be overprotective when a gymnast, one that I regard as talented, was on an apparatus. I was controlling everything that he was doing on the apparatus from beginning to the landing by saying "you must finish the movement like this, you should not do something else!" I would get angry when a gymnast did not perform a skill as I wanted to be. I would scold them like "You must land as I say exactly, it is wrong!" Now I have an incredibly talented gymnast, and he is creative. He also plays drums. He never finishes the same when he is landing by doing different leg and arm movements and things, and I do not say anything about it. If it happened previously, I would have stopped him by saying "in this apparatus, you must do as I say exactly and land like this!" But I did not stop him. What happened? He became free. I did not limit him. He did what he wanted to do and learned how to land himself. Then he started to try new ways of landing. C4 was with me at that time observing the gymnast wonderingly. I told him that we had talked about it in the meetings (the LCP meetings). (C1)*

The coaches admitted that they used to mistake discipline for controlling and commanding just as other coaches in their setting. They would not allow any gymnast to autonomously behave in the gym trying to control every aspects of training. They argued that this ongoing controlling approach resulted in gymnasts becoming less motivated and passive receivers. The coaches admitted that they had a misconception of discipline that deteriorated gymnasts' passivity during training.

> *We, as coaches, have a misconception of discipline. I did not use to ask questions about how my gymnasts feel or think about something; only training was of the importance. When our gymnasts get in the line like an arrow and do not make a sound, we are boasting about it to others saying "look, everyone is in line, like soldiers!" I felt this wrong idea during a camp in Italy. Coaches and gymnasts were like friends in there. They were joking each other, laughing, and enjoying their time, and when the training began, you should see how self-disciplined the gymnasts were. The coach-athlete relationship that has been built in time was the reason for this. We could not make it happen because of our mistakes. (C1)*

C1 stated that he started to reap the benefits of including gymnasts in the decision-making process during the training. He stated that this approach enabled his gymnasts' creative thinking and ownership of learning, which subsequently enhance their skill progressing.

Maybe it develops from the beginning. Some gymnasts are keen to be a passive receiver. Maybe it is because of the coach. For example, we, including other coaches in the field, always warn gymnasts with a certain proficiency level "Before I say, you do not do anything!" It is over. When I think over it, It may be us creating this problem because I did not use to behave as I now behave to my gymnasts. Now I freed them and began to reap its benefits. The child has difficulty in performing first, but in the second try, he succeeds. At the same time, his learning becomes more profound and is reinforced. (C1)

The coaches said they began to create an autonomy-supportive training environment in which gymnasts are also given specific responsibilities. While they previously expect their gymnasts not to do anything uninformed, they started to give the responsibility for the training in part to the gymnasts that they believed developed their sense of responsibility and ownership of learning.

Now I give the necessary information about strength training at a day and watch them from the corner. They realized that they have to do it by themselves. Their ownership of training is a convenience for us. They are now responsible for all of the equipment they need during training. They raised their consciousness of responsibility. As they think about their learning, they take the burden away from us. They realize more what we do in here. They think that "I need to do this." They learn a lot in the setting by thinking about what they are doing and taking responsibility for their development. (C6)

C1 emphasized that giving gymnast an autonomy and responsibility, and believing in them as a coach increases their self-confidence.

The most I care about is the issue of children's self-confidence. Now, I am cautious about it. Sometimes I leave them alone by giving them responsibilities in performing some skills. I say "I will watch you from there. You may need to work on this at this amount. I believe you." Then I leave there. They work very well. (C1)

C1 said he started to recognize and respect gymnasts' choices and interests during training in which gymnasts are having a voice and an extent of autonomy to choose what they want to do or where to start in their training. He believes that this also increases gymnasts' internal motivation.

195

I talk with my gymnasts more. We do it about ten minutes before training. I used to make them in line and say "ten huts! Have good training!" However, now I started to ask "Do you have any pain? Are you okay? Is there anybody who has a health issue?" or say "Do you have any issue to talk to me? We can talk." Then I ask "What shall we do today in training? What do you want to do? Have you thought about what to do in today's training?" All of them choose the apparatus that they are good at. They like it very much. If one good at backflip and somersault, he says "Coach, let's do floor today!" I say, "Okay, let's do that!" On the condition that their requests do not hinder the training program, even if it is five minutes or ten minutes, I make them choose what they want in order not to decrease their internal motivation. (C1)

The coaches stated they started to listen to their gymnasts more, and use questioning both to understand the gymnasts' needs and learning. They said that the gymnasts started to communicate their needs and interests more.

As I recognize what they have to say, they started to ask the things they are curious about. For example, he feels that there is a missing part in his performance, he now approaches me and asks "coach, what was my mistake?" Another one, for example, tells me "Coach, I am good at this skill, I want to try it on the springboard!" He wants to try to show me some things. (C6)

Both of the coaches admitted that they used to mostly focus on physical performance improvement without adequately considering gymnasts' other developmental needs and interests. However, they said they started to try to address gymnasts' personal needs and wellbeing during training.

I realized that it is critical to understand how a gymnast feel. The child comes to the training. How does he feel? Many things can happen in his life. First, I try to understand how he feels. I ask when I feel something wrong "Batı, are you okay? Is there anything wrong? What are you worried about?" I would not ask much before. In the past, I thought that whenever the training starts, anything else of the gymnast does not matter but his physical training. It was a mechanic. However, now, when I see something wrong, and the training is not going well, I ask them "Are you tired today? How do you feel now?" In other words, I try to solve the problem. Some children do not directly say. (C1)

4.2.3.1.2.5. Encouraging Positive Parent Involvement

Both of the coaches appeared to be aware of ecological factors that have an impact on gymnasts' sport development, and one of the most important factors for artistic gymnastics context for them is parents. The coaches stated that parents usually over-involve training, criticize their children, and put pressure on their children to be better at performing. The coaches stated that parents could criticize their children

regarding their performances by taking their roles. They argued that this situation causes gymnasts alienation from the sport. They try to instruct the parents to make positive comments on their children's performances and be supportive, but not to be over-involved in training.

> *As parents watch the training every day, they become over-involved in the technical aspects and start to get angry at their children at home when they perform poorly. When it is the case, gymnasts become afraid, and they do not want to participate. (C6)*

More importantly, after participating in the LCP, the coaches realized that parents' comparison of their children with their teammates and peers harms gymnasts' personal development. C6 said when they sense or witness comparison, he began to contact with parents directly to stop them comparing their child with others.

> *Parents say "that boy excelled you, this boy did better than you today." Whenever I see it, I began to interfere with this approach. For example, sometimes a small child performs a movement and after that runs towards their parents asking how he did it. Moreover, sometimes parents may compare their children with others' performance. I recommend parents be supportive and positive at all times. I tell them when I tell your children's mistakes; you should be appreciative emphasizing the value of hard work. (C6)*

4.2.3.2. Transformation of a Gymnast within One Year

C1 mentioned about his recent experience with a developmental-level gymnast who has been working with an elite coach. The coach has a vast experience in a competitive context, and he has been working both in competitive and participation context at the time of the data collection. C1 said he has been observing problems with their relationship. He said the relationship between the coach and the gymnast was getting worse as the gymnasts cannot perform as his coach expected.

> *I want to tell you my recent experience with a gymnast, it is important. There is a head coach in our setting, everyone knows. He is very experienced. He developed many competitive gymnasts so far. He still trains developmental level gymnasts while working in participation context. He has a gymnast his name is Kemal. He can in no way do some skills in the high bar, and that is where their relationship started to deteriorate. (C1)*

He observed them for several weeks and witnessed problems in their coach-athlete relationship. He explained how the coach's approach deteriorated his relationship with the gymnast and negatively affected his development in sport.

For a long time, he (the gymnast) could not perform a skill on the high bar although they worked on repeatedly and he tried numerous times. He was only making him try the skill repeatedly. The coach was scolding him because he cannot perform the skill. He was also humiliating him because of his poor performance on the apparatus. Their relationship worsens in time, and he began to turn in on himself because of the coach's negative approach. He became afraid of any gesture of the coach in time. Finally, he ended up with confusing and forgetting the techniques he has learned so far. He lost his self-confidence. He was on the brink of dropping out of gymnastics. The coach and the gymnast became opposed to each other, and he (the coach) was not showing tolerance towards him. (C1)

C1 stated that he offered him (the gymnast's coach) to work with the gymnast for a season. In six months, there have been significant improvements in the gymnast's technical performance.

I offered him to be his coach for one year. Then he worked with me six months and became second in the national competitions in his category. His self-confidence increased, and he started to communicate with me. (C1)

C1 explained that he used the relevant information provided during the LCP meetings when training the gymnast specifically in skill learning and personal development. His explanations showed that during the time he spent with the gymnast, he adopted an athlete-centered approach focusing on the gymnast's needs. Additionally, reflecting on current coaching practices, he developed strategies to foster the gymnast's development.

How did it happen? Firstly, I approached him with a high degree of tolerance. I was patient. I patiently waited until he expressed himself first. Then I waited him understand the things I try to teach. So, firstly, I tried to understand what he needs. You have to behave according to gymnast's needs. We had talked about it during the meetings. I took lessons from my previous coaching practices as well as his coach's behaviors. I did things or did not do things that aimed to increase his self-confidence. For example, I never humiliated him. I did not get mad at him ever although he made mistakes continuously. When he made mistakes, I gave feedbacks about where he made the mistakes and how he could correct them. Then we corrected them together. I began to communicate with him. Then he started to talk to me. After some time, he started to come to the training walking on air. When I showed patience and teaching the techniques from the beginning slowly without judgment, everything became very different. The kid recovered from that trauma. Participating in the meetings made me realize these things. Everything we discussed fell into place. (C1)

Field observations also proved that the gymnast ranked second in the national competition at the time of his intervention. Additionally, the researcher witnessed the negative approach of the previous coach towards the gymnast as well as the positive

coach-athlete relationship environment C1 created during the period. During the observations, the coach has been understanding and instructive towards the gymnast. The coach was often asking questions and giving instructive and positive feedback to the gymnast when the gymnast failed to perform a skill.

CHAPTER 5

DISCUSSION

In this chapter, quantitative findings of Study 1 and the qualitative findings of Study 2 are discussed based on related literature, respectively.

5.1. Study 1

5.1.1. Research Question 1: How do competitive youth gymnasts from different ages and genders perceive their sport outcomes of competence, confidence, connection, and character in artistic gymnastics setting?

The purpose of this study was to determine differences between gymnasts' perceptions in the 4 Cs regarding their age and gender. Initial descriptive analysis and the univariate analyses revealed differences between the gymnasts' scores in each dimension of the 4 Cs. Findings indicated that older gymnasts (15 – 18 years of age) had lower perceived scores in each outcome than those of younger gymnasts (12 – 14 years of age). The analyses also indicated gender differences in competence and character outcomes. Girls had higher scores in competence and character.

Age group findings showed that gymnasts' perception of confidence, connection, and character decreases as they move from 12 – 14 to 15 – 18 years of age. Young athletes usually start to compete in serious competitions during the 15 – 18 years' age interval (20). According to the DMSP, 16+ years are the investment years in which young athletes specialize in one sport and move from 'train to train' to 'train to compete' phase (Côté & Fraser-Thomas, 2007). During this time, being exposed to high volume of training and large number of competitions may be difficult for the gymnasts in regard to psychological and social dimensions, and that may pose a decrease in their perceptions in confidence, connection, and character outcomes. There were no significant difference between the age groups of the gymnasts on their competence perceptions. That implies that the gymnasts perceived their competence as similar although there is a decrease in the score as the age increases.

200

The significant gender differences found in the athletes' competence and character scores could be attributed to adolescence and dependent psychosocial reasons that need attention to coaching practices and sport programming. Gender-based analysis of gymnasts illustrates that girls had higher competence perception than boys. The starting age of competition is earlier (as early as age 7) in sports high performance is reached before adolescence. Physical maturation may partially explain the higher perception of competence since it is assumed that it positively affects physical competence in a sport. Therefore, girls' earlier puberty onset, which allows for larger strength gains (Behringer, Vom Heede, Yue, & Mester, 2010) may be one of the reasons that lead to higher competence perception.

Previous research on athletes' gender differences in moral maturity and moral reasoning (Bredemeier & Shields, 1984; 1986), legitimacy judgments (Conroy, Silva, Newcomer, Walker, & Johnson, 2001), and unsportsmanlike approach (Kavussanu & Roberts, 2001) found gender differences that are in parallel with the present study findings. In previous studies, girls had higher overall moral maturity and moral reasoning, lower perceptions of legitimacy judgments on antisocial behaviors (i.e., rule-breaking & injurious behaviors). Additionally, they had lower approval of unsportsmanlike play. It appears that girls and boys automatically accept traditional cultural practices regarding gender roles (Coakley & White, 1992), such as boys express and accept behaviors of physical aggression more consistently (Weiss & Bredemeier, 1990). A comprehensive examination of quality relationships between youth athletes and significant others may provide a better understanding of the reasons for the difference observed in character outcome. A recent study on the nature of connection and its relation to the character in a youth sport context demonstrates the effect of quality relationships on athletes' developmental outcomes (Herbison et al., 2018). Herbison et al. (2018) found that the athletes who were perceived as popular by their team members were more likely to exhibit prosocial behaviors.

In total, the findings of this present study revealed important information regarding the youth artistic gymnasts' developmental outcomes in Turkish context. There is a limited research, which examined the 4 Cs of youth athletes from a shared understanding point of view (Côté & Gilbert, 2009). Generally, previous studies focused on the coaches' side while neglecting the athletes' side (Côté et al., 2010). This present study enables a conceptual understanding of youth gymnasts' perception of their

coaching context specifically based on their age and gender. Evaluating coaching effectiveness based on age and competitive level of sporting environment has been suggested in the literature (Côté et al., 2010). Examining coaching effectiveness has been conducted by asking, observing, and tracking on their performance records (Mallett & Côté, 2006) excessively examining coaches' behavioral features (Lyle, 2002).

5.2. Study 2

5.2.1. Research Question 2 (a): How does the 6-week learning community program take place?

This study aimed to facilitate coaches' coaching effectiveness by developing a six-week learning community program based on coaches' professional needs. Thematic analysis findings indicate three main outcomes for the coaches. These are 1) raising awareness and conceptual understanding of the learning community approach and the 4 Cs framework, 2) a five-stage internalization of the relevant scientific and experiential information, and 3) increasing the ability to conceptually identify professional needs by reflecting on coaching experiences, and communicate these needs with an expert. These three outcomes are discussed with the relevant literature below, respectively.

5.2.1.1. Raising Awareness and Conceptual Understanding of the Learning Community Approach and the 4 Cs Framework
5.2.1.1.1. The Learning Community Approach

The ultimate aim of the LCP was to increase coaching effectiveness. During the first meeting, the learning group discussed the 4 Cs framework as a critical element of coaching effectiveness. The learning group also conversed about in what circumstance they will continue throughout the program. In parallel with discussing the nature of the learning community, the group also discussed the ways they obtain professional information. Specifically, the learning group discussed the purpose and principles of the program, the 4 Cs of athlete outcomes framework, and how they obtain professional knowledge.

At the beginning of the program, the coaches were informed about the purpose and the principles of the LCP. One of the critical features of the LCP is being based on relevant scientific and experiential information. The learning group discussed scientific

information that was directly designed to meet the coaches' professional needs. Additionally, the group made use of experiential information exchange regarding coaching issues throughout the program meetings by reflecting on their coaching practices and experiences and providing support to one another based on their experiential knowledge. Secondly, the coaches searched for answers to the coaching issues by collaborating within an interactive environment. There was no hierarchy between the group members throughout the program, and each group member could freely make their point regarding a topic with a high level of trust. Last but not least, participating in the learning group was voluntary. Therefore, the coaches were aware that any time they could leave the group discussions. However, the coaches were motivated in participating in the program, and their motivation increased as the meetings continued. All of the coaches fully participated in the program.

The findings indicate that the principles of the LCP parallel with the principles of learning community approach (e.g., Gilbert et al., 2009) and adult education (e.g., Brookfield, 1986). Firstly, the LCP was developed based on coaches' specific contextual needs for developing gymnasts' developmental outcomes as suggested in the teaching and coaching literature (e.g., Trudel et al., 2010; Gilbert et al., 2009; Walker & Leary, 2009). This point is found highly critical in the PD literature including adult learning principles and learning community approach emphasizing the importance of building a professional development program considering learners' immediate contextual needs. In this present study, the coaches' contextual needs were empirically defined using the central element of coaching effectiveness, which provided directly relevant data of what coaches professionally have been doing in their setting. That helped coaches to become highly motivated in participating in the program.

Secondly, as suggested by previous authors (e.g., Gilbert et al., 2009; Trudel et al., 2010) the LCP was built with a small group of coaches who coach the same sport in the same setting. The learning group comprised of two different coaching experience, which dramatically intrigued group collaboration and building contextual knowledge. Two of the coaches were elite-level coaches while the other four coaches were from the developmental level and that allowed for an active exchange of experiential knowledge between the coaches.

Thirdly, the LCP was based on a learner-centered approach, which provides a non-hierarchical and trustful discussion environment as a suggested feature of the

learning community approach and adult learning (e.g., Walker & Leary, 2009; Brookfield, 1986)). Thanks to the environment created, the coaches' high level of interaction and collaboration were ensured. The learning group could openly discuss their coaching practices whether it be positive or negative independent of coaching experience or coaching level. The coaches usually work alone, and most of them are less experienced; therefore, this supervised discussion environment helped coaches to turn their experiences into a learning opportunity effectively (Trudel & Gilbert, 2006).

5.2.1.1.2. The 4 Cs Framework

As a critical element of coaching effectiveness (Côté & Gilbert, 2009), the 4 Cs was used as the main framework of this study. This framework played two critical roles in the program. Firstly, the framework functioned as a pathway suggesting what the coaches need to know to be effective in their coaching practices. The framework was also used in the indirect evaluation of coaching effectiveness and the following development of relevant content to be discussed for the LCP. After forming a conceptual understanding of the learning community approach in the coaches' minds, firstly, the coaches' comprehension and internalization of the 4 Cs framework were realized. The learning group discussed the concepts of each C in detail. The coaches completely accepted the framework and argued that it covers gymnasts' developmental aspects. The coaches felt responsible for developing the 4 Cs of athlete outcomes in gymnasts. While discussing the concepts of the 4 Cs, the coaches expressed their understanding of them by providing contextual information about each of the C. Among the Cs; the coaches found character dimension to be a precondition to be regarded as successful in sport and wanted to continue discussing character dimension when they were asked. In addition to the main framework, the coaches also suggested "creativity" as a critical developmental outcome for gymnasts' sport development, and demanded to discuss it. They emphasized the importance of creativity especially in creating unique skill movements, routines, and training patterns, which necessitate complex problem-solving skills. To facilitate creativity outcome for gymnasts, the importance of using a problem-based approach and a variety of teaching methods were emphasized during the group discussion.

As the coaches of the present study, the 4 Cs of athlete outcomes framework had been well-accepted by coaches in a different coaching culture (i.e., Australia; Vella,

Oades, & Crowe, 2011). Vella and colleagues (2011) found that the coaches felt responsible for the outcomes that fit into the 4 Cs framework. In the present study, the coaches also recognized each of the C and generated contextual examples that fit into each of the 4 Cs. The coaches of this present study differed from Australian coaches in regarding the most critical dimension for athlete development. While Australian coaches regarded 'competence' as an essential requirement for athlete development, the coaches of the present study highlighted the utmost importance of character development of gymnasts and regarded it as a priority to be a successful gymnast in the long run. The reason may be that the coaches were from participation and team sport context in the study whereas the coaches of this study were from a competitive, individual sport context in which gymnasts are specialized early. Although the context is highly competitive from childhood, the gymnastics coaches put the priority on character development over competence development based on their field experiences.

In coaching literature, it is stated that while some coaches can find ways to facilitate athletes' developmental outcomes by reflecting on their coaching experiences (Camire, Trudel, & Forneris, 2014), many coaches struggle with finding the right path to developing youth in sport. This present study also provided an appropriate pathway for coaches to facilitate youth development in the sport by clearly defining the elements of coaching effectiveness to the coaches, indirectly evaluating their effectiveness, and helping coaches to create relevant information regarding how to facilitate each of the developmental outcomes.

As Gilbert and Trudel (2009) suggested, there is a lack of research with a shared conceptual understanding of coaching effectiveness. Previous research usually focused on the coaches' side in evaluating coaching effectiveness by, for example, focusing on performance records (Mallett & Côté, 2006) and coaches' behavioral indicators (Lyle, 2002). Therefore, the studies facilitating coaches' professional development by focusing directly on coaches' needs in developing athletes' developmental outcomes is scarce. Recent studies examined the presence of positive youth development in different sport contexts (e.g., Strachan et al., 2011) and used the 4 Cs as a legitimate framework in defining coaches' capabilities of facilitating positive developmental outcomes (e.g., Vella et al., 2011). More recently, the 4 Cs has also been used as a conceptual framework in small-scale studies to develop coaches' effectiveness (e.g., Falcao, Bloom, & Gilbert, 2012). However, no studies have been come across in the coaching literature that

developed professional development opportunities for coaches directly based on coaches' contextual needs defined in the 4 Cs. In the coach development literature, it is suggested that the programs focusing on developing coaches' abilities in ensuring athletes' holistic development need to be based on measurable outcomes to be regarded as effective (Trudel, Gilbert, & Werthner, 2010). This present study used the 4 Cs toolkit as a proxy measure of coaching effectiveness (Vierimaa et al., 2012). Then, the intervention program was designed considering the coaches' contextual needs defined in the 4 Cs. All in all, the use of the 4 Cs as a framework in the program had critical roles in firstly broadening the coaches' views towards effective coaching, and in facilitating the coaches' professional development by indirectly evaluating their needs and providing relevant scientific information for these needs.

The learning group also discussed how the coaches generally obtain professional information and what kind of obstacles they encounter on the way. Thematic analysis findings indicated that the coaches often obtain information from informal sources with an individual effort. They stated the convenience of obtaining technical information via visual sources of internet. The coaches also mentioned the benefits of participating in international camps but argued that this opportunity is quite limited to top-level coaches. The ones who participated were having difficulty in communicating with other coaches because of a language barrier even if they could participate in these camps. It appears that language barrier aggravates the coaches' understanding of the content of such organizations as well as building international networks with their colleagues. The coaches regard formal provisions insufficient for their needs. They argued that the formal courses and seminars usually fall short of providing context-specific information. Additionally, the coaches complained about the scarcity of sources written in Turkish and that is specific to artistic gymnastics. Decontextualized information provided and language barrier appear to affect coaches' knowledge obtainment, translation and internalization negatively.

The coaches' voiced knowledge gap has been stated in many recent research (e.g., He, Trudel, & Culver, 2018; Kilic & Ince, 2015; Martindale & Nash, 2013; Reade et al., 2008a). These studies generally illustrated that coaches have barriers in reaching relevant scientific information produced in sports sciences and being able to translate that information according to their contextual needs. For example, in Martindale and Nash's (2013) study, coaches' transfer of sports science knowledge is poor because of

deficiencies in the features of the information they reach in terms of relevance, integration and access, and language. In addition to the academic language, in He et al.'s (2018) study, the coaches emphasized the barrier of English proficiency that significantly limits coaches from reaching eligible scientific as well as informal information. In parallel with the study findings in different coaching cultures, Turkish coaches appear to have difficulties in reaching quality sources and provisions to increase their coaching effectiveness (Kilic & Ince, 2015). In addition to having hardships in reaching contextual relevant information, they also perceive that the form and the language of information sources create barriers in front of obtaining relevant information. The coaches appear to have problems in being able to understand scientific language. More importantly, as stated in He et al.'s study, they have a bigger barrier of a lack of foreign language skill that prevents coaches from obtaining relevant, up-to-date scientific information.

Another issue highlighted in the literature is the perceived insufficiency of formal learning opportunities. In similar with previous research (Kilic & Ince, 2015; He et al., 2018; Reade et al., 2008a) the coaches found formal learning opportunities valuable but ineffective in providing context-specific information that is focused on their immediate needs. In Kilic and Ince's (2015) study, the coaches reported that they prefer to directly communicate with sport scientists and other coaches as well as looking for eligible information from the internet mostly. Their use of written scientific sources is scarce. Additionally, they highlighted their contextual needs especially in information specific to their sport, mental training and preparation, and fitness and conditioning. The coaches of the present study appeared to reflect the similar vexing problems of the knowledge gap in their coaching context. There has been a need for identifying a clear strategy that can help coaches bridge this knowledge gap, especially for the coaches who have a lack of familiarity with the English language as well as academic language. Only after surmounting language barrier the coaches can start to build a conceptual understanding of the relevant scientific information, communicate with that understanding, and translate that information into their coaching situation, which consequently leads to optimal professional development. This present study clearly defines the steps to be followed in reaching such state of development for the coaches.

5.2.1.2. A Five-Stage Internalization of the Relevant Scientific and Experiential Information

Relevant scientific information in facilitating the gymnasts' 4 Cs was shared with the coaches in the form that the coaches could internalize throughout the program. A content of relevant scientific information was developed based on the coaches' professional needs in each of the C and the suggestions of relevant work in sport coaching research (e.g., Côté & Gilbert, 2009; Côté et al., 2010). To effectively deliver the relevant content to the coaches, a standardized five-step worksheet was developed considering the coaches' needs in the 4 Cs, their perceived barriers in transferring knowledge, and the relevant previous research (e.g., He et al., 2018; Kilic & Ince, 2015).

The five-step worksheet was applied for each meeting as follows. The coaches firstly expressed their understanding of a topic of discussion (a developmental outcome), which helped them to draw their attention to the topic and raise their awareness of it. Then they obtained the theoretical explanations of the topic, and the coaches related these explanations with their coaching experiences. This strategy enabled coaches to discuss the topics with a shared conceptual understanding.

Additionally, it enhanced the coaches' ownership of the topic while instilling the familiarization of the academic language relating to it. In the third step, the coaches discussed the influential factors that affect the topic and put forward their working strategies that facilitated its development. In this way, coaches enhanced their awareness of the factors and became knowledgeable about different solutions to specific problems regarding the topic by actively exchanging their field experiences with one another. In the fourth step, the coaches discussed the findings of the NA (Study 1 results) regarding the topic. That helped the coaches to be aware of their specific professional needs and made coaches think about the underlying reasons (coaching practices) that may lead to these results by reflecting on their coaching practices. The coaches discussed their coaching practices that may result in such findings by openly reflecting on their perceived practices either right or wrong. In the fifth step of the knowledge internalization strategy, the learning group was introduced the relevant scientific information that helps facilitate the outcome being discussed. The information shared with the coaches were in the coaches' language (Turkish), and has become the realm of the coaches' comprehension thanks to the previous steps followed. This step enabled the coaches to reach the latest eligible scientific information relevant to a topic of

discussion. In this way, the coaches gained a deeper understanding and a broader perspective of facilitating the topic of discussion (a developmental outcome). The coaches compared their coaching practices with the up-to-date relevant scientific recommendations they were provided. Below, how the meetings were evolved in this respect will be presented. The general flow of each meeting can be followed in the related wheel charts.

5.2.1.2.1. Character

In the beginning, the coaches understood the character as being respectful to others, having good communication skills, behaving autonomously, being disciplined and hardworking, being physically resilient, committed, and patient. The group discussed the personal and contextual factors that influenced character development. For the coaches, defiance, and obstinacy, athlete-induced injuries, and moral withdrawal (fabricating injury) were the influential personal factors. Regarding contextual factors, coaches appeared to use talent-labeling (prejudice against apparently less talented), create an antisocial training climate, and overload gymnasts. Parents' high expectations, their impacts on children's dropout, and parent over-involvement are among the other negative contextual factors. The coaches appeared to find formal coach education opportunities as being insufficient regarding facilitating gymnasts' character development. They complained about obtaining only generic information instead of specific strategies. Coaches strongly supported the finding that "gymnasts' antisocial behaviors increase with age" whereas some of them did not support the finding "girls perceive more prosocial" believing that girls and their coaches are behaving more antisocially in the field. The coaches teach a code of ethics to their gymnasts, monitor their lifestyles, and teach responsibility to facilitate their character development. Lastly, the group discussed the scientific recommendations for facilitating character development in sport. These were "creating a task-oriented climate," "taking collective responsibility to ensure positive morality," "creating a democratic environment," and "discussing an ethical issue on cases." The coaches approved of all of the recommendations and reflected on their coaching practices that conform or mismatch to the recommendations during the discussion.

5.2.1.2.2. Connection

For the coaches, connection means having a mutual closeness, trust, and affection with gymnasts. For the coaches, being introvert or extrovert as a gymnast affects connection development. Regarding contextual factors, coaches appear to be the most influential factor for the decreased connection scores of gymnasts. Coaches' exclusive approach, behaving in favor of talented gymnasts, early identification of talent, having conflicting values between coach and gymnast, failure in meeting gymnasts' differing needs in time, working in many different contexts, and the hardship of spotting gymnasts as a woman coach were the main influential factors discussed. Arguably there was a healthy relationship between the peers. Regarding parent involvement, the findings indicated that the socioeconomic status of parents largely influences coach-gymnast relationship. When parents are from low SES, their expectations of a career goal and gaining benefits such as scholarships from schools are high. For these reasons, these parents and their children are more closely tied to their coaches. The high SES parents are more focused on their children's fundamental motor skill development as well as psychosocial development. Therefore, their sport participation is not as strongly guaranteed as the others. Lastly, parent coaches are thought to affect c-a relationship negatively. Coaches use their foresight skills which prevent gymnasts from being injured or facilitates better skill learning. Providing technical feedback and corrections are believed to strengthen the coach-athlete relationship. Lastly, the group discussed the COMPASS model of relationship maintenance in the c-a relationship (Rhind & Jowett, 2010) to strengthen the constructs of closeness, commitment, and complementarity between their gymnasts. The coaches did not specifically exemplify these strategies with their coaching experiences, but regarding openness dimension, it appears that coaches do not openly share with gymnasts when they believe the gymnasts are incapable or untalented until adolescence not to be destructive.

5.2.1.2.3. Confidence

Coaches understood confidence as a feeling that comes from being physically strong among peers at the beginning of the discussion. Regarding the influential factors, for the coaches, overcoming the fear of injuries as a gymnast is critical to developing confidence. Coaches need to know when gymnasts are ready for certain skill

performances. Coaches usually appear to repeatedly force gymnasts to perform the skills that they feared for performing and this causes losing self-confidence. Also, coaches may become overprotective with negative experiences, and that may cause a low level of confidence in gymnasts. Parents' overambitious approach and oppressiveness, as well as distrust of their children, negatively affect gymnasts' self-confidence. The coaches agree that gymnasts' self-confidence significantly decreases as they grew older and argued that the increasing difficulty of movement skills and the accompanying risk of injury are among the reasons for this decrease. The coaches' strategies to increase gymnasts' self-confidence were staying physically close to them during skill performances, and talking with parents about the developmental processes of their children in order to persuade parents to be patient and understanding. In the "model for building confidence in athletes" proposed by Vealey and Vernau (2010), the coaches appeared to be either ineffective or unaware of the elements of physical training and preparation, self-regulation, inspiration, and achievement and experience. Physical training and preparation are problematic due to limited time and lack of professional knowledge. Regarding self-regulation strategies, the coaches appeared not to use mental training but believed its effectiveness in increasing gymnasts' self-confidence. Coaches had the misconception that mental training may not be appropriate for gymnasts with younger ages. Regarding "positive talk," it appears that coaches usually emphasize mistakes and use negative talk. The coaches agreed that energy management is critical in increasing gymnasts' self-confidence since it affects their performance positively. Regarding "inspiration" as another strategy, the coaches train promised gymnasts with the elite gymnasts as a working strategy. Participating in the international preparation camps realizes this purpose. In the "experiencing success" strategy, the importance of goal setting was emphasized. Apparently, there is no effective use of goal setting strategy in the field. At the end of the discussion, the coaches started to state their professional needs in learning the use of mental training strategies to increase gymnasts' self-confidence.

5.2.1.2.4. Creativity

The coaches found creativity critical to reaching higher ends in artistic gymnastics. The coaches appeared to have misconceptions and lack of knowledge regarding the suggestions made for facilitating creativity. The coaches believed that the

difficulty of skill movements triggers creativity, and coaches' creativity must be at the forefront when their gymnasts are in their childhood. The coaches argued that they prepare routines based on gymnasts' talent and potential and that helps increase their creativity.

Regarding the seven propositions for facilitating creativity, the coaches argued that they support sport-specific knowledge to their gymnasts. On "rewarding curiosity and exploration," the coaches were reluctantly giving the reason of potential risks that may bring with it.

Regarding "encouraging risk-taking," the coaches argued that the nature of artistic gymnastics already involves it and taking higher risks may be too dangerous. They refer to this strategy only during final competitions by trying a more difficult routine or finish. Regarding "having high expectations," the coaches appear to motivate their gymnasts with being able to participate in competitions.

Regarding "offering opportunities for choice and discovery" the coaches admitted that they are mostly coach-centered alleging gymnasts' immaturity.

Additionally, some of the coaches in the group confused athlete-centeredness with turning gymnasts adrift. The coaches were also afraid of giving autonomy to gymnasts giving injury risk as a reason. The necessity of athlete-centeredness starting from early ages was suggested. Regarding "developing self-management skills," the coaches complained about the lack of responsibility and internal motivation in gymnasts. During the discussion, the coaches came to realize that the autonomy-supportive approach is closely linked to developing gymnasts' responsibility and internal motivation. In the beginning, the coaches perceived autonomy-supportiveness as being undisciplined and loose, but they agreed that an athlete-centered approach is needed for developing self-reliant, thinking, and responsible gymnasts in the long run.

5.2.1.2.5. Competence

The group lastly discussed competence outcome. Coaches appear to use suggested teaching phases (cognitive, practice, & automatization phases) in teaching techniques. The coaches emphasized the importance of coach modeling the fundamental skills at the beginning of gymnasts' skill development. Regarding teaching tactics, the coaches approved "the tactical triangle" (reading the situation, gathering relevant information to make an appropriate tactical decision, and using decision-making skills

to solve a problem). The coaches emphasized the importance of determining gymnasts' needs (either physical or psychological) and developing tactics with gymnasts together. The coaches also appear to decide gymnasts' routines most of the time until youth level, but gymnasts can also align their routines during the competition at the youth and adult competitive level. They may choose an easier or more difficult routine depending on the situation. The coaches appeared to need for professional help in developing gymnasts' physical development (e.g., physical fitness). Overly emphasizing the technical aspect and having inadequate knowledge in gymnasts' physical development appears to result either in defective skill development or interrupt gymnasts' skill development completely. The coaches in the field appear to have higher expectations of gymnasts without providing the necessary physical foundation. The coaches agreed with the finding "female gymnasts perceive significantly more competent in technical and physical skills than their male counterparts." They attributed this result to different growth rate between the genders. The group discussed the scientific information on athlete trainability and long-term developmental issues regarding cognitive, emotional and ethical development of athletes based on age and gender. It appears that coaches increase a load of training approximately two years earlier than generally recommended. Also, there is a two-year difference between girls and boys regarding growth, and girls complete their growth phase two years earlier than suggested in the generalized information. The group primarily discussed coaches' influence on gymnasts' competence development. The coaches themselves and arguably the coaches in the field appeared not to consider gymnasts' changing social, cognitive, and emotional developmental phases. The coaches find adolescence as the most uncertain time for gymnasts' development. The group discussed many issues that impede gymnasts' competence by reflecting on their experiences based on the scientific recommendations they were shared. These were a) overemphasis on technical and strength development during adolescence, b) being unable to communicate according to gymnasts' developmental stage, c) harmful use of tone during training, d) insufficient emotional development, and e) competition policy.

The coaches and arguably the coaches in the field were having hardships in reteaching skills and building strength while gymnasts are entering into puberty. It appears that the coaches' lack of trainability knowledge caused a painful process both for gymnasts and the coaches. While a significant change in their body negatively

affected gymnasts' competence, the coaches were trying hard to reteach skills and rebuild gymnasts' strength, which did not work well and caused a decrease in gymnasts' self-confidence. During the discussion, the less experienced coaches appeared to obtain relevant eligible information by reflecting on the experienced colleagues' field experiences and the scientific recommendations discussed regarding the trainability issue. Regarding strength training, it appears that generalized knowledge may not apply to artistic gymnastics context all the time. Additionally, while it is argued that child gymnasts do not use free weights while training, it appears that bodyweight training can become quite stressful and demanding for their skeletal and muscular system as well as psychology.

Coaches appear to have hardships with communicating with gymnasts in teaching skills and do not have the necessary pedagogical knowledge in communicating with gymnasts from different developmental stages. While raising their awareness of cognitive theory of learning and making them realize the criticality of gymnasts' cognitive developmental stages in learning skills, the coaches also exchanged working strategies such as asking help from gymnasts' more skillful peers and from a coach who is approachable and knowledgeable in the pedagogy of teaching skills.

Elite coaches in the field appear to have difficulty in building effective interactions with young gymnasts. These coaches' approach to gymnasts (tone) become inappropriate from time to time, and allegedly they may not have the necessary pedagogical skills to build a strong connection with younger gymnasts. Regarding emotional development, coaches in the field appear to have problems in gaining the gymnasts' necessary emotional stage based on age. Allegedly, coaches may also have emotional problems that impede gymnasts' emotional development.

Additionally, the group discussed the negative effect of competing at early ages. It appears that for child gymnasts the format of the competitions was the same as those organized for young and adult gymnasts, and that causes little gymnasts to face the physiological, psychological, and sociological pressure of competition.

The study findings revealed that the design of the 5-step knowledge internalization strategy, which includes the relevant content development that directly focused on meeting coaches' educational needs and eliminating the critical barriers to successful coach education. In the literature, it was highlighted that formal coaching education opportunities have limited impact on coaches' professional development

(Gilbert et al., 2009). Although coaches were keen to continuing further education (Vargas-Tonsing, 2007) they appeared to neither look for decontextualized information nor an instructor-centered approach when they try to develop their professional skills (e.g., Kilic & Ince, 2015). Coaches appear eager to directly communicate with other coaches (Cassidy et al., 2006) and with sport scientists (Reade et al., 2008; Kilic & Ince, 2015) on relevant coaching issues (Martindale & Nash, 2013), and become highly motivated to continuously learn when the content is directly relevant to their immediate needs (Gilbert et al., 2009). In order to be able to keep up with their ever-changing environment, coaches need to use up-to-date knowledge produced in sports science, but they appear to be unable to reach relevant information and have issues in understanding the academic language of scientific work (e.g., Martindale & Nash, 2013; Reade et al., 2008; Williams & Kendall, 2007; Kubayi, Coopoo, & Toriola, 2018).

Additionally, in coaching cultures where English is not the native language, the coaches are more desperate in reaching eligible relevant scientific information (e.g., He et al., 2018; Kilic & Ince, 2015). The five-stage internalization strategy was developed to meet coaches' needs addressed in previous knowledge gap research. The value of the use of social learning perspective was highlighted in coaching literature (e.g., Trudel et al., 2010) and its effect on facilitating coach learning was proved in recent studies (e.g., Bertram, Culver, & Trudel, 2017; Cassidy et al., 2006; Culver & Trudel, 2006) However, the clear pathway of how to raise coaches' awareness of their professional needs and unlock coaches' potential in understanding and translating relevant information into their situation in a coaching culture where the speaking language is not English has not been clearly defined.

Comprised of the amalgamation of the principles of social learning theory and adult learning principles, and the findings of related research on coaches' knowledge transfer, the five-stage internalization strategy provided clear steps for coaches to effectively reach and ingrain eligible scientific knowledge in addition to experiential knowledge. Coaches firstly become aware of the topic of need and start to develop a conceptual understanding of the topic by associating scientific information with their understanding as a group. After gaining a broader point of view and a shared theoretical understanding about the topic, the coaches start to make sense of the relevant contextual findings and give contextual reasons for these findings by reflecting on their field experiences with their obtained new perspective. After sharing the possible solutions

that group could offer from its experiential knowledge, the coaches meet with a content of the relevant eligible scientific suggestions in the form that coaches can assimilate both regarding academic language and the written language itself. In this way, with increased awareness and conceptual understanding of the topic of discussion, the coaches effectively learn what they felt they need to know with increased ownership of their needs. Consequently, a successful knowledge transfer occurs that is directly based on coaches' needs as well as on required relevant coaching knowledge for developing coaching effectiveness.

5.2.1.3. Increasing the Ability to Conceptually Identify Professional Needs by Reflecting on Coaching Experiences and Communicate These Needs with an Expert

During the meetings, the coaches started to actively reflect on their coaching practices and experiences using the 4 Cs framework. This reflective process that occurred throughout the meetings enabled the coaches to identify and speak out their professional needs conceptually. The coaches' felt needs were mainly related to building sport confidence and connection. Therefore, a sport psychologist was invited for the coaches to search for answers regarding their felt needs and curiosities in these outcomes. The coaches voiced their professional needs about a) coach-gymnast interaction, b) mental training, c) gymnasts' fall and psychological recovery, d) overcoming gymnasts' competition anxiety, e) developing responsibility in gymnasts and goal setting, f) making competition meaningful for gymnasts, and g) coaches' roles. The coaches discussed each of the issues with the sport psychologist to deal with each of them.

The coaches were curious about their needs and appeared to be open to learning when they first met the sport psychologist. The coaches were open to communication and easily started to communicate with the sport psychologist. There was a high level of trust and curiosity of the group members towards the sport psychologist. The coaches could easily reflect on their negative coaching practices with the sport psychologist and asked for answers to correct them. Their trust in the sport psychologist increased when the sport psychologist gave relevant contextual examples that were in keeping with the coaches' situation.

The thematic analysis specifically revealed that the coaches communicated with the sport psychologist with a conceptual understanding of their felt professional needs. They were aware of which construct of coaching effectiveness their questions belonged to. The enhanced conceptual awareness and knowledge of coaching effectiveness they built enabled the coaches to clearly define and communicate their professional needs with the sport psychologist. Thanks to the interactive and trustful learning environment established, the coaches also contributed to the knowledge production process actively by reflecting on their coaching experiences either to provide a solution to a problem or to make an example of a wrong coaching practice that they felt needs correction. This interactive and collaborative environment also provided an alignment between what the coaches were looking for and the information the sport psychologist was providing. In this way, the sport psychologist obtained first-hand information of what knowledge the coaches need for their professional development.

Previous research on coach learning showed the significant various barriers to coaches' professional development including the limited impact of coach education programs (e.g., Trudel & Gilbert, 2006), limited information exchange between coaches and a lack of employment opportunities (Mallett et al., 2007) for them to develop their professional skills. Mallett, Rynne, and Dickens (2013) argued that while providing important information for coach development, the retrospective works on successful coaches, which focus on quantities of experiences, do not provide optimal ways for development in which the discussions of specific learning experiences have been limitedly presented. As a result of the barriers mentioned, coaches are mostly on their own in developing their professional skills (Mallett, Rynne, & Dickens, 2013). Mallett, Rynne, and Billett (2011) highlighted the need for defining quality learning experiences that are whether formal, nonformal or informal.

This informal program that was defined so far reflect the features of situated learning (Wenger, 1998), adult learning principles (Brookfield, 1986), and a learning community approach (Gilbert et al., 2009). Considering the environment created based on these approaches it can be argued that coaches gradually became competent by firstly raising self-awareness regarding their coaching practices. Gilbert and Côté (2013) suggested that a raised self-awareness is the first precondition for becoming an effective coach (e.g., Gallimore & Tharp, 2004). However, this awareness needs to be accompanied by action either to maintain strengths or address weaknesses (Schempp et

al., 2007). Becoming aware of their strengths while recognizing their weaknesses, the coaches of this study started to take action to search for answers for their needs. While doing it, the coaches had a high level of confidence and competence in communicating the sport psychologist with a conceptual understanding of their needs. The coaches openly reflected on their practices that need to be addressed with a high level of curiosity and motivation and shared their reflections with the professional with a competent academic language. It shows an improved self-confidence and competence in interacting with the sport psychologist. Research indicated that coaches who participated in higher education courses have greater confidence and competence in interacting with professionals as well as critical thinking skills (Mallett et al., 2010; Rynne, 2008). Arguably, the finding of the study parallels with the work of Mallett et al (2010) and Rynne (2008), since both of the contexts (i.e., the present study context and participating in university courses) provides coaches educational opportunities that help them develop an academic understanding as well as encourage critical thinking through engagement with an interactive and collaborative participation in an informal learning environment.

Coaches' increased awareness and openness to discuss their professional needs also allowed the sport psychologist to align her knowledge provision accordingly. In this way, a field expert could better understand the coaches' 'real' issues and could discuss these issues within a shared conceptual understanding. Some recent works alleged that they bridged the gap between professionals (e.g., sport scientists) and coaches (e.g., Judge, Young, & Wanless, 2011; Judge et al., 2016). Judge et al. (2011; 2016) created an environment in which a sport scientist and a coach worked together to increase athletes' performance in competitive athletics. However, these studies did not clearly define the coaches' processes of becoming engaged in working with the sport scientist and increasing their professional knowledge.

Additionally, recent works developing informal learning environments for coaches revealed coach perceptions of positive change such as improved knowledge of mastery goal orientation (Smith et al., 2007; Smoll et al., 2007), increased awareness and knowledge of athlete centeredness (Cassidy et al., 2006; Culver & Trudel, 2006; Garner & Hill, 2017; Falcao, Bloom, & Gilbert, 2012; Falcao, Bloom, & Bennie, 2017), improvements in coaches' interpersonal and intrapersonal knowledge (Knowles et al., 2001; Garner & Hill, 2017), improvements in knowledge sharing and responsibility of

athletes (Culver, Trudel, & Werthner, 2009), and providing information coaches need (Bertram, Culver, & Gilbert, 2017). The findings of these studies clearly indicate the significant contribution of using a learning community approach in coach development. However, these studies usually did not specifically define the processes of coach learning during their intervention, and generally were designed based on different study findings. There needs a diagnosis of coaches' contextual needs and related collaboration in clearly defining these needs within the learning groups (Brookfield, 1986; pp. 10). However, previous studies generally gave limited information in defining coaches' contextual needs, and most of them were not designed based on a direct NA study to improve coaching effectiveness.

Another point to be highlighted in the development of a learning community environment is that the studies provided such an environment usually were developed with an assumption that all coaches naturally have access to sport science directly since their native language is English. The pathways in meeting coaches with eligible scientific information in such an environment especially in content development and the way of presenting that content have not been clearly defined. In order the coaches to become aware of the essential elements of coaching effectiveness and proficient regarding these elements, they need to be met with eligible scientific information with a presence of a framework (i.e., 4 Cs). Since the design of informal coach development programs needs to be based on measurable measures in order to be regarded as effective (Trudel et al., 2010), it is critical to introduce relevant scientific knowledge to coaches with a sound coaching effectiveness framework coupled with eligible scientific information in the form that the coaches can comprehend. There are critical steps to be followed to enable coaches to develop knowledge competencies for becoming the active users and translators of scientific knowledge into action (Gilbert & Côté, 2013). Use of a learning community approach provides a useful pathway in bridging knowledge gap (Lyle, 2010), especially when the stages of that pathway is clearly defined including coaches from other cultures. This present study provides such a pathway that allowed coaches to become aware of the parameters of effectiveness, their needs in these parameters, and how to resolve them. Consequently, they became competent and confident in conceptually defining their own immediate needs and communicating with professionals by actively looking for further relevant information for their development.

219

5.2.2. Research Question 2 (b): How does a 6-week learning community program affect coaches' perceptions of the 4 Cs and the learning community program experience?

5.2.2.1. The coaches' perceptions of the LCP experience

The findings of a thematic analysis of the coaches' perceptions of the LCP experience will be discussed under the titles of 1) the coaches' motivations to participating in the LCP, 2) The coaches' evaluation of the LCP, and 3) reflection and change.

5.2.2.1.1. The Coaches' Motivations for Participating in the LCP

The findings of the meetings and the coaches' reflections on the LCP experience revealed that at the beginning, coaches had hesitations and different motivations for participating in the program. Although each coach appeared to be motivated to participate, the comparably less experienced coaches were more shying about their proficiency in participating in such a program. Another hesitance the coaches had was the transparency of exchanging information among the group. The coaches were unsure that there would be a transparent knowledge sharing among the group members. The more experienced coaches were also highly motivated in contributing to the knowledge production process with their experiential coaching knowledge. Since coaching environment is highly competitive, it is expected that the coaches have such doubts regarding a collaborative environment. In order to create a collaborative environment, Culver et al. (2009) suggested that there needs a strong visionary leader. With the significant contribution of the facilitator's skills and expertise to the meeting process, the coaches were motivated to participating in the program throughout the program meetings.

One of the significant influential factors in motivating the coaches was the facilitator's previous experiences in the sport domain and his scientific approach to the coaches. The coaches emphasized the facilitator's extensive field experiences and scientific knowledge in competitive sports. The coaches could easily make connections with the field examples the facilitator shared with them and comprehended the meaning the examples conveyed. Additionally, the coaches highlighted his facilitating skills such as creating a comfortable, inclusive and trustful learning environment in which they could openly share their opinions and practices even though they are wrong. The

facilitator appeared to effectively use the principles of the social learning theory (Wenger, 1998) and adult learning (Brookfield, 1986). From the adult learning point of view, the facilitator built a respectful environment that considers the coaches' self-worth, which helped to gain the coaches' confidence and trust. The coaches could even criticize each other with the sense of self-worth.

Another motivating factor for participating in the program for the coaches was the provision of contextual scientific information along with the experiential information shared by the group throughout the meetings. Coaches felt that the information provided to them was directly related to their contextual coaching issues. They also cited obtaining information from the group discussions as useful during the meetings. The role of the other features of the program was also significant in increasing coaches' motivation and engagement such as sharing weekly contents with the coaches and letting them decide on what to primarily discuss as well as additional topics they found important for their professional development.

The findings indicate the use of the elements of social learning theory, adult learning, and a learning community. In line with social learning theory, a group learning occurred from the group members' field experiences (a shared repertoire; Wenger, 1998). Independent of the coaching level or experience, the group started to discuss the issues more actively by asking more questions, answering each other's questions based on their experiential knowledge about their needs, as suggested in one of the elements of a learning community. A job-alike team appeared who shared their common challenges, professional needs, and interest that helped them stay focused (Gilbert et al., 2009).

Also, the findings illustrate that the coaches were highly motivated throughout the meetings since they found information directly related to their contextual needs. While they are working on their professional needs to enhance athletes' developmental outcomes (an element of a learning community; Gilbert et al., 2009), they were informed the relevant areas of need in the outcomes they aimed to develop, which helped them directly focus on the needs with a high level of motivation.

The weekly content shared with the coaches by which they obtained eligible scientific knowledge has also a significant impact on the coaches' increased motivation. The weekly content and the standardized worksheet format that was followed throughout the meetings firstly enabled coaches to become aware of the basic elements

of coaching effectiveness. Secondly, it helped the coaches to increase their competencies in understanding the academic language in these elements. Thirdly, the coaches obtained professional knowledge (including scientific and experiential) that is directly relevant to their needs to increase their coaching from the group interactions. Bridging the knowledge gap between sport science researchers and coaches has been a vexing problem highlighted in recent coaching research in many different coaching cultures (e.g., Kilic & Ince, 2015; Reade et al., 2008; Martindale et al., 2013; Mesquita, Isidro, & Rosado, 2010; He et al., 2018). The literature points out the need for defining learning opportunities for coaches in which they can participate with enjoyment and high motivation (Lauer & Dieffenbach, 2013) and learn how to develop positive youth developmental outcomes in youth athletes (Horn, 2008). The design of this study provides a clear pathway in realizing these two critical needs. While keeping the coaches' motivation at the highest level by providing directly relevant information, the study is built directly based on the coaching effectiveness framework, which reflects positive youth development in sport (Côté & Gilbert, 2009).

5.2.2.1.2. Coaches' Evaluation of the LCP Experience

The coaches' evaluation of their LCP experience was based on its content and delivery.

5.2.2.1.2.1. Relevant Content: The Coaches' Perceptions of the 4 Cs

The findings of the meetings revealed that the coaches strongly adopted the 4 Cs of athlete outcomes framework. At the beginning of the program, the coaches did not seem to have a holistic approach to coaching effectiveness. However, as the program was continuing, the coaches started to show a high level of motivation and build an understanding and appreciation of the 4 Cs framework. The coaches have become conscious and knowledgeable about the psychosocial aspect of young athletes' sport development in addition to certain critical aspects discussed in the physical aspect of the program. Therefore, the coaches' view of effective coaching changed into a broader one. While valuing psychosocial development of gymnasts, the coaches realized that athletes' personal development (i.e., confidence, connection, and character) is the essential part of optimal athlete development. In coaching research, there has been a need for distinguishing an effective coach from ineffective ones, and the integrative

definition of coaching effectiveness, which is a well-accepted framework, enables us to successfully distinguish effective coaching in different coaching contexts (Côté & Gilbert, 2009). Research highlighted that usually youth sport coaches were left alone in developing their coaching styles (Gilbert & Trudel, 2004) while coaches in competitive sporting context experienced little training opportunities regarding athlete development (Erickson et al., 2007). Coaches have to deliberately create a favorable developmental environment for athletes (Gould & Carson, 2008). While research done from the coaches' perspective is valuable, there needs to focus on athletes' outcomes (Côté et al., 2010) and improve coaches' professional development based on those outcomes to help coaches develop such developmental environments. The measurement framework to measure athletes' outcomes (Vierimaa et al., 2012) provided a more objective picture of coaching practices in the coaches' very setting including gymnasts' psychosocial developmental outcomes. The 4 Cs framework helped the coaches broaden their perspective of the 'coaching effectiveness' enabling them to grasp the view that the psychosocial development of gymnasts is equally important as their physical development. While the coaches became knowledgeable about the psychosocial aspect of gymnasts' development, they also obtained relevant critical information regarding facilitating 'competence' outcome. Therefore, the coaches established a coherent philosophy of holistic athlete development, which is regarded as essential for benefiting from the sport as a tool for development (Camire, Forneris, Trudel, & Bernard, 2011).

Additionally, the coaches recognized that each of the Cs is critical and strongly tied to each other. Therefore, neglecting one or more than one Cs result in negative outcomes leading to impairments in gymnasts' overall optimal development in a given sport. The coaches especially appreciated the presence and importance of the dimensions of "character" and "connection" arguing that these two outcomes are strongly tied to each other. In line with the integrative definition of coaching effectiveness and a recent study, the coaches found the 4 Cs as an interconnected framework. The recent research on the 'dynamicity' of connection outcome revealed that the types of connection in a sport setting (i.e., peer relationship) might be correlated with certain character behaviors (e.g., prosocial behavior) (Herbison et al., 2018). Looking at the issue from a coach-athlete relationship view, the coaches of this study argued the close tie between connection and character outcomes, stating that coaches' relationship with gymnasts strongly affects gymnasts' character development.

In addition to the 4 Cs, the coaches also felt "creativity" as a critical developmental aspect largely influencing gymnasts' competence development. The coaches emphasized the importance of both coaches' and athletes' developed creativity in reaching the elite level in artistic gymnastics. Majority of the coaches started to perceive that a more productive pedagogical approach is needed in facilitating gymnasts' creativity. In addition to the 4 Cs framework, the coaches also felt that "creativity" is also an indispensable element of coaching effectiveness as an athlete outcome.

It is reasonable that in competitive gymnastics context, gymnasts and coaches need to be complex problem-solvers and creative in performing routines and producing unique movement patterns and routines. From the pedagogical point of view, cultivating creativity in sports necessitates the use of a productive teaching approach. Mosston and Ashworth (2008) suggest that learners who are accustomed to using divergent discovery (a productive learning style that creates a self-motivated endurance; Mosston & Ashworth, 2008) are keen to enter creative thinking (pp. 69). Using in a combination of reproductive (i.e., command) and productive (e.g., discovery) teaching styles is most likely to lead to creative thinking and performance (Mosston & Ashworth; pp. 272). However, the current coaching practices are predominantly built on a foundation of behaviorist psychology (Nelson & Colquhoun, 2013) in which athlete conformity and compliance are on the emphasis (Cassidy et al., 2008; pp. 120). It is based on the reproduction of preferred athletic bodies, which arguably inhibit individual creativity (Apple, 1979). The majority of the coaches of this study were generally favoring behaviorist coaching approach. Although grasping the value of and need for creativity in reaching higher ends in competitive gymnastics, no coach appeared to use any suggestions (Griggs & McGregor, 2012) about facilitating creativity in their gymnasts in their practices before. They confused autonomy-supportive approach with turning gymnasts adrift and appeared to hardly accept the merit and the necessity of creating an autonomy-supportive coaching environment to nurture gymnasts' creativity. A recent study on coaches' use and value perceptions of teaching styles (Kilic & Ince, 2017) prove the dominance of the use of reproductive teaching styles. Additionally, the coaches investigated were undervaluing the use of productive teaching styles less than their athletes. There appears to be a need for further improvements regarding the

pedagogical content knowledge of coaches that pertains to coaches' professional knowledge (Côté & Gilbert, 2009; Gilbert & Côté, 2012).

Another critical aspect regarding the 4 Cs framework that the coaches remarked was its use in defining the coaches' professional needs. The coaches stated that the NA conducted based on the 4 Cs framework provided context-specific scientific information that allowed them to recognize their professional needs directly. The coaches welcomed the main topics (i.e., the 4 Cs) discussed throughout the meetings and found the determination of their needs for each of the topic one of the unique features of the program. Having discussed the findings of a scientific examination regarding the coaches' settings resulted in the coaches' ownership of the topics of discussion and their related NA results. The coaches argued that the NA findings directly reflect their contextual problems, and the relevant scientific information provided for meeting these needs was quite instructive for their professional development.

Considering that only participation in sport does not guarantee developing developmental outcomes (Danish, Forneris, Hodge, & Heke, 2004), planned scientific efforts must be made to help coaches become more holistic in their practices including facilitating positive youth development (Camire, Forneris, Trudel, & Bernard, 2011). Therefore, the integrative definition of coaching effectiveness and its one of critical elements (the 4 Cs) provide a clear framework for coaches to develop their competencies in their relevant coaching contexts (Côté et al., 2010). The coaches also proved the soundness of the 4 Cs and contextualized the NA results by reflecting on their coaching experiences. The coaches felt the need areas that the NA study revealed as their professional needs by exemplifying the reasons for those needs. This process facilitated the coaches' grasp on the framework, the needs defined based on the framework, and the relevant scientific information introduced to meet these professional needs. Trudel and Gilbert (2006) suggested that coaches must define their needs, develop strategies for them, and then evaluate their strategies for solving their problems. It appears that in line with Trudel and Gilbert's (2006) suggestion, thanks to the sound framework introduced and the contextual NA information shared with coaches coupled with related scientific recommendations, the coaches were able to define their coaching problems. Then they started to be knowledgeable about the strategies to solve these problems. The NA provided an approach that looks at coaching effectiveness from athletes' point of view, which is most needed in coaching research (Côté et al., 2010). This helped to see

a more realistic picture of the current coaching practices especially when the coaches themselves approved the NA findings. In sum, with the provision of the contextual needs in the 4 Cs, the coaches recognized their needs, reasoned these needs, and sought answers to them with the help of relevant scientific recommendations coupled with group experiences. In coach development literature, the studies were generally based on different previous work.

5.2.2.1.2.2. Delivery of the LCP

The coaches evaluated the LCP experience by comparing their experiences of formal opportunities regarding the physical environment, and psychological atmosphere created, the way of knowledge transfer, and the types of knowledge shared.

The findings revealed that the coaches regarded the physical structure of the LCP much more effective than that of formal opportunities. The coaches mentioned some features of the formal opportunities they regarded as negative such as they were too crowded and distant. More importantly, the coaches complained about the one-way knowledge dissemination, which was lecturing. The coaches pointed out the interactive environment built in the LCP, which allowed for an exchange of knowledge and ideas. The coaches were able to test the eligibility of their ideas and practices in the LCP meetings. There was a strong group learning during the LCP meetings. For example, comparably less experienced coaches found this environment highly nurturing especially regarding obtaining knowledge from more experienced coaches in the group. The heterogeneity of the group from the same setting appeared to allow for strong experiential knowledge sharing among the group. The coaches emphasized the superiority of a reciprocal discussion environment in which the group is focusing on a specific issue. In this regard, the coaches found formal opportunities as rather superficial in these aspects. Regarding the psychological atmosphere created, the coaches found the LCP environment as convenient for free expression, nonjudgmental, and nonhierarchical, which created a high level of trust and openness among the group members. The coaches could exchange information and be encouraged to reflect on their practices and experiences regardless of their coaching level or experience.

A number of previous research that created situated learning environments (e.g., Cassidy et al., 2006; Garner & Hill, 2017; Culver & Trudel, 2006) proved its effectiveness in facilitating coaches' professional development. The learning

community approach has been regarded as a quite effective method bridging the knowledge gap by allegedly helping coaches adopt the elements of holistic approach to coaching and athlete development (Gilbert et al., 2009; Lyle, 2010). The literature illustrates that formal coach development opportunities were perceived as decontextualized (e.g., Gould et al., 1990; Lyle, 2002). Coaches find formal opportunities too abstract from real-life situations of coaching (Lemyre, Trudel, & Durand-Bush, 2007). They find solving their contextual issues by learning relevant knowledge more effective than being introduced generic knowledge (Vargas-Tonsing, 2007; Wright, Trudel, & Culver, 2007). However, informal learning environment must not be left by itself because of the danger of reproducing the existing coaching culture, power relations, and existing coaching practice (Cushion et al., 2003). Therefore, the both types of professional development have their strengths and weaknesses (Mallett et al., 2009) and there needs to be a careful design of situated learning environments. In line with the characteristics of previous research on the significant contributions of situated learning environments on coaches' professional development (e.g., Garner & Hill, 2017; Bertram et al., 2017; Culver et al., 2009; Cassidy et al., 2006), and recommendations of previous research (Culver & Trudel, 2008) the present study appeared to provide a slightly structured learning environment for the coaches in which they could communicate their professional needs, actively obtain the relevant eligible information they need, and contextualize the information they created according to their needs collaboratively.

Regarding the effective way of transferring relevant eligible information, the coaches highlighted that there had been a familiarization of the concepts for each discussion topic. The facilitator was familiarizing the related concepts to the coaches at the beginning of each meeting by providing a well-planned familiarization strategy that includes contextual examples for the topic of discussion. That helped coaches to build a shared understanding of a topic of discussion, which increased their focus on the related topic and contextualization of scientific information provided related to the topic later on. The coaches argued that formal coach learning opportunities do not provide such familiarization process and they have great difficulty in understanding the information disseminated in these environments which are usually general and not directly related to their contextual issues. The research illustrated that formal coach education opportunities usually have a 'taken for granted approach' to coaches'

comprehension (Gilbert & Trudel, 1999). However, to facilitate coaches' learning, the content and the delivery issues need to be carefully designed and be facilitated by a professional. In the relevant literature, the presence of a professional facilitator was strongly emphasized for the success of a learning community initiatives (e.g., Cassidy et al., 2009; Culver & Trudel, 2006; Culver, Trudel, & Werthner, 2009) especially in terms of keeping discussions on the right track with the appropriate use of theoretical concepts and ensuring a sustainable and effective learning by focusing on the coaches' real-world issues that they struggle in their settings. The study findings indicated a presence of a strong facilitator who facilitated, directed and envisioned the learning community throughout the program. Additionally, the design of the delivery needs to be aligned with coaches' cultural knowledge gaps — the 5-step internalization strategy that the facilitator used in this study provides a clear pathway to reaching an effective learning community program based on coaches' contextual as well as cultural needs.

As a way of an effective knowledge transfer, the coaches highlighted the important role of meeting the sport psychologist at the end of the program. They discussed with her their contextual needs and interests. Also, they found an opportunity to recognize their false facts while obtaining in-depth information on what they asked to know (e.g., mental training). The coaches argued that in formal opportunities, they could not build such communication with experts in which there are a mutual understanding and a focused discussion of the needs. Coupled with the obtainment of a scientific perspective towards coaching effectiveness, the coaches also increased their awareness of their own professional needs by participating in the LCP. With that raised awareness, the coaches started to ask for answers to their felt needs. The coaches built an enthusiasm towards working with the sport psychologist recognizing the need to working with relevant specialists when they cannot solve their professional needs in a competitive sport context. The coaches highly valued the sport psychologist and were open to communication and curious about the answers they were to obtain. They were able to communicate their needs with the sport psychologist with a conceptual understanding. The psychologist also highlighted the coaches' ability to express their professional needs with a scientific perspective clearly. The coaches' LCP experience appears to lead to ability and further eagerness to working with relevant experts in future when needs arise.

On the whole, the coaches became aware and knowledgeable of their professional needs and started to move towards them. The findings showed that when the elements of the learning community approach and the internalization strategy were applied to the program, the knowledge transfer among group members and between the coaches and the sport psychologist became effective and instructive. The group built its contextual knowledge based on relevant science and experience by directly interacting with each other.

The present study presented the critical steps of how to effectively take part in the process of knowledge dissemination as a professional both as a coach and a sport psychologist. Firstly, the study provided a well-designed framework (i.e., the 5-steps internalization strategy), by which coaches become conscious knowledge seekers who built the necessary conceptual understanding of their professional needs with increased accessibility of relevant scientific work. Research on coach learning illustrated that coaches might take the initiative to create their learning situation (Werthner & Trudel, 2006) and this strategy explains the process of demonstrating the ability to take such an initiative by firstly clearly defining their professional needs. Secondly, the study helped the sport psychologist to easily communicate with the coaches and convey the knowledge she aimed to share. Additionally, she had the opportunity to understand what the coaches clearly need for their professional development and work on meeting their real needs. Werthner and Trudel (2006) stated that working as a psychologist in high-performance settings make professionals be involved in coaches' performance in addition to that of athletes', and it may help develop the professionals' awareness and understanding of different ways of coaches' learning, which consequently improve their effectiveness in working with coaches. In this way, sport psychologists may also have the clues of ways of interacting and giving the direction of coaches regarding coaches' further learning (Werthner & Trudel, 2006). Therefore, while this strategy develops coaches' awareness and knowledge helping them to seek for relevant knowledge actively, it is also most helpful for the professionals who aim to effectively work with coaches by providing information tailored to their needs.

Regarding providing psychological skills to coaches, Gould et al. (1999) suggested that coaches need to meet with information in a user-friendly way including concrete examples. Camire et al.'s (2014) study aimed to realize this purpose by researchers directly integrating to coaches' environment as a consultant throughout a

season in a team youth sport environment. The study showed how football coaches integrated and used psychological skills they learned. However, the authors suggested that there is a need for more research regarding how coaches from different coaching settings can effectively develop knowledge of psychological skills and use. Knowledge gap issue needs to be addressed by the characteristics of each coaching culture. For example, Kilic & Ince (2015) and Reade et al. (2008a, b) found that coaches are less likely to use scientific publications in obtaining the information they need. Also, coaches neither have time for discerning eligible information nor the necessary academic language and foreign language (e.g., Kilic & Ince, 2015; Reade et al., 2008b; He et al., 2018) abilities to comprehend them. The present study bridges the knowledge gap by enabling coaches to reach eligible and relevant scientific information, which in turn increased their ability to define their professional needs and adequately communicate these needs with the sport psychologist in an artistic gymnastics context. The findings of this study illustrate that this process increased the coaches' learning psychological skills and the likelihood of integrating these skills in their coaching practice. It also helped a professional sport psychologist to work more effectively with coaches thanks to the coaches' increased ability to define their immediate needs and ability to communicate them with a conceptual understanding, and openness to collaboration and learning. The coaches started to be 'self-directed learners,' which was the ultimate aim of the LCP as suggested in the related literature (Gilbert & Trudel, 2005).

5.2.2.2.3. Reflection and Change

From the beginning of the LCP, the coaches started to reflect on and reveal their opinions and knowledge about coaching practices and experiences throughout the meetings. Each coach in the group shared their experiences, opinions, and beliefs of a topic by reflecting on them using scientific information provided, and therefore gained the benefits of their reflection by increasing their consciousness and evaluating their practices according to the scientific recommendations. Coaches recognized that their practices were limited to the physical aspect of development and they gained a wider perspective of gymnasts' development by reflecting on their coaching practices. The coaches noticed their poor practices as well as the one that they have been doing right. Some of the coaches, especially comparably more experienced ones, regarded the LCP

experience as a reminder of ideal coaching, which they have forgotten by being assimilated in the current dominant coaching culture.

The coaches reportedly changed their coaching practices during the LCP meetings according to what they have learned. Specifically, the findings indicate that coaches started to use the discussed strategies that aim to facilitate gymnasts' autonomy and responsibility, strengthen their interaction with gymnasts, and set shared goals.

Reportedly, the coaches started to hold gymnasts accountable for their behaviors and make them think about the consequences of their acts while stopping doing emotional abuse by trying to make them feel responsible and sorry for their parents when they misbehave. The coaches started to provide more autonomy to their gymnasts by giving them choices and freedom during training while giving them specific responsibilities. They also started to use questioning to trigger gymnasts' thinking and to learn more about their needs and interests. It appears that the coaches started to apply a more athlete-centered coaching approach during the program. While claiming changes in their practices, the coaches were aware that the impact of their change they had made in their practices would be recognized in the long run.

This present study is aligned with what previous work suggested in creating an effective reflective environment for coaches. The study findings clearly illustrate that the coaches 'retrospectively' reflected on their actions throughout the meetings (Gilbert & Trudel, 2001). Additionally, they reflected on what they have witnessed in their setting. They compared and contrasted the information they obtained with their practices and experiences. As Gilbert and Trudel (2001) suggested, the environment created generated more communication and collaboration between coaches. The study met the need for creating a learning environment that nurtures the reflective process in community-based meetings and the freedom of thought for them to better generate new coaching strategies (Gilbert & Trudel, 2001). The freedom of thought was at the center of the group meetings. By openly reflecting on their coaching practices and experiences the coaches found an opportunity to learn from both experiential knowledge that the group produced and the relevant scientific information compiled for them. As suggested in the literature (Gilbert & Trudel, 2005), the issues discussed were the coaches' current and recent issues with the help of a structured needs analysis, and that in turn, triggered coaches' reflection. The coaches were highly motivated and focused on their contextual

issues. Discussing real issues experienced have greater importance since individuals focus more on the information that is personal and immediate to them (Schön, 1983).

Developing coaches' reflective skills is not to do with coaching experience (Cushion & Nelson, 2012) and it necessitates a programmatic effort, time, and commitment (Gilbert & Trudel, 2006). The study provided a well-structured environment in which coaches developed their reflective skills. With the significant contributions of the facilitator, the group stayed focused on what to specifically reflect on. Research highlighted the importance of the presence of a professional facilitator for providing a sustainable learning community environment (Culver & Trudel, 2006, 2008; Werthner & Trudel, 2006). The facilitator provided a rich discussion environment that involved contextual examples as well as helping coaches to provide contextual examples that coaches can deeply and critically reflect them on (Cushion et al., 2010). As suggested by Cushion et al. (2010) the group started to superficially reflect on the issues while in time and with a systematic effort of the facilitator, the coaches went into deep reflection situations in which they openly discussed their opinions, changing attitudes and realizations.

The findings of the present study support the previous small-scale intervention research on coaches' changing attitudes and practices in terms of an athlete-centered approach (e.g., Cassidy et al., 2006; Garner & Hill, 2017; Smith et al., 2007; Smoll et al., 2007; Falcao et al., 2012; Falcao et al., 2017). For example, the studies showed that coaches raised their awareness of athletes' needs (Cassidy et al., 2006; Garner & Hill, 2017). They also illustrated a reported improvement in athletes' developmental outcomes (i.e., the 4 Cs) just as the present study reports (Garner & Hill, 2017; Bertram et al., 2017; Falcao et al., 2017).

5.2.3. Research Question 3: What are the long-term effects of the LCP on the coaches' practices and their athletes' sport outcomes?

As the researcher was the participant observer (a coach) in the setting the coaches work, the coaches have been observed after they completed the LCP program for approximately two years and field notes regarding their coaching practices have been taken. After two years of regular participation in the setting, the two of the coaches asked to discuss the effects of the LCP participation on their practices and gymnasts' development. The coaches mainly discussed how they changed their perspectives

towards youth gymnasts' development and how they shaped their practices accordingly. One of the coaches reflected on his experience about changing a gymnast's troubled career into a successful one with benefiting from the knowledge he obtained during the LCP program. This experience is discussed under the title of "the transformation of a gymnast's career."

5.2.3.1. Changed Views

The LCP participation helped the coaches to have a broader view towards coaching, which enabled them to recognize their questionable practices in their setting. They appeared to adopt an ecological point of view towards gymnasts' development. They became sensitive to influential ecological factors on gymnasts' sport development such as parent involvement and school support. Instead of judging gymnasts' poor performance, the coaches started to be more understanding and aware of the significant effect of other ecological factors.

As a coach educator in the field, C1 highlighted the overemphasis on the physical aspect of development while observing many misconducts in gymnasts' psychosocial development in their setting. The coach witnessed that the hastiness in developing technical skills. The resultant unidimensional approach cause gymnasts to become dull and demotivated to learning skills and that increases the likelihood of being antisocial persons who consequently build unhealthy relationships with their coaches and peers. As a result, the risk of dropping out of the sport increases. He argued that there is an urgent need for improvements especially in gymnasts' character and connection outcomes (i.e., coach-gymnast relationship).

5.2.3.2. Strategies Adopted After the LCP Participation

Participation of the LCP has led the coaches to use some strategies in their future coaching career that facilitated gymnasts' development in gymnastics. These strategies were becoming a reflective coach, facilitating connection and character development, creating a meaningful and tolerant learning environment in teaching skills, encouraging gymnast autonomy, considering gymnasts' personal needs, and facilitating positive parent involvement. The regarding the strategies are discussed below, respectively.

The coaches appeared to develop reflective skills by evaluating their previous coaching experiences and taking lessons from them. Especially, C1 appeared to become

233

a reflective practitioner who continuously evaluates his coaching practices. The coach has been evaluating his coaching in two ways. Firstly, he reflects on his previous practices and assesses his coaching according to the 4 Cs framework. Secondly, he has been reflecting on his coaching while coaching, and make sure he behaves in keeping with the holistic approach to coaching, which he has gained by participating in the LCP.

The coaches emphasized the importance of facilitating gymnasts' developmental outcomes of connection and character and mentioned about their strategies to improve them. C6 has been encouraging gymnasts' prosocial behaviors by promoting the display of prosocial behaviors during training such as congratulating each other's performances and shaking hands. Additionally, he has been organizing social events to strengthen peer relationship among gymnasts primarily. C1 focuses on strengthening the coach-athlete relationship. He argued that building trust with gymnasts also affects gymnasts' confidence positively especially during competitions since young gymnasts need extra care because of the individual nature of gymnastics.

It appears that in teaching skills better, the coaches started to use athlete-centered strategies. Firstly, they started to develop a meaningful learning environment by asking the reasons for learning skills and providing instructive information and feedback to gymnasts when needed. Additionally, C1 has been giving gymnasts the role of a coach in explaining skills, which he believed strengthening gymnasts' learning of skill while increasing their self-confidence. When creating such a learning environment, the gymnasts started to ask the reasons for learning skills and doing things in certain ways as well as trying new ways of learning themselves.

The coaches also started to be tolerant of teaching skills. C6 started to instruct gymnasts to regard making mistakes as natural and constructive for learning skills instead of being afraid of it. The coaches argued that coaches hastiness and intolerance in the process of skill learning damage gymnasts' appropriate skill learning in the setting. C1 became a tolerant and patient coach and started to use mental training techniques he learned to facilitate gymnasts' skill learning. The coaches added that they started to use visual feedback coupled with a positive language when correcting mistakes. As they discussed with the sport psychologist about the positive language during the LCP, they started to instruct their gymnasts focusing on what is expected rather than emphasizing what is not supposed to do.

The coaches were rather controlling and commanding towards their gymnasts but started to change their views and practices after their LCP participation into a more athlete-centered perspective. While gymnasts used to do as the coaches commanded and could not communicate with them regarding their learning, they started to be actively involved in decision-making processes in training, which the coaches believed developed gymnasts' responsibility in learning. As C1 admitted, the coaches have mistaken discipline for controlling and commanding and did not allow for any autonomous gymnast behavior during training. That resulted in decreased motivation and passivity in gymnasts. Coupled with his anger and intolerance, arguably, the controlling approach prevented gymnasts from communicating with the coach about their needs, which led to secretion of their injuries from the coach. However, when he started to encourage autonomous behaviors and include gymnasts in the decision-making processes during training, gymnasts started to build ownership of their learning and increased their creative thinking, which consequently enhanced their skill progression. The coaches believed that giving gymnasts autonomy and responsibilities also increased their ownership of learning and self-confidence.

The coaches regarded 'parents' as one of the most influential factors for artistic gymnastics context. The coaches recognized parents' over-involvement in training, criticism towards their children, and pressurizing behaviors and manners towards their children. They argued that this situation creates critical negative outcomes for gymnasts. To facilitate parent involvement, they started to suggest parents be more positive, supportive and understanding of their children's sport development. More importantly, the coaches realized that parents were comparing their children with their peers regarding performance outcomes. Recognizing that this approach produces an ego-oriented antisocial environment, the coaches started to personally contact with parents and asking them to stop comparing their children with their peers while suggesting them to instill their children the value of hard work.

5.2.3.3. The Transformation of a Gymnast's Career

From the C1's statements regarding changing a gymnast's problematic path of development in sport into a flourishing one, it is apparent that the coach could conceptually (i.e., the 4 Cs perspective) pin down the underlying problems of his poor performance. He detected that at the primary sources of the problem were the poor

coach-athlete relationship, a dominance of coach-centered approach, psychologically abusive coaching behaviors, and a poor skill development approach that apparently led to decrease in the gymnast's self-confidence, connection and character development. The field notes supported the coach's statements that gymnast was arguably on the brink of dropping out while C1 was intervening the process.

With the adoption of an athlete-centered and a humanistic approach and the use of specific strategies that he allegedly learned from his participation in the LCP, C1 managed to significantly improve the gymnast's skill development as well as facilitating his personal development. The coaches focused on the gymnast's needs and built a two-way communication environment during the training. The coach was understanding and instructive towards the gymnast during the skill learning and progression processes, which helped improve the gymnast's self-confidence and internal motivation. He engaged the gymnast in the learning process by solving his skill learning problems together by mutually discussing the reasons for his poor performance. The coach started to teach the skills without judgment or negative comments but providing constructive feedback. In the end, the gymnast was able to communicate with the coach and could perform the skills he used to have difficulty in performing and that helped the gymnast to obtain a second ranking in his category in the national competition. More importantly, the gymnast decided to continue participating artistic gymnastics.

In line with the study findings regarding the third research question, recent studies reported increase in coaches' awareness towards athletes' needs and preferences (Cassidy et al., 2006) increased reflective skills (Knowles et al., 2001; 2006), improved knowledge (Trudel et al., 2000; Garner & Hill, 2017), gaining an athlete-centered approach (Garner & Hill, 2017; Falcao et al., 2017), and ability to promote communication and cohesion (Falcao et al., 2012; 2017). Some of the studies also stated coaches' reported evidence of change in athletes' developmental outcomes (Garner & Hill, 2017; Falcao et al., 2012; 2017; Bertram, Culver, & Gilbert, 2017). This study also specifically provided evidence that the coaches' increased their awareness of the ecological factors (e.g., parent influence) and started to develop strategies to optimize their effects.

In addition to providing a reported change of the coaches during the LCP program, the present study also goes beyond by evaluating the long-term (e.g., two years) impact of learning community intervention effort. There is a need for studies that

show the long-term effect of informal professional development programs for coaches (Trudel et al., 2010). Keeping in close contact with all of the participant coaches in their setting for the two years as a participant observer (i.e., a coach) provided rich information about the 'real' effects of the LCP on the coaches in the field. During that period, the researcher (as a coach in the field) only unobtrusively stayed approachable to the coaches and observed their coaching practices with their agreement as a part of the study (Marshall & Rossman, 2014). This 'intense and nearly continuous interaction' (Shimahara, 2005) with the coaches revealed that three of the coaches have dramatically changed their coaching approach after participating the LCP; however, only two of them willingly approached to the researcher and reported the changes they had undergone during that period. Participant observation usually involves interviews to complement the data obtained through observation (Spradley, 1979). The interviews strengthened the validity of the researcher's field observations regarding the coaches' abovementioned improvements in their setting. What was also exceptional was that witnessing one of the coach's ability to conceptually determine the needs of the coaches and gymnasts, coming up with the solutions based on the knowledge obtained during the LCP program with a high level of reflectiveness, and successfully implement them on a case of a struggling gymnast. This finding implied that the LCP program, even partially, fulfilled its aim of transforming coaches' into being 'self-directed' learners (Gilbert & Trudel, 2005) who have the ability and knowledge to define their professional needs with a high level of awareness and conceptual understanding, and actively find answers to these needs.

CHAPTER 6

CONCLUSIONS & RECOMMENDATIONS

The conclusions that were reached for the study were presented for relevant research questions below.

6.1. Research Question 1: How do competitive youth gymnasts from different ages and genders perceive their sport outcomes of competence, confidence, connection, and character in an artistic gymnastics setting?

Results of Study 1 firstly indicated a significant decrease in the gymnasts' confidence, connection, and character outcomes as they get older. Secondly, significant differences were found between girls' and boys' competence and character scores. Girls had higher scores both in competence and character outcomes. This study on youth athletes' outcomes provides a comprehensive evaluation of coaching effectiveness mainly from participants' perceptions using the 4 Cs framework. The study portrays what is happening in the field of youth sports about athletes' development of competence, confidence, connection, and character. The findings on age and gender indicate the areas of need for improving coaching effectiveness. Gymnasts' psychosocial development appears to be interrupted as they get matured, and there are significant gender-related differences between the youth athletes' perceptions of developmental outcomes. This present study may partially explain the decreasing trend in the youth sports participation rate in the Turkish context.

6.2. Research Question 2: How does a 6-week learning community program based on the needs arose from the gymnasts' perceived developmental outcomes affect coaches' views and knowledge towards gymnasts' 4 Cs and their learning community experience?

6.2.1. (a) How does the 6-week learning community program take place?

The results of the qualitative data analysis firstly defined the process of how the coaches raised awareness and conceptual understanding of the learning community

approach and the 4 Cs framework. Secondly, the study described the specific steps of how the coaches internalized the types of knowledge (i.e., relevant scientific and experiential knowledge) they produced and were introduced. Thirdly, the results pictured the process of how the coaches became able to conceptually identify their professional needs with an increased reflective capacity, and communicate their professional needs with an expert (i.e., a sport psychologist).

6.2.2. (b) How does a 6-week learning community program affect coaches' perceptions of the 4 Cs and the learning community program experience?
6.2.2.1. The 4 Cs

The results of the qualitative data analysis revealed that coaches 1) adopted the 4 Cs framework, 2) perceived "creativity" as a critical developmental athlete outcome, and 3) perceived the findings of the needs analysis based on the 4 Cs as applicable, and the relevant scientific information based on the needs analysis as instructive for their professional development.

The findings of the study indicated that the coaches strongly adopted the framework of the 4 Cs of athlete outcomes with an increased motivation and appreciation. The study revealed that the coaches' view of coaching effectiveness had been changed into e more holistic one, considering gymnasts' personal development (i.e., confidence, connection, and character development) as essential to optimal development in sport. The study findings indicated that the coaches recognized the 4 Cs of athlete outcomes as an integrated framework that strongly interacting each other. Therefore, the coaches started to perceive the 4 Cs as an inseparable element for optimal development in youth sport.

Additionally, coaches perceived "creativity" as a critical developmental outcome that largely influences gymnasts' competence outcome. Majority of the coaches in the group started to perceive the need for a more productive pedagogical approach in facilitating creativity development.

The coaches perceived that the findings of the needs analysis based on the 4 Cs framework were directly related to their contextual coaching problems. Additionally, the coaches perceived the scientific information provided based on the needs analysis quite instructive for their professional development.

6.2.2.2. The Learning Community Program Experience

According to the findings, the coaches viewed the LCP as effective in terms of the environment created, the way of knowledge transfer, and the way knowledge is built.

The physical structure of the LCP increased the effectiveness of the coaches' LCP experience. Also, the interactive environment created throughout the meetings provided a strong group learning. The heterogeneity of the group from the same coaching setting provided an effective group learning. Focusing on specific needs in an interactive discussion environment provided a deeper understanding of professional needs. Finally, psychologically safe environment provided high level of trust and openness among the group members, which consequently enhanced group learning and reflection.

The knowledge internalization strategy helped coaches to become active knowledge seekers. The coaches built a shared conceptual understanding of the topics of discussion. This enabled the coaches to be kept focused on the topic of discussion and contextualize the scientific information provided. The facilitator had a critical role in guiding and envisioning the group discussions throughout the program. With the use of the knowledge internalization strategy, the coaches became able to effectively communicate their contextual needs, which they had defined, with a field expert. With an increased scientific understanding and adequate content knowledge they obtained, the coaches began to define their professional needs and look for answers to these needs. The coaches were able to conceptually communicate their felt needs with the expert. The coaches recognized the importance of working with field experts and became more open to collaborate with them in the future.

The LCP program increased the coaches' reflective skills with a consistent programmatic effort. The coaches started to superficially reflect on the issues and as the program continued, they went into deeper reflections that resulted in recognitions and changes in attitudes towards their practices and the practices themselves. With an ability to deeply reflect on their experiences and comparing them with the scientific recommendations, the coaches built their relevant contextual knowledge as a group. Then, the coaches started to change their coaching practices as the LCP continued.

6.3. Research Question 3: What are the long-term effects of the LCP on the coaches' practices and their athletes' sport outcomes?

The findings of the qualitative data analysis indicated that the coaches actually adopted a holistic view towards sport coaching. They started to alter some of their coaching practices accordingly. One of the coaches' changed approach and related practices positively affected a gymnast' career. The coaches were more sensitive to gymnasts' psychosocial development in addition to the overemphasis and related misconducts in gymnasts' competence development. The coaches also increased their awareness of the ecological factors that affect optimal gymnast development and started to use strategies to make these factors more supportive for gymnasts' development.

The coaches began reflecting in and on their practices as well as that of other coaches' with a lens of the 4 Cs framework. In this way, the coaches were able to define the areas of need, and started to provide solutions to provide gymnasts optimal developmental experiences using the knowledge they obtained during the LCP. One of the coaches experience with a gymnast exemplified how the use of 4 Cs approach transformed the gymnast's career into a flourishing one.

6.4. Recommendations

In order to comprehensively understand the reasons for the decrease in the gymnasts' outcomes from an ecological perspective and provide sound solutions, there needs to conduct several lines of research. Investigating the dynamic elements of personal engagement, quality relationships, and appropriate settings in the contexts will be informative.

Firstly, the extent that coaching practices are in keeping with their athletes' developmental needs required to be understood. Specifically, the sport contexts need to be examined in terms of their practices of deliberate play, deliberate practice, early specialization, and early diversification taking the contextual differences pointed out in the DMSP. Secondly, youth athletes' relationship with coaches and other significant people is critical. Recent studies focused on the relationship between coaches' behaviors and athletes' developmental outcomes (e.g., Allan & Côté, 2016; Erickson & Côté, 2016). Using Transformational Coaching Framework (Bass & Riggio, 2006) will also be useful to understand coach-athlete relationships in youth sports (Turnnidge, Evans, Vierimaa, Allan, & Côté, 2016). Athletes' relationship with parents and peers also

largely influence their sport participation (Côté, 1999; Scanlan & Lewthwaite, 1988). Nelson-Ferguson et al. (2016) stated that the suitable ways for parental support (Côté & Hay, 2002), parental involvement (Fredricks & Eccles, 2004), and parenting styles (Holt, Tamminen, Black, Mandigo, & Fox, 2009) were presented in the literature. Thirdly, youth sport programs have been suggested to be evaluated in terms of program structure and delivery of activities. The eight setting features framework (Eccles & Gootman, 2002) helps understand the extent of the effectiveness of sport programs in facilitating an optimal developmental environment. The eight setting features framework has been increasingly utilized in evaluating youth sport environments (Strachan et al., 2011; Bean, Harlow, Mosher, Fraser-Thomas, & Forneris, 2018).

From the program design point of view, it appears that formal coach education opportunities in Turkey fall short in meeting coaches with the information they need (Kilic & Ince, 2015). The findings of Study 1 also indicate an urgent need of developing complementary informal coach education programs regarding improving coaches' awareness and knowledge of ensuring youth athletes' holistic development. There needs to create slightly structured complementary informal learning opportunities for coaches in which they could meet knowledge that is contextual and is directly focused on athletes' developmental needs (Gilbert, Gallimore, & Trudel, 2009). Additionally, creation of such programs has to be based on measurable outcomes to be regarded as effective (Trudel, Gilbert, & Werthner, 2010). This present study sets an inspiring example of how to develop an effective informal coach education opportunity in this regard. Future informal coach education opportunities, especially in different coaching cultures, are strongly suggested to be built upon the proven strategies developed in the present study in order for them to be driven by coaches' and youth athletes' developmental needs in different coaching contexts.

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245

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APPENDICES

A. MEASUREMENT TOOLKIT FOR THE 4 Cs

Sporda Yetkinlik Envanteri

Spor yetkinliği, kişinin **spordaki belirli bir görevi başarılı bir şekilde gerçekleştirme yeteneğidir**. Bu ankette hem kendinizin hem de takım arkadaşlarınızın spor yetkinliklerini derecelendireceksiniz.

Lütfen her bir soruyu cevaplarken bildiğiniz diğer tüm cimnastikçilere göre kendinizi ne kadar becerili veya yetkin olarak algıladığınızı göz önünde bulundurunuz. Lütfen soruları içtenlikle cevaplayınız. Her bir soruda, **belirtilen özel alanları dikkate alarak** derecelendirme yapınız.

Size en uygun olan düzeyi **işaretleyiniz**. "5" sizin yaş grubunuzdaki en yetkin sporcuyu temsil ederken, "1" sizin yaş grubunuzdaki en az yetkin sporcuyu temsil etmektedir.
Kendinizi derecelendirdiğiniz bölüme ulaştığınızda mevcut kutucuğu işaretleyiniz.
Cevaplarınız tamamen gizli tutulacaktır.

Bu bölümde kendinizi değerlendireceksiniz.

Lütfen aşağıdaki alanlarda bu kişinin spor yetkinliğini derecelendiriniz.					
Teknik beceriler (örneğin amut, denge aletinde sıçrama, yer aletinde überşlak atlayışı vb.)	Hiç Yetkin Değil	Biraz Yetkin	Ortalama Yetkin	Çok Yetkin	Son Derece Yetkin
	1	2	3	4	5
Taktik beceriler (örneğin Karar verme, oyunu okuma, strateji geliştirme vb .)	Hiç Yetkin Değil	Biraz Yetkin	Ortalama Yetkin	Çok Yetkin	Son Derece Yetkin
	1	2	3	4	5
Fiziksel beceriler (örneğin Kuvvet, hız, çabukluk, dayanıklılık vb.)	Hiç Yetkin Değil	Biraz Yetkin	Ortalama Yetkin	Çok Yetkin	Son Derece Yetkin
	1	2	3	4	5

Not: Yukarıdaki üç maddenin ek kopyaları takımdaki her sporcu için tekrar edilir.

1

Sporda Yetkinlik Envanteri (Takım Arkadaşı Değerlendirme)

Bu bölümde .... adlı kişiyi değerlendireceksiniz.
Eğer kendinizi değerlendiriyorsanız yandaki kutucuğu işaretleyiniz.

Lütfen aşağıdaki alanlarda bu kişinin spor yetkinliğini derecelendiriniz.					
Teknik beceriler (örneğin amut, denge aletinde sıçrama, yer aletinde überşlak atlayışı vb.)	Hiç Yetkin Değil	Biraz Yetkin	Ortalama Yetkin	Çok Yetkin	Son Derece Yetkin
	1	2	3	4	5
Taktik beceriler (örneğin Karar verme, oyunu okuma, strateji geliştirme vb .)	Hiç Yetkin Değil	Biraz Yetkin	Ortalama Yetkin	Çok Yetkin	Son Derece Yetkin
	1	2	3	4	5
Fiziksel beceriler (örneğin Kuvvet, hız, çabukluk, dayanıklılık vb.)	Hiç Yetkin Değil	Biraz Yetkin	Ortalama Yetkin	Çok Yetkin	Son Derece Yetkin
	1	2	3	4	5

Not: Yukarıdaki üç maddenin ek kopyaları takımdaki her sporcu için tekrar edilir.

2

Sporda Yetkinlik Envanteri (Antrenör değerlendirmesi)

Spor yetkinliği, kişinin **spordaki belirli bir görevi başarılı bir şekilde gerçekleştirme yeteneğidir**. Bu ankette sporcunuzun spor yetkinliğini derecelendireceksiniz.

Lütfen her bir soruyu cevaplarken bildiğiniz diğer tüm cimnastikçilere göre sporcunuzu ne kadar becerili veya yetkin olarak algıladığınızı göz önünde bulundurunuz. Lütfen soruları içtenlikle cevaplayınız. Her bir soruda, **belirtilen özel alanları dikkate alarak** derecelendirme yapınız.

Size en uygun olan düzeyi **işaretleyiniz**. "5" sporcunuzun yaş grubundaki en yetkin sporcuyu temsil ederken, "1" sporcunuzun yaş grubundaki en az yetkin sporcuyu temsil etmektedir.
Cevaplarınız tamamen gizli tutulacaktır.

Bu bölümde ....adlı kişiyi değerlendireceksiniz.

Lütfen aşağıdaki alanlarda bu kişinin spor yetkinliğini derecelendiriniz.					
Teknik beceriler (örneğin amut, denge aletinde sıçrama, yer aletinde überşlak atlayışı vb.)	Hiç Yetkin Değil 1	Biraz Yetkin 2	Ortalama Yetkin 3	Çok Yetkin 4	Son Derece Yetkin 5
Taktik beceriler (örneğin Karar verme, oyunu okuma, strateji geliştirme vb .)	Hiç Yetkin Değil 1	Biraz Yetkin 2	Ortalama Yetkin 3	Çok Yetkin 4	Son Derece Yetkin 5
Fiziksel beceriler (örneğin Kuvvet, hız, çabukluk, dayanıklılık vb.)	Hiç Yetkin Değil 1	Biraz Yetkin 2	Ortalama Yetkin 3	Çok Yetkin 4	Son Derece Yetkin 5

Not: Yukarıdaki üç maddenin ek kopyaları takımdaki her sporcu için tekrar edilir.

3

Sporda Kendine Güven Envanteri

Aşağıda sporcuların cimnastik ile ilgili duygularını tanımlamak amacıyla kullandıkları çeşitli ifadeler bulunmaktadır. Her bir maddeyi okuyunuz ve **cimnastik yaparken** genellikle nasıl hissettiğinizi gösteren uygun numarayı işaretleyiniz.

	Hiç değil			Son derece fazla
Kendime güveniyorum.	1	2	3	4
Zorlukların üstesinden gelme konusunda kendime güveniyorum.	Hiç değil 1	2	3	Son derece fazla 4
İyi performans sergilediğimden eminim.	Hiç değil 1	2	3	Son derece fazla 4
Kendime güveniyorum çünkü hedefime ulaştığımı zihnimde canlandırıyorum.	Hiç değil 1	2	3	Son derece fazla 4
Baskıların üstesinden gelebileceğim konusunda kendime güveniyorum.	Hiç değil 1	2	3	Son derece fazla 4

4

275

Antrenör-Sporcu İlişkisi Anketi (Sporcu)

Bu anket antrenörünüzle olan ilişkinizi değerlendirmek amacıyla hazırlanmıştır. Lütfen içtenlikle cevaplandırınız. Cevaplarınız tamamen gizli tutulacaktır.

		Hiç Değil						Son Derece Fazla
1.	Antrenörüme yakınımdır.	1	2	3	4	5	6	7
2.	Antrenörüme bağlıyımdır.	1	2	3	4	5	6	7
3.	Antrenörümü severim.	1	2	3	4	5	6	7
4.	Antrenörüm ile çalışırken kendimi rahat hissederim/rahatımdır.	1	2	3	4	5	6	7
5.	Antrenörüme güvenirim.	1	2	3	4	5	6	7
6.	Spor kariyerimin şu anki antrenörümle gelecek vaadettiğini düşünüyorum.	1	2	3	4	5	6	7
7.	Antrenmanda antrenörümün çabalarını boşa çıkarmamaya çalışırım.	1	2	3	4	5	6	7
8.	Antrenörüme saygı duyarım.	1	2	3	4	5	6	7
9.	Antrenörümün performansımı artırmak için gösterdiği fedakarlığı takdir ederim.	1	2	3	4	5	6	7
10.	Antrenörüm ile çalışırken elimden gelenin en iyisini yapmaya hazırımdır.	1	2	3	4	5	6	7
11.	Antrenörümle çalışırken ona karşı samimi ve içten bir tutum benimserim.	1	2	3	4	5	6	7

5

276

Antrenör-Sporcu İlişkisi Anketi (Antrenör)

Bu anket sporcunuzla olan ilişkinizi değerlendirmek amacıyla hazırlanmıştır. Lütfen içtenlikle cevaplandırınız. Cevaplarınız tamamen gizli tutulacaktır.

1.	Sporcuma yakınımdır.	Hiç Değil 1	2	3	4	5	6	Son Derece Fazla 7
2.	Sporcuma bağlıyımdır.	Hiç Değil 1	2	3	4	5	6	Son Derece Fazla 7
3.	Sporcumu severim.	Hiç Değil 1	2	3	4	5	6	Son Derece Fazla 7
4.	Sporcum ile çalışırken kendimi rahat hissederim/rahatımdır.	Hiç Değil 1	2	3	4	5	6	Son Derece Fazla 7
5.	Sporcuma güvenirim.	Hiç Değil 1	2	3	4	5	6	Son Derece Fazla 7
6.	Antrenörlük kariyerimin şu anki sporcumla gelecek vaadettiğini düşünüyorum.	Hiç Değil 1	2	3	4	5	6	Son Derece Fazla 7
7.	Antrenmanda sporcumun çabalarını boşa çıkarmamaya çalışırım.	Hiç Değil 1	2	3	4	5	6	Son Derece Fazla 7
8.	Sporcuma saygı duyarım.	Hiç Değil 1	2	3	4	5	6	Son Derece Fazla 7
9.	Sporcumun performansını artırmak için gösterdiği fedakarlığı takdir ederim.	Hiç Değil 1	2	3	4	5	6	Son Derece Fazla 7
10.	Sporcum ile çalışırken elimden gelenin en iyisini yapmaya hazırımdır.	Hiç Değil 1	2	3	4	5	6	Son Derece Fazla 7
11.	Sporcum ile çalışırken ona karşı samimi ve içten bir tutum benimserim.	Hiç Değil 1	2	3	4	5	6	Son Derece Fazla 7

6

Sporcu Davranışı Ölçeği

Aşağıda cimnastik antrenmanlarında/müsabakalarında gerçekleşebilecek davranışların listesi yer almaktadır. Lütfen sporunuzu yaparken edindiğiniz tecrübeleriniz hakkında düşününüz ve bu sezon bu davranışları **ne sıklıkta** yaptığınızı uygun rakamı işaretleyerek belirtiniz.

Lütfen içtenlikle cevaplandırınız.

	Bu sezon ben...	Asla	Nadiren	Bazen	Sıklıkla	Çok sık
1.	Takım arkadaşıma düzeltme verdim.	1	2	3	4	5
2.	Rakibimi olumsuz eleştirdim.	1	2	3	4	5
3.	Takım arkadaşımla tartıştım.	1	2	3	4	5
4.	Rakibime yardım ettim.	1	2	3	4	5
5.	Rakibime kasten faul yaptım.	1	2	3	4	5
6.	Rakibim sakatlandığında antrenmanın/müsabakanın durdurulmasını istedim.	1	2	3	4	5
7.	Takım arkadaşımı sözlü olarak taciz ettim/takım arkadaşıma kötü davrandım.	1	2	3	4	5
8.	Takım arkadaşımı cesaretlendirdim.	1	2	3	4	5
9.	Bana yapılan kötü bir faulden sonra aynı şekilde karşılık verdim.	1	2	3	4	5
10.	Sakatlanan rakibime yardım ettim.	1	2	3	4	5
11.	Takım arkadaşımı olumsuz eleştirdim	1	2	3	4	5
12.	Takım arkadaşımı olumlu eleştirdim.	1	2	3	4	5
13.	Rakibimi kızdırmaya/tahrik etmeye çalıştım.	1	2	3	4	5
14.	Takım arkadaşıma küfür ettim.	1	2	3	4	5
15.	Takım arkadaşımı iyi performans sergilediği için kutladım.	1	2	3	4	5
16.	Rakibimi sakatlamayı denedim.	1	2	3	4	5
17.	Kasıtlı olarak rakibimin dikkatini dağıttım.	1	2	3	4	5
18.	Takım arkadaşıma kötü performans sergilediği için öfkelendim.	1	2	3	4	5
19.	Kasti olarak müsabaka kurallarını ihlal ettim/çiğnedim.	1	2	3	4	5
20.	Rakibimi fiziksel olarak tehdit ettim/rakibime fiziksel olarak göz dağı verdim.	1	2	3	4	5

7

B. INTERVIEW PROTOCOL FOR COACHES

1. Öncelikle sizin bu etkileşimli öğrenme ortamına katılımınızı motive eden unsurlar üzerinde durmak istiyorum. Bu unsurlar nelerdir, bahsedebilir misiniz?

   Kendinizle veya çevresel unsurlar olabilir…

   - İlerleyen günlerde katılımınızı motive eden bu düşüncelerinizde değişiklikler oldu mu? Bunlardan bahsedebilir misiniz?

2. 6 haftalık bir etkileşimli öğrenme sürecinin sonuna geldiniz. Bu sürece katılım sağladıktan sonra sporcu gelişimine yönelik anlayışınızda veya herhangi bir başka konuda değişiklik olduğunu düşünüyor musunuz? Ne tür değişiklikler gözlemlediniz Bunlardan bahsedebilir misiniz?

3. Bu öğrenme ortamının, sizin profesyonel gelişim ihtiyaçlarınızı karşılaması konusunda neler düşünüyorsunuz?

4. Daha önce karşılaşmayı tahmin etmediğiniz, sizin için önemli bir bilgiye bu ortamda ulaştınız mı? Örnek verebilir misiniz?

5. Haftalık toplantılarda size sunulan bilgiler yanında, sahip olduğunuz bilgiyi artırmak adına toplantılar boyunca başka bir kaynaktan yararlandınız mı? Diğer antrenör deneyimleri vb.

6. Bu öğrenme ortamında elde ettiğiniz bilgiyi sahada deneyimleme veya gözleme fırsatınız oldu mu?

   - Sporcunuzu yetkinlik, özgüven, bağ, karakter ve yaratıcılık boyutlarında edindiğiniz herhangi bir bilgiyi kullanarak desteklediğiniz oldu mu? Evet ise örnek verebilir misiniz?

7. İçinde bulunduğunuz spor ortamındaki diğer antrenörler, burada öğrendiklerinize ilişkin farkındalığa/bilgiye sahip mi?

   - Burada edindiğiniz bir bilgiyi başka bir antrenörle paylaştınız mı? Evetse, neyi paylaştınız? Konuya ilişkin herhangi bir soruları oldu mu? Olduysa, size ne gibi sorular yönelttiler?

   - Diğer antrenörlerin bu etkileşimli öğrenme ortamına ilişkin düşünceleri hakkında neler düşünüyorsunuz?

8. Üzerinde tartıştığımız tüm konuları göz önünde bulundurduğunuzda, sizin için en önemli olan nokta/noktalar nelerdi?

9. Bu deneyim için oluşturulan öğrenme iklimi hakkında neler düşünüyorsunuz? (Deneyim paylaşımı, bilimsel bilgi aktarımı, etkileşim vb.)

10. Bir sonraki antrenör öğrenme grubu ortamlarının yapılandırılması konusunda önerileriniz nelerdir?

11. Bu görüşmeye başka ekleyeceğiniz bir şey var mı?

C. INTERVIEW PROTOCOL FOR FACILITATOR

1. Öncelikle bu öğrenme grubunun bir üyesi olarak verdiğiniz katkılar için teşekkür ederim. Geçtiğimiz altı haftalık seansların oluşturulan grup ile nasıl yürüdüğü hakkında kısaca bilgi verebilir misiniz?

2. Bildiğiniz üzere cimnastik ortamındaki dört sporcu çıktısı daha önce nicel olarak incelenmiştir. belirlenen ihtiyaçlar doğrultusunda grup ve hem kendi deneyimlerinin hem de bilimsel bilginin bulunduğu bir öğrenme ortamında buluşturulmuştur. Antrenörlerle yapılan odak grup görüşmesi onların bütünsel sporcu gelişimine (4Cs of athlete outcomes) ilişkin olumlu tutum geliştirdiklerini ve bu konu ile ilgili kendilerini daha bilgili olarak algıladıklarına işaret etmektedir. Siz bu öğrenme sürecini bir kolaylaştırıcı olarak nasıl değerlendiriyorsunuz?

3. Öğrenme grubu dışında antrenörler hiç size soru sordu mu? Evetse ne tür sorulardı?

4. Antrenörlerin bu altı hafta sonunda kendi eğitimsel ihtiyaçlarının farkına varmaları konusunda ne düşünüyorsunuz? Sizce tüm antrenörlerde buna ulaşıldı mı?

5. Antrenörler sahada ihtiyaç duydukları konulardan biri hakkında alan uzmanı ile ayrıca buluşturuldu. Antrenörlerin bu deneyimlerini nasıl değerlendiriyorsunuz?

6. Sizce antrenörlerin kendi eğitimsel ihtiyaçlarının farkına varması için altı haftalık bir öğrenme grubu yeterli midir? Eğer bu öğrenme grubunu devam ettirmek istesek antrenörlere ne tür bir öğrenme ortamı sağlamak istersiniz?

7. Bu tür öğrenme gruplarına katılan antrenörlerin kendi antrenörlük ortamlarındaki rolünün nasıl olmasını beklersiniz?

8. Eklemek istediğiniz başka bir konu var mı? Eğer yoksa görüşmeyi burada bitiriyorum. İşbirliğiniz ve bu görüşmeye katılımınız için teşekkür ederim.

D. INTERVIEW PROTOCOL FOR SPORTS PSYCHOLOGIST

1. Antrenörler sahada ihtiyaç duydukları konulardan biri hakkında alan uzmanı ile ayrıca buluşturuldu. Antrenörlerin bu deneyimlerini nasıl değerlendiriyorsunuz?

2. Antrenörlerin kendi eğitimsel ihtiyaçlarının farkına varmaları konusunda ne düşünüyorsunuz?

3. İhtiyaç sahibi antrenör ve bilim insanının böyle bir platformda buluşturulması sizin açınızdan nasıldı? Neler hissettiniz?

4. Antrenörlerin tutum ve algılarının size karşı nasıl olduğunu düşünüyorsunuz?

5. Antrenör sizden bu toplantı dışında yardım istedi mi?

6. Bu toplantıda sizin bulduğunuz en önemli olan nokta neydi?

7. Bu deneyim için oluşturulan öğrenme iklimi hakkında neler düşünüyorsunuz?
   -Deneyim, bilimsel bilgi aktarımı, etkileşim

8. Sonraki bilgi paylaşımı platformları sizce nasıl oluşturulmalıdır?

9. Ekleyeceğiniz başka bir konu var mı?

E. HUMAN SUBJECTS ETHICS COMMITTEE APPROVAL

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
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25 KASIM 2015

Gönderilen: Doç. Dr. Mustafa Levent İNCE

Eğitim Fakültesi

Gönderen: Prof. Dr. Canan SÜMER

İnsan Araştırmaları Komisyonu Başkanı

İlgi: Etik Onayı

Danışmanlığını yapmış olduğunuz Doktora Öğrencisi Koray KILIÇ "Yarışmacı Gençlik Cimnastikçilerinin İhtiyaçlarının İncelenmesi ve Antrenörler İçin Mesleki Öğrenme Grubu Oluşturulması" isimli araştırması İnsan Araştırmaları Komisyonu tarafından uygun görülerek gerekli onay 01.12.2015-30.12.2016 tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Canan SÜMER

Uygulamalı Etik Araştırma Merkezi

İnsan Araştırmaları Komisyonu Başkanı

F. INFORMED CONSENT FORM FOR GYMNASTS AND PARENTS

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1956

Beden Eğitimi ve Spor Bölümü

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Veli Onay Mektubu

Sayın Veliler, Sevgili Anne-Babalar,

Bu çalışmanın amacı nedir? Araştırmamızın amacı antrenörler için hazırlanacak olan bir eğitim uygulaması için antrenörlerin mesleki ihtiyaç alanlarını belirlemek için gerekli bilginin elde edilmesidir. Bu amaçla antrenörlerin aldığı eğitimin çocuğunuzun sporla ilgili eğitimine yaptığı katkı da incelenmektedir.

Çocuğunuzun katılımcı olarak ne yapmasını istiyoruz?: Çalışmanın amacını gerçekleştirebilmek için çocuklarınızın antrenman sahasında bazı anketleri doldurmasına ihtiyaç duymaktayız. Katılmasına izin verdiğiniz takdirde çocuğunuz anketi antrenman zamanında dolduracaktır. Sizden çocuğunuzun katılımcı olmasıyla ilgili izin istediğimiz gibi, çalışmaya başlamadan çocuğunuzdan da sözlü olarak katılımıyla ilgili rızası mutlaka alınacaktır.

Çocuğunuzdan alınan bilgiler ne amaçla ve nasıl kullanılacak?: Çocuğunuzun dolduracağı anketlerde cevaplarınız kesinlikle gizli tutulacak ve bu cevaplar sadece bilimsel araştırma amacıyla kullanılacaktır. Çocuğunuzun ismi ve kimlik bilgileri, hiçbir şekilde kimseyle paylaşılmayacaktır. Araştırma sonuçlarının özeti tarafımızdan okula ulaştırılacaktır. Çocuğunuzun bu çalışmaya katılımının antrenörlerin sporculara sunduğu eğitimlerin niteliğinin geliştirilmesinde önemli katkıları olacaktır.

Çocuğunuz çalışmayı yarıda kesmek isterse ne yapmalı?: Çocuğunuzun cevaplayacağı soruların onun psikolojik gelişimine olumsuz etkisi olmayacağından emin olabilirsiniz. Yine de, bu formu imzaladıktan sonra çocuğunuz katılımcılıktan ayrılma hakkına sahiptir.

Bu çalışmayla ilgili daha fazla bilgi almak isterseniz: Araştırmayla ilgili sorularınızı aşağıdaki e-posta adresini kullanarak bize yöneltebilirsiniz.

Saygılarımızla,
Koray Kılıç
Doç. Dr. Mustafa Levent İnce

Beden Eğitimi ve Spor Bölümü
Orta Doğu Teknik Üniversitesi, Ankara
e-posta: kkilic@metu.edu.tr

Lütfen bu araştırmaya katılmak konusundaki tercihinizi aşağıdaki seçeneklerden size en uygun gelenin altına imzanızı atarak belirtiniz ve bu formu çocuğunuzla spor kulübünüze geri gönderiniz.

A) Bu araştırmaya çocuğum ....'nın da katılımcı olmasına izin veriyorum. Çalışmayı istediği/m zaman yarıda kesip bırakabileceğini biliyorum ve verdiğim bilgilerin bilimsel amaçlı olarak kullanılmasını kabul ediyorum.

Baba Adı-Soyadı................................   Anne Adı-Soyadı......................................

İmza ....   İmza ....

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B) Bu çalışmaya katılmayı kabul etmiyorum ve çocuğumun ....'nın da katılımcı olmasına izin vermiyorum.

Baba Adı-Soyadı.................................   Anne Adı-Soyadı......................................

İmza ....   İmza ....

G. INFORMED CONSENT FORM FOR COACHES

ARAŞTIRMAYA GÖNÜLLÜ KATILIM FORMU

Bu çalışma ODTÜ Beden Eğitimi ve Spor Bölümü araştırma görevlilerinden Koray KILIÇ ve öğretim üyelerinden Prof. Dr. Mustafa Levent İNCE tarafından yürütülmektedir. Bu form sizi araştırma koşulları hakkında bilgilendirmek için hazırlanmıştır.

Çalışmanın Amacı Nedir?

Bu çalışmanın amacı antrenörlerin kendi mesleki ortamlarına yönelik öğrenmelerine olan olumlu etkisinin kanıtlandığı (Culver ve Trudel, 2006) bir Mesleki Öğrenme Grubu uygulamasının sizin branşınız ile ilgili tasarlanması ve uygulanmasıdır.

Bize Nasıl Yardımcı Olmanızı İsteyeceğiz?

Araştırma'da şayet Mesleki Öğrenme Grubuna katılırsanız yapılacak odak grup görüşmelerine katılmanız ve katıldığınız Mesleki Öğrenme Gruplarını video 'ya çekmemize ve ses kaydına almamıza izin vermeniz gerekecektir.

Katılımınızla ilgili bilmeniz gerekenler:

Bu çalışmaya katılmak tamamen gönüllülük esasına dayalıdır. Herhangi bir yaptırıma veya cezaya maruz kalmadan çalışmaya katılmayı reddedebilir veya çalışmayı bırakabilirsiniz. Araştırma esnasında cevap vermek istemediğiniz sorular olursa boş bırakabilirsiniz.

Araştırmaya katılanlardan toplanan veriler tamamen gizli tutulacak, veriler ve kimlik bilgileri herhangi bir şekilde eşleştirilmeyecektir. Katılımcıların isimleri bağımsız bir listede toplanacaktır. Ayrıca toplanan verilere sadece araştırmacılar ulaşabilecektir. Bu araştırmanın sonuçları bilimsel ve profesyonel yayınlarda veya eğitim amaçlı kullanılabilir, fakat katılımcıların kimliği gizli tutulacaktır.

Riskler:

Çalışmaya katılımla ilgili beklenen herhangi bir risk yoktur.

Araştırmayla ilgili daha fazla bilgi almak isterseniz:

Çalışmayla ilgili soru ve yorumlarınızı araştırmacıya kkilic@metu.edu.tr e-posta adresinden iletebilirsiniz.

Yukarıdaki bilgileri okudum ve bu çalışmaya tamamen gönüllü olarak katılıyorum.
(Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

İsim Soyad	Tarih	İmza
	15/04/2016	

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EDUCATION

Degree	Institution	Year of Graduation
MS	Middle East Technical University, Department of Physical Education and Sports	2013
BS	Ankara University, Department of Physical Education and Sports Teaching	2009

WORKING EXPERINCE

2010 – Present	Middle East Technical University, Department of Physical Education and Sports	Research Assistant

FOREIGN LANGUAGES

English (Advanced), Japanese (Elementary)

PUBLICATIONS

1. Calik, B., Kilic, K., Akar, H. (2019). Evaluation of the Current School-Parent Association Policy in Two Public Primary Schools. *Elementary Education Online,* 18(*1*), 1-19.

2. Kilic, K, Ince, M. L. (2017). Reliability of Turkish Adapted Form of Sport Competence Inventory. *Hacettepe Journal of Sport Sciences,* 28 (4), 167-175. DOI: 10.17644/sbd.323266 .

3. Kilic, K., Ince, M. L. (2017). A Validity and Reliability Study of the Self-Confidence Subscale of the Revised Competitive State Anxiety-2. *Journal of Physical Education & Sports Sciences / Ankara University SPORMETRE, 15(4), 135.*

4. Kilic, K., Ince, M. L. (2016). Examination of Comprehensibility of Positive Youth Development Scales for Sport by 8 - 14 Years Old Children and Youth. *Niğde University, Journal of Physical Education and Sport Sciences*, 10(2), 213-225.

5. Kilic, K. & Ince, M. L. (2015). Use of Sports Science Knowledge by Turkish Coaches. *International Journal of Exercise Science.* 8(*1*), 21-37. http://digitalcommons.wku.edu/ijes/vol8/iss1/4/

I. TURKISH SUMMARY / TÜRKÇE ÖZET

Giriş

Organize spora katılım çocuk ve gençlerin fiziksel, devinimsel, sosyal ve duygusal gelişimlerine katkı yapmaktadır (Côté & Fraser-Thomas, 2007). Genel olarak sporun katılımcıya katkısının kendiliğinden gerçekleşeceği inanışı hakimdir (Coakley, 2016). Bununla birlikte, çocuk ve gençlerin spora katılımdan yarar sağlamaları, spor ortamının iyi planlanması ile mümkün olmaktadır (Fraser-Thomas, Côté, & Deakin, 2005). Araştırmalar, spor aktivitelerinin çocukların ve gençlerin fiziksel performanslarını, spora katılımlarını ve kişisel gelişimlerini birlikte destekleyecek gelişim fırsatları sunabildiğini göstermektedir (örn. Côté & Hancock, 2016). Bununla birlikte birçok spor programı, katılımcının yalnızca fiziksel veya devinimsel gelişimine odaklanmaktadır.

Çocukların ve gençlerin spor deneyimleri; yetişkinler, özellikle antrenörler tarafından onların fiziksel performanslarını kısa zamanda geliştirebilmek amacıyla evriltilmektedir. Araştırmalar, birçok sporda üst düzey başarıya ulaşmak için erken özelleşmenin gerekli olmadığını vurgulasa da (Côté & Abernethy, 2012) yetişkinler tarafından yönetilen spor sistemlerinde genellikle erken seçim ve erken özelleşme ön plana çıkarılarak; sporcuların kestirme yoldan fiziksel performansı geliştirilmeye çalışılmaktadır. Erken dönemde atletik başarı hedefi, çocukların ve gençlerin çok boyutlu gelişim ihtiyaçlarının karşılanmasını engellemektedir. Bu durum, onların uzun vadeli gelişimlerine büyük ölçüde zarar vermektedir (Côté & Lidor, 2013). Örneğin, araştırmalar erken yaşta yarışmacı sporcu seçiminin, özellikle ergenlikten önceki dönemde veya ergenlik döneminde (Vaeyens ve dig., 2009) güvenilmez olduğunu belirtse de (Parcels, 2002), birçok antrenörlük kültüründe bu uygulama oldukça yaygındır. Sporcunun yalnızca kişisel gelişim boyutuna odaklanıldığında da genç sporcuların gelecekteki spora katılımlarını destekleyecek spora özgü becerilerin gelişimi olumsuz etkilenmektedir (Turnnidge, Hancock, & Côté, 2014).

Türkiye'de spor kulüplerinin sayısı son on yılda ortalama iki katına çıkmıştır (Gençlik ve Spor Bakanlığı, 2017). Bununla birlikte ülke genelinde gençlerin spora aktif katılımı, ergenlik döneminde durgunlaşmakta ve yaş ilerledikçe hızlı bir biçimde

azalmaktadır (Kin-İşler, Aşçı, Altıntaş, & Güven-Karaban, 2009). Genç sporcuların katılımını temsil eden veriler incelendiğinde, yaklaşık dört milyon kayıtlı sporcunun, ortalama altıda birinin spora aktif olarak katılmayı sürdürdüğü göze çarpmaktadır. Sporcu ve spor kulübü sayısında son on yılda önemli oranda artışın gerçekleşmiş olmasına karşın; spora aktif katılmaya devam eden ve pasif kayıtlı sporcuların oranında önemli bir değişiklik olmadığı gözlemlenmektedir. Bu sorun, genç sporcuların zaman içinde sporu bırakmakta olduğuna işaret etmektedir (Pehlivan, 2013). Çocuk ve genç sporcuların sporu bırakmaları, spora katılım süreçlerinin sistematik olarak incelenmesini gerektirmektedir. Bu konuda yapılacak bilimsel bir değerlendirme, antrenörlük uygulamalarının ne düzeyde genç sporcuların gelişim ihtiyaçlarına yönelik tasarlandığının ve geçekleştiğinin anlaşılması ile bu ihtiyaçlara yönelik çözümlerin üretilmesi için azami önem ve aciliyet taşımaktadır.

Dünyada oldukça kabul gören, genç sporcuların hem fiziksel performanslarını hem de kişisel gelişimlerini bir arada kapsayan sporcu gelişimi yaklaşımı (Sporda Pozitif Gençlik Gelişimi Yaklaşımı [SPGG]); çocuk ve gençlerin spor kazanımlarını dört ana boyutta kavramsallaştırmaktadır. Bunlar; i) yetkinlik (competence), ii) özgüven (confidence), iii) bağ (connection) ve iv) karakter (character) gelişim boyutlarıdır (Côté, Bruner, Erickson, Strachan, & Fraser-Thomas, 2010; Côté & Gilbert, 2009). Yetkinlik, spora özgü becerileri; özgüven, sporcunun içsel olarak kendine öz saygısını ve öz güvenini; bağ, sporcunun hem spor ortamında hem de spor ortamı dışındaki ortamlardaki kişilerle nitelikli ilişkiler kurmasını; karakter ise saygı, empati ve sorumluluk duygusuyla sporcunun olumlu sosyal davranışlar sergilerken antisosyal davranışlardan sakınması olarak tanımlanmıştır. Son yıllarda sporcu gelişimi alanında yapılan araştırmalar, bu dört sporcu kazanımı benimsendiğinde spora katılım, performans ve kişisel gelişim ana amaçlarının gerçekleşmesinin daha yüksek düzeyde olacağını göstermektedir (Côté, Turnnidge, and Vierimaa, 2016; Côté & Hancock, 2014). Pozitif psikoloji ilkelerinden yola çıkan bu dört ana sporcu kazanımı kavramsal çatısı, farklı spor ortamları için sporcu gelişiminde ve antrenör niteliğinin belirlenip geliştirilmesinde bir rehber niteliği taşımaktadır (Côté et al., 2010). Alanyazında oldukça kabul gören bütüncül "nitelikli antrenörlük" tanımına göre nitelikli antrenör, "profesyonel, kişilerarası ve içsel bilgisini kullanarak belirli bir spor ortamında sporcularının yetkinlik, özgüven, bağ ve karakter gelişimlerini sürekli olarak geliştiren

kişi"dir (Côté & Gilbert, 2009, p. 316). Dolayısıyla antrenörlerin mesleki ihtiyaçlarının ve dolaylı olarak spor programlarının niteliğinin belirlenmesinde sporcuların gelişim çıktılarının incelenmesi oldukça kritik bir husustur.

Vierimaa, Erickson, Côté ve Gilbert (2012) bu dört ana sporcu kazanımının (yetkinlik, özgüven, bağ ve karakter) ölçülebilmesine olanak tanıyan bir değerlendirme kavramsal çatısı ve ilgili bir ölçüm paketi önermişlerdir. Araştırmacılar, önerilen ölçüm paketinin; sporcunun hem fiziksel performansı, hem de psikososyal bağlam(ın)daki spor kazanımlarını ölçerek antrenör niteliğinin ve antrenörlerin mesleki ihtiyaçlarının saptanmasına olanak tanıdığını belirtmişlerdir. Ayrıca, araştırmacılara göre bu kavramsal çatı dolaylı olarak spor programlarının niteliği ile ilgili bilimsel kanıta dayalı bilgi üretmektedir (Erickson & Côté, 2016; Allan & Côté, 2016; Miller & Siegel, 2017; Vierimaa, Bruner, & Côté, 2018; Herbison, Vierimaa, Côté, & Martin, 2018).

Şimdiye kadar antrenör niteliği genellikle tek boyutlu olarak incelenmiştir [örn. kazanma kaybetme kayıtları ve yıla dayalı deneyim (Mallett & Côté, 2006; Côté & Gilbert, 2009)]. Genç sporcuların fiziksel, devinimsel ve psikososyal açıdan gelişimini merkeze alarak antrenörlerin niteliğini bütüncül olarak değerlendiren çalışmaların sayısı oldukça sınırlıdır (Côté & Gilbert, 2009). Spora katılımın sporcuların ergenlik dönemindeki hızlı düşüşü göz önüne alındığında, antrenörlerin mesleki ihtiyaçlarının belirlenmesi bağlamında sporcuların gelişimsel spor kazanımlarının (yetkinlik, özgüven, bağ ve karakter) incelenmesinin oldukça önemli olduğu anlaşılmaktadır.

Nitelikli antrenörlük tanımı, antrenörlüğün oldukça karmaşık bir yapıya sahip olduğunu; ayrıca antrenörlerin sürekli olarak nitelikli bilgi kaynaklarından beslenmesinin gerekliliğini vurgulamaktadır. Antrenörler, mesleki gelişim ihtiyaçlarını genellikle formal ve informal öğrenme yollarıyla karşılamaktadır (Mallett, Trudel, Lyle, & Rynne, 2009). Araştırmalara göre antrenörler formal mesleki gelişim ortamlarını değerli bulmakta ve kendi öğrenmelerine bir dereceye kadar katkısının olduğunu takdir etmektedirler (Kılıç & İnce, 2015). Bununla birlikte antrenörlerin öğrenme yollarını inceleyen birçok araştırma, hem katılımcı ortamda (Abraham, Collins, & Martindale, 2006; Bloom, Durand-Bush, & Salmela, 1998; Gilbert, Côté, & Mallett, 2006; Gould, Giannini, Kılıç & İnce, 2015; Krane, & Hodge, 1990; Reade, Rodgers, & Hall, 2008) hem de yarışmacı ortamda (Erickson, Bruner, MacDonald, & Côté, 2008; Gilbert, Côté,

& Mallett, 2006; Gilbert & Trudel, 2001; Kılıç & İnce, 2015; Lemyre, Trudel & Durand-Bush,2007) yer alan antrenörlerin çoğunlukla pratik ve doğrudan ortam ihtiyacına yönelik olan informal öğrenme olanaklarına daha fazla değer verdiklerine ve informal öğrenme ortamlarından çok daha fazla mesleki fayda elde edebildiklerine işaret etmektedir.

Araştırmalar, günümüzdeki formal mesleki gelişim ortamlarının antrenörlük mesleği ile ilgili temel bilgileri sunduğunu fakat antrenörlerin ortamsal ihtiyaçlarının karşılanmasında hem içerik, hem de içeriği aktarma yöntemi bakımından oldukça yetersiz kaldığının altını çizmektedir. Örneğin, formal antrenörlük eğitim programlarında antrenörlere genellikle çok kısıtlı bir zaman dilimi içerisinde, onların doğrudan ihtiyaçlarına yönelik olmayan yoğun ve genel bilimsel içerik sunulmaktadır (Lemyre, Trudel, & Durand-Bush, 2007). Bu programlarda genellikle aktarılan bilgilerin antrenörler tarafından mükemmel olarak anlaşıldığı ve bu bilgileri kendi antrenörlük ortamlarına aktarabildikleri varsayılmaktadır (Gilbert & Trudel, 1999). Ayrıca söz konusu mesleki gelişim ortamları, genellikle işbirliğine ve bilginin içselleştirilmesine olanak tanımayan ortamlardır. Dolayısıyla, antrenörler formal eğitim yoluyla kısa süreli olarak hatırlayacakları genel bilgileri edinseler de nitelikli antrenörlerde gözlemlenebilecek olan kendi ortamlarına özgü karmaşık problemleri çözebilme yetisini elde edememektedirler (Trudel & Gilbert, 2006). Bu bağlamda, antrenörlük niteliğinin ayırt edici bir diğer özelliği de antrenörün ihtiyacı olan bilgiye ulaşarak karmaşık problemleri etkili bir biçimde çözebilme yeterliğidir (Côté & Gilbert, 2009).

İnformal öğrenme ortamları her ne kadar antrenörlerin mesleki gelişimi için daha faydalı olabilse de bu ortamlardaki bilgi edinimi sistematik olarak planlanmadığında, rastgele olma ve ciddi problemleri içerme ihtimali çok daha yüksektir (Mallett ve ark., 2009). Oldukça yaygın olarak sahada kullanılan ve paylaşılan deneyime dayalı rastgele bilgi edinimi, antrenörlerin dünyada sürekli bir devinim içinde olan yeni antrenörlük uygulamalarından ve spor bilimlerindeki güncel gelişmelerden haberdar olmalarını engelleyebilmektedir. Ayrıca bu durum sahadaki yanlış antrenörlük uygulamalarının da benimsenip birer antrenörlük kültürü haline gelmesine ve dolayısıyla yanlış uygulamaların tekrar edilmesine neden olabilmektedir (Cushion, Armour, & Jones, 2003; Cushion, Nelson, Armour, & Lyle, 2010). Nitelikli antrenör

olabilmek için antrenörlerin hem deneyime dayalı doğru bilgiye hem de bilimsel bilgiye sistematik olarak ulaşarak kendi ortamlarının ihtiyaçlarına cevap verecek bilgiyi üretmeleri ve bu bilgiyi ihtiyaçlarına yönelik kullanmaları gereklidir. Fakat yakın zamandaki araştırmalar antrenörlerin anlayabileceği, içselleştirebileceği ve sonunda kendi ortamlarına transfer edebileceği nitelikli bilgiyi onlarla buluşturabilmenin uzun süredir çözülememiş bir sorun olduğuna işaret etmektedir (Kılıç & İnce, 2015; Reade ve ark., 2008; He, Trudel, & Culver, 2018). Bu çalışmalar, antrenörlerin kendi ihtiyaçları ile ilgili saha uzmanları ile doğrudan çalışmak istediklerini; ancak sahada karşılaştıkları problemleri çözebilecekleri nitelikli bilgiye ulaşmakta ve saha uzmanları ile kendi ihtiyaçlarına ilişkin iletişim kurmakta zorlandıklarını göstermektedir. Ayrıca, özellikle İngilizce'nin anadil olmadığı antrenörlük kültürlerinde, antrenörlerin kendi mesleki ihtiyaçlarına yönelik güncel spor bilimleri bilgisinden haberdar olmaları ve bu bilgiyi kendi ortamlarına transfer etmeleri çok daha az olasıdır (Kılıç & İnce, 2015; He ve ark., 2018). Bu durum, antrenörlerin bilgiyi öğrenmede var olan mevcut bilgiyi anlama ve içselleştirme problemlerine ilave bir engel teşkil etmektedir.

Son yıllarda öğretmenlik (Garet, Porter, Desimone, Birman & Yoon, 2001; Hünük, İnce & Tannehill, 2013) ve antrenörlük (Trudel & Gilbert, 2006; Gilbert, Gallimore & Trudel, 2009) alanlarında mesleki gelişim konusunda yapılan araştırmalar, öğrenmenin ve bilgiyi inşa etmenin sosyal bir aktivite olduğunu savunan "Sosyal Öğrenme Teorisi"nin (Wenger, 1998) mesleki gelişimde ne denli önemli olduğunu göstermektedir. Özellikle antrenörlük alanında günümüze kadar yapılan araştırmalar, Sosyal Öğrenme Teorisi'ne dayalı olan "Öğrenme Grubu Yaklaşımı"nın (Learning Community Approach) antrenörlerin mesleki gelişiminde daha önce sözü edilen engelleri aşmasındaki kritik rolünü göstermektedir (Gilbert ve ark., 2009).

Antrenör eğitim programlarının çıktılarında ölçülebilir anlamlı değişimlerin sağlanabilmesi için bu programların antrenörlerin ve sporcuların kazanımlarına dayalı olarak geliştirilmesi elzemdir (Trudel, Gilbert & Werthner, 2010). Dolayısıyla Öğrenme Grubu Yaklaşımı'nın mesleki ihtiyaçları odağına alan yapısı dikkate alındığında (Gilbert ve ark., 2009), antrenörlerin nitelikli antrenörlük tanımında belirlenen kazanımlar doğrultusunda kanıta dayalı olarak belirlenen mesleki ihtiyaçlarına yönelik bir öğrenme grubunun oluşturulması oldukça gereklidir. Bu sayede antrenörler, sporcu gelişimine ilişkin bütüncül bir bakış açısı kazanırken; sporcularının optimal

gelişimlerini sağlayacak olan mesleki niteliklerini de artırmış olacaklardır. Alanyazında da belirtildiği üzere birçok antrenörlük kuruluşu ve spor politikalarını yönlendiren kurum/kuruluşlar, gençlik spor ortamlarında çalışan antrenörlere yönelik formal eğitimin tamamlayıcısı olarak mesleki öğrenme gruplarının oluşturulması ihtiyacını vurgulamaktadır (Gilbert et al., 2009).

Öğrenme Grubu Yaklaşımı kullanılarak tasarlanan önceki antrenör gelişim programlarının antrenörlerin mesleki gelişimlerini sağlamada etkilikleri kanıtlanmıştır. Bunula birlikte, bu çalışmaların birçoğu doğrudan antrenörlerin kanıta dayalı bağlamsal mesleki ihtiyaçlarına yönelik tasarlanmamıştır. Ayrıca bu çalışmalarda genellikle tüm antrenörlerin dünya genelinde üretilen bilimsel bilgiye ulaşabilme ve kendi ihtiyaçlarını kavramsal olarak spor bilimi uzmanları ile paylaşabilme gibi önemli yeterliklere sahip oldukları varsayılmaktadır. Dolayısıyla kanıta dayalı, bağlamsal ve mesleki ihtiyaçlara dayalı bir öğrenme grubu programının süreçlerinin tanımlanması ve bu süreçlerin antrenörlerin niteliği ve gelecekteki uygulamaları üzerindeki etkisinin anlaşılması gereklidir. Ayrıca, uygulanan mesleki gelişim programlarının antrenörlerin uygulamalarına uzun vadeli etkileri genellikle incelenmemiştir.

Bu çalışmada, yukarıda bahsi geçen konulara cevap bulmak amacıyla yarışma amaçlı artistik cimnastik ortamı ele alınarak, birbirini takip eden üç araştırma sorusu sorulmuştur. Bu araştırma sorularının cevaplarına ulaşmak için ise birbirini takip eden iki ayrı çalışma yürütülmüştür. Birinci araştırma sorusu ilk çalışma (Çalışma 1); ikinci ve üçüncü araştırma soruları ise ikinci çalışma (Çalışma 2) kapsamında ele alınmıştır. Çalışmanın söz konusu üç araştırma sorusu aşağıda sunulmaktadır:

1) Farklı yaş grubuna ve cinsiyete sahip yarışmacı genç cimnastikçiler yetkinlik, özgüven, bağ ve karakter çıktılarını nasıl algılamaktadırlar?

2) Cimnastikçilerin algıladıkları gelişimsel kazanımlardan saptanan ihtiyaçlara dayalı oluşturulan altı haftalık bir öğrenme grubu programına katılım, antrenörlerin bütüncül sporcu kazanımları ve öğrenme grubu deneyimleri ile ilgili bakış açılarını ve bilgi düzeylerini nasıl etkilemektedir?

   a. Altı haftalık öğrenme grubu programı nasıl işlemektedir?

b. Altı haftalık öğrenme grubu antrenörlerin bütüncül sporcu kazanımları ve öğrenme grubu deneyimi ile ilgili algılarını nasıl etkilemektedir?
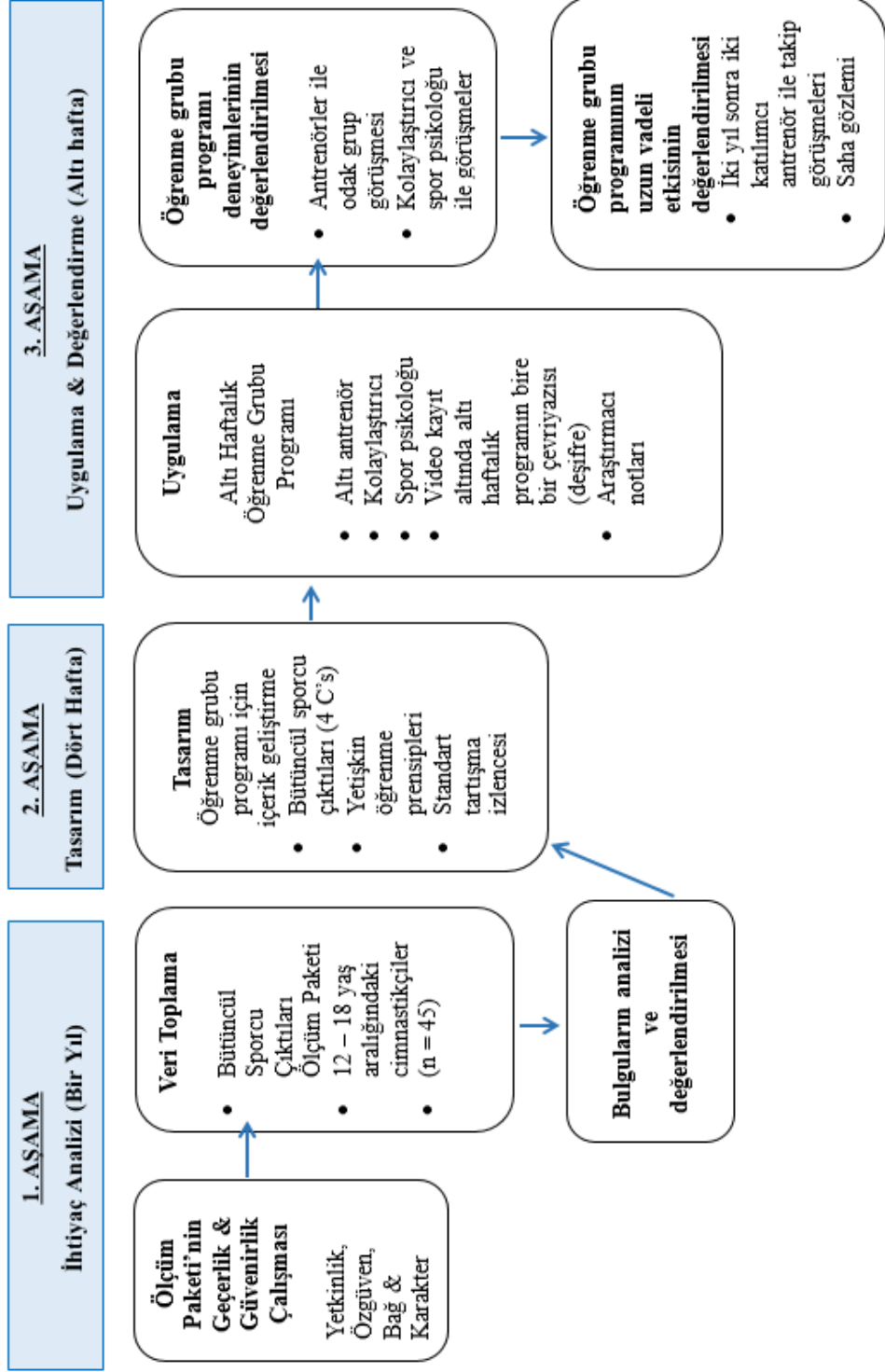
3) Uygulanan altı haftalık öğrenme grubu programının antrenörlerin uygulamaları ve sporcuların kazanımları üzerindeki uzun vadeli etkileri nelerdir?

Çalışmanın antrenörlük alanyazınına iki önemli katkısı bulunmaktadır. Çalışmanın ilk bölümü antrenörlük niteliğinin bütüncül bağlamda değerlendirilmesini sağlamaktadır. Sporcuların spor gelişimi ile ilgili bütüncül kazanımları incelenerek antrenörlerin kendi ortamları ile ilgili mesleki ihtiyaçları belirlenmiştir. Çalışmanın ikinci bölümü Çalışma 1'in bulgularına dayanmaktadır. Bu bölüm, antrenörlerin doğrudan mesleki ihtiyaçlarına dayalı etkili bir öğrenme grubu programı geliştirmenin belli başlı yollarını tarif etmiştir. Türk spor ortamında bütüncül bir bakış açısıyla antrenör niteliğinin değerlendirilmesini ve antrenörler için kanıta dayalı bir mesleki gelişim programı geliştirme sürecini tarif eden bir çalışmaya rastlanılamamıştır.

Yöntem

Araştırma sorularını yanıtlamak amacıyla çok katmanlı sıralı karma yöntem (the embedded sequential mixed method design; Creswell & Plano Clark, 2011; s. 91) kullanılmıştır.

Çalışma 1'in amacı sporcuların bütüncül spor kazanımlarını ölçmektir. Bu amaçla, çalışmanın ilk bölümünde öncelikle kullanılacak ölçek paketinde, kültürel adaptasyona ihtiyaç duyulan ölçeklerin geçerlik ve güvenirlik çalışmaları gerçekleştirilmiştir (Kılıç & İnce, 2016; 2017; 2018). Daha sonra psikometrik olarak sınanan ölçek paketi; İstanbul, Ankara, İzmir, Bolu, Mersin ve Bartın illerinden gönüllü 45 genç yarışmacı artistik cimnastikçi ve onların dokuz antrenörüne uygulanmıştır. Her bir kazanımdaki sporcu kazanım puanları cimnastikçilerin yaş ve cinsiyetlerine dayalı olarak incelenmiştir. Veriler betimleyici ve çıkarımsal istatistik yöntemleriyle analiz edilmiştir.

Şekil 1. Çalışmanın tasarımı ve veri toplama yöntemleri ile ilgili akış diyagramı

Çalışma 2'de antrenörler için sporcuların kazanımlarından ortaya çıkan ihtiyaçlara dayalı altı haftalık bir öğrenme grubu programı geliştirilmiştir. Program, altı gönüllü antrenör, bir kolaylaştırıcı ve bir davetli spor psikoloğu ile uygulanmıştır. Çalışma verileri; altı haftalık öğrenme grubu video kaydının bire bir çevriyazısı, kolaylaştırıcı ve spor psikoloğu ile yapılan yarı yapılandırılmış görüşmeler, antrenörler ile yapılan odak grup görüşmesi ve araştırmacını alan notlarından oluşmaktadır. Uygulanan öğrenme grubu programının uzun vadeli etkisini değerlendirmek amacıyla antrenörlerin çalışma ortamında, uzun süreli katılımcı gözlemi ve programın uygulanışından iki yıl sonra iki katılımcı antrenör ile yapılandırılmamış görüşmeler gerçekleştirilmiştir. Öğrenme grubu toplantıları ile ilgili veri 2015 yılının Mayıs ve Haziran ayları arasında toplanmıştır. Programın uzun vadeli etkisi ile ilgili veri ise, program bitiminden itibaren iki yıl süreyle katılımcı gözlemler ve 2017 yılının Aralık ayında iki katılımcı antrenör ile yapılandırılmamış görüşmeler yoluyla toplanmıştır. Veriler tematik analiz yöntemiyle analiz edilmiştir.

Programın ana amaçları; antrenörlerin 1) bütüncül sporcu gelişimi hakkında farkındalıklarını artırmak ve bilgilendirmek, 2) grup deneyimlerinden ve nitelikli antrenörlük tanımında belirlenmiş olan mesleki ihtiyaçlara (gelişimsel sporcu kazanımları; 4 Cs of athlete outcomes) yönelik sunulan bilimsel bilgiden faydalanmalarını sağlamak, ve 3) kendi antrenörlük uygulamalarına bütüncül antrenörlük bakış açısıyla yansıma yapma becerilerini geliştirmektir.

Programın uygulama temel yapıtaşlarını, "Yetişkin Öğrenme Prensipleri" (Adult Learning Principles; Brookfield, 1986), "Öğrenme Grubu Yaklaşımı" (A Learning Community Approach; Gilbert ve ark., 2009) ve "Mesleki Öğrenme Grubu" (Communities of Practice; Wenger, 1998) ilkeleri oluşturmaktadır. Buna paralel olarak öğrenme grubu üyeleri ortak bir ilgi alanına (mesleki gelişim) sahip olarak, bu ilgi alanına grup olarak ilgi duyacakları (sürekli katılım) ve sosyal olarak birbirleriyle etkileşim halinde olacakları (antrenörlük meselelerini tartışma ve sorular yöneltme) bir ortam tasarlanmıştır. Ayrıca bu ortam, grup üyeleri arasında bir güven ve saygı ortamı oluşturmak üzere tasarlanmıştır (etkili öğrenme gruplarının önemli özelliklerinden biri; Withcomb, Borko & Liston, 2009). Yetişkin öğrenmesinin etkili olabilmesi için Brookfield (1986) altı prensip önermektedir. Bunlar i) gönüllü katılım, ii) diğer üyelerin varlığına saygı, iii) kritik yansıma yapma, vi) işbirliği, v) dayanışma ve vi) kendi kendini

yönlendirebilen yetişkinler yetiştirmedir. Oluşturulan öğrenme grubu programında her bir prensip vazgeçilmez birer unsur olarak kabul edilmiştir.

Programın içerik kavramsal çatısını ise yetkinlik, özgüven, bağ ve karakter kazanımlarından oluşan "bütüncül sporcu kazanımları kavramsal çatısı" (the 4 Cs of athletes' developmental outcomes; Côté ve ark., 2010) oluşturmaktadır. Öğrenme grubu tartışmaları bir deneyimli kolaylaştırıcı tarafından yürütülmüştür. Her bir tartışmada farklı sporcu kazanımlarına odaklanılmıştır. Son toplantıda antrenörler program içeriği ve öğrenme grubu yaklaşımı hakkında yansıma yapmışlardır. İlk toplantıda antrenörlere programın amacı, prensipleri ve sporcu kazanımları ile bunların nitelikli antrenörlük ile ilişkisi paylaşılmıştır. Antrenörler bu süreçte, istedikleri sporcu kazanımından başlamış ve sporcu gelişiminde önemli buldukları "yaratıcılık" kazanımının tartışılmasını talep etmişlerdir. İkinci toplantıda sporcuların "karakter" kazanımı üzerinde durulmuştur. Üçüncü toplantıda sporcuların "bağ" kazanımı (antrenör – sporcu ilişkisi, sporcuların sporun içinden ve dışından diğer aktörler ile ilişkileri) tartışılmıştır. Dördüncü toplantıda öğrenme grubu, sporcuların "özgüven" ve "yaratıcılık" kazanımlarına odaklanmıştır. Beşinci toplantıda öğrenme grubu sporcuların "yetkinlik" kazanımına odaklanmış, sonrasında haftalık tartışmalar ilerledikçe ifade etmeye başladıkları mesleki ihtiyaçlarını tartışmak üzere bir spor psikoloğu ile buluşmuşlardır. Altıncı toplantıda öğrenme grubu, bu toplantıya kadar tartışılan mesleki konular üzerine yansıma yapmış ve sonrasında da öğrenme grubu deneyimini değerlendirmiştir.

Kolaylaştırıcı, öğrenme grubu tartışmalarını antrenörlerin bilgiyi derinlemesine içselleştirmelerini sağlamak üzere tasarlanmış standart bir "tartışma izlencesi"ne uygun olarak yönlendirmiştir. Tartışma izlencesinin içeriği sırasıyla 1) antrenörlerin tartışılan kazanım hakkındaki önceki bilgilerini tanımlamak, 2) tartışılan sporcu kazanımını tanımlamak ve bu kazanımın kuramsal arka planını antrenörlerin deneyimleri ve saha gözlemleri ile ilişkilendirmek suretiyle hakkındaortak bir anlayış geliştirmek, 3) antrenörlerin bakış açısından, tartışılan sporcu kazanımının gelişimini etkileyen faktörlerin ortaya çıkarılması ve kazanımın kolaylaştırılması için geliştirdikleri işe yarayan stratejileri tartışmak, 4) sporcu kazanımı ile ilgili ihtiyaç analizi sonuçlarını grup ile tartışmak ve 5) sporcu kazanımının geliştirilmesi ile ilgili güncel bilimsel bilgiyi grup ile paylaşmaktır.

Sırasıyla uygulandığında tartışma izlencesinin amaçları a) tartışılan konu hakkında farkındalık ve benimseme sağlamak, b) antrenörleri, tartışılan kavramların akademik diline aşina hale getirmek, c) farklı mesleki deneyimlere dayalı grup öğrenmesini sağlamak ve geliştirmek, d) konu ile ilişkili dünyada üretilen güncel bilimsel bilgiyi antrenörlerin kendi dillerinde rahatça anlayabilecekleri forma getirerek antrenörlerle buluşturmak, e) antrenörlerin, grup deneyimlerinden ve paylaşılan bilimsel bilgiden öğrendiklerini kullanarak kendi antrenörlük uygulamalarına yansıma yapmalarını sağlamak ve f) antrenörlerin kendi mesleki ihtiyaçlarını saptamalarını ve bu ihtiyaçları saha uzmanları (örn. spor psikoloğu) ile paylaşabilmelerini sağlayacak kavramsal repertuarı antrenörlerde oluşturmaktır.

Öğrenme grubu programının içeriği sporcu kazanımlarında ortaya çıkan antrenör ihtiyaçlarına dayalı olarak geliştirilmiştir. Çalışma 1'in bulguları antrenörlerin her bir kazanımda mesleki ihtiyaçlarının olduğuna işaret etmektedir. Bu aşamada, her bir kazanım (örn. yetkinlik) ile ilişkili nitelikli bilimsel bilgi taraması yapılmış ve antrenörlerin rahatça anlayabileceği forma getirilmiştir. Kazanımlar ile ilgili bilgi ilişkilendirilmesinde konu alanı ile ilgili alanyazın önerileri birincil olarak dikkate alınmıştır (Côté & Gilbert, 2009; Vierimaa et al., 2012; Vella & Gilbert, 2014; Côté ve ark., 2010).

Bulgular

Birinci Araştırma Sorusunun Bulguları

Farklı yaş ve cinsiyetteki yarışmacı genç cimnastikçiler artistik cimnastik ortamında yetkinlik, özgüven, bağ ve karakter spor kazanımlarını nasıl algılamaktadırlar?

Birinci araştırma sorusu, 45 artistik cimnastikçi ve sporcuların 9 antrenörünün oluşturduğu veri setinin betimleyici ve çıkarımsal istatistikleri gerçekleştirilerek cevaplandırılmıştır. Veri seti Shapiro-Wilk normallik ve Levene varyansın homojenliği testleri ile sınanmış ve varsayımlar karşılanmadığından sporcuların yaş ve cinsiyete dayalı farklılığının incelenmesinde Mann Whitney U Testi gerçekleştirilmiştir (Field, 2009).

Kazanımların betimleyici istatistiği ve katılımcıların cinsiyet ve yaşa dayalı bilgileri aşağıdaki tablolarda sunulmuştur.

Tablo 1. *Ölçüm paketindeki değişkenlerin tanımlayıcı istatistikleri*

Ölçüm araçları	Ort	SS	Min	Maks
Yetkinlik (1-5)	4.03	.40	2.91	4.69
Özgüven (1-4)	3.39	.44	2.40	4.00
Bağ (1-7)	6.10	.69	4.18	6.91
Karakter (1-5)	.71	.48	-.53	1.35

Tablo 2. *Örneklemin cinsiyet ve yaş gruplarına göre betimleyici istatistikleri*

			Yetkinlik (5 üzerinden)	Özgüven (4 üzerinden)	Bağ (7 üzerinden)	Karakter
Cinsiyet	Kız	Ort	4.19	3.43	6.15	.88
		SS	.28	.50	.76	.33
		Min	3.64	2.40	4.36	-.06
		Maks	4.69	4.00	6.91	1.35
	Erkek	Ort	3.86	3.35	6.05	.53
		SS	.45	.37	.63	.54
		Min	2.91	2.60	4.18	-.53
		Maks	4.58	4.00	6.82	1.24
Yaş grubu	1 (12-13)	Ort	4.14	3.58	6.43	.96
		SS	.28	.37	.68	.22
		Min	3.64	2.60	4.18	.53
		Maks	3.69	4.00	6.91	1.35
	2 (15-17)	Ort	3.93	3.21	5.81	.49
		SS	.48	.43	.58	.54
		Min	2.91	2.40	4.36	-.53
		Maks	4.67	4.00	6.73	1.29

Not: Karakter puanı sosyal puandan antisosyal puan çıkarılarak hesaplanmıştır.

Yaş ve Cinsiyete Dayalı Karşılaştırma

Yetkinlik algısında (antrenör, sporcu ve takım arkadaşı) yaş grubu 1 ve yaş grubu 2 arasında (Mdn = 20.40) anlamlı bir farklılık bulunmamıştır U = 189.50, z = -1.42, ns, r = -.21. Bununla birlikte kız cimnastikçilerin (Mdn = 27.50) yetkinlik puanları, erkek cimnastikçilerinkinden (Mdn = 18.30) anlamlı olarak daha fazla bulunmuştur U = 149.50, z = -2.35, p < .05, r = -.35.

Özgüven ölçeği sonuçlarına göre kız (Mdn = 24.89) ve erkek (Mdn = 21.02) cimnastikçilerin puanları arasında anlamlı farklılık bulunmamıştır U = 209.50, z = -1, ns, r = -.15. Fakat yaş grubu 1 cimnastikçiler (Mdn = 28.74) kendilerini, yaş grubu 2 cimnastikçilerden (Mdn = 17.98) anlamlı olarak daha fazla özgüvenli algılamaktadırlar.

Bağ boyutunda erkek (Mdn = 21.36) ve kız (Mdn = 24.57) cimnastikçilerin puanları arasında anlamlı fark bulunmamıştır U = 217.00, z = -.82, ns, r = -.12. Fakat yaş grubu 1 cimnastikçiler (Mdn = 29.38), yaş grubu 2 cimnastikçilerden anlamlı olarak daha fazla puana sahip olduğu bulunmuştur (Mdn = 17.42), U = 118.00, z = -3.06, p < .05, r = -.46.

Karakter boyutunda kız cimnastikçiler (Mdn = 27.20), erkek cimnastikçilerden (Mdn = 18.61) anlamlı olarak daha yüksek puana sahiptirler (Mdn = 18.61), U = 156.50, z = -2.2, p < .05, r = -.33. Ayrıca yaş grubu 1 cimnastikçiler (Mdn = 29.43) yaş grubu 2 cimnastikçilerden (Mdn = 17.38) anlamlı olarak daha yüksek puana sahiptirler U = 117.00, z = -3.07, p < .05, r = -.46.

İkinci Araştırma Sorusunun Bulguları

Cimnastikçilerin algıladıkları gelişimsel kazanımlardan saptanan ihtiyaçlara dayalı oluşturulan altı haftalık bir öğrenme grubu programına katılım antrenörlerin bütüncül sporcu kazanımları ve öğrenme grubu deneyimleri ile ilgili bakış açılarını ve bilgi düzeylerini nasıl etkilemektedir?

> a. *Altı haftalık öğrenme grubu programı nasıl işlemektedir?*
> b. *Altı haftalık öğrenme programı antrenörlerin bütüncül sporcu kazanımları ve öğrenme grubu deneyimi ile ilgili algılarını nasıl etkilemektedir?"*

İkinci araştırma sorusunun verilerini video ile kayıt altına alınmış altı haftalık öğrenme grubu toplantılarının bire bir çevriyazıları, araştırmacı notları, antrenörlerle yapılan odak grup görüşmesi ve kolaylaştırıcı ve spor psikoloğu ile yapılan yarı yapılandırılmış görüşmeler oluşturmaktadır. Veriler tematik analizi yoluyla analiz edilmiştir.

a) *Altı haftalık öğrenme grubu programı nasıl işlemektedir?*

Öğrenme grubu program tartışmalarının ana hatlarını, çoğunlukla dört ana sporcu kazanımı kavramsal çatısı oluşturmuştur. Dolayısıyla ana temalandırma başlıkları yetkinlik, özgüven, bağ ve karakter olarak adlandırılmıştır. Bulgular "yaratıcılık" temasının bu kazanımlara ek olarak tartışıldığını göstermektedir. Toplantı konularını temsil eden beş ana tema bulunmaktadır. Bunlar sırasıyla; a) ilk toplantı (sporcu gelişim çıktılarının genel olarak paylaşımı), b) karakter, c) bağ, d) özgüven ve yaratıcılık ve e) yetkinlik'tir.

İlk toplantıda programın amacı ve prensipleri, dört ana sporcu kazanımının sahadaki varlığı ve antrenörlerin mesleki bilgiye ulaşma yolları tartışılmıştır.

İkinci toplantıda antrenörler öğrenme grubunun prensipleri ve dört ana sporcu kazanımı kavramsal çatısı ile ilgili anlayış geliştirdikten sonra sporcu gelişiminde ön sıraya koydukları "karakter" kazanımı ile ilgili tartışmak istemişlerdir. Antrenörler, başarılı bir cimnastikçi olmanın ön koşulu olarak karakter gelişiminin önemini vurgulamış ve karakter gelişiminin aksamasının takım uyumunu ve antrenör – sporcu ilişkilerini oldukça olumsuz etkilediğini ileri sürmüşlerdir. Tematik analiz bulguları toplantının standartlaştırılmış tartışma izlencesine uygun olarak ilerlediğini göstermektedir. Toplantıda ortaya çıkan temalar sırasıyla; 1) antrenörlerin karakter gelişiminden ne anladığı, 2) karakter gelişimi ile ilgili ortak bir anlayış geliştirme, 3) antrenörlerin deneyim ve gözlemlerine dayanarak cimnastikçilerin karakter gelişimlerini etkileyen faktörleri tartışma, 4) cimnastikçilerin karakter gelişimini kolaylaştırmak için antrenörlerin kullandıkları stratejileri tartışma, 5) karakter gelişimi ile ilgili ihtiyaç analizi bulgularının tartışılması, ve 6) cimnastikçilerin karakter gelişimlerini destekleyecek bilimsel bilginin tartışılmasıdır.

Üçüncü toplantıda "bağ" kazanımı tartışılmıştır. Tartışılan boyutlar sırasıyla 1) antrenörlerin bağ gelişiminden ne anladıkları, 2) bağ gelişimi ile ilgili ortak anlayış geliştirme, 3) antrenörlerin deneyim ve gözlemlerine dayanarak cimnastikçilerin bağ gelişimlerini etkileyen faktörleri tartışma, 4) cimnastikçilerin bağ gelişimini kolaylaştırmak için antrenörlerin kullandıkları stratejileri tartışma, 5) bağ gelişimi ile ilgili ihtiyaç analizi bulgularının tartışılması, ve 6) cimnastikçilerin bağ gelişimlerini kolaylaştıracak ilişkili bilimsel bilginin tartışılmasıdır.

Dördüncü toplantıda "özgüven" ve "yaratıcılık" kazanımları tartışılmıştır. Özgüven boyutunda ortaya çıkan temalar 1) antrenörlerin özgüven gelişiminden ne anladıkları, 2) özgüven gelişimi ile ilgili ortak anlayış geliştirme, 3) antrenörlerin deneyim ve gözlemlerine dayanarak cimnastikçilerin özgüven gelişimini etkileyen faktörleri tartışma, 4) cimnastikçilerin özgüven gelişimini kolaylaştırmak için antrenörlerin kullandıkları stratejileri tartışma, 5) özgüven gelişimi ile ilgili ihtiyaç analizi bulgularının tartışılması, ve 6) cimnastikçilerin özgüven gelişimlerini kolaylaştıracak ilişkili bilimsel bilginin tartışılmasıdır.

Öğrenme grubu özgüven kazanımını tartıştıktan sonra kolaylaştırıcının 'yaratıcılık' kavramının ne olduğuna ve nasıl geliştirilebileceğine ilişkin bilgi paylaşımı ile yaratıcılık kazanımı tartışılmaya başlanmıştır. Bu boyutta ortaya çıkan temalar 1) antrenörlerin yaratıcılık gelişiminden ne anladıkları, 2) cimnastikçilerin yaratıcılığını kolaylaştırmak için antrenörlerin kullandıkları stratejiler, ve 3) cimnastikçilerin yaratıcılık gelişimini kolaylaştıracak ilişkili bilimsel bilginin tartışılmasıdır.

Beşinci toplantıda öğrenme grubu "yetkinlik" kazanımını tartışmıştır. Antrenörler spor yetkinliğinin teknik, taktik ve fiziksel boyutlarında uzman olduklarından kolaylaştırıcı bu kavramların tanımlarını ayrıntılı olarak ele almamış, çoğunlukla cimnastikteki yetkinlik gelişiminin teknik ve taktik boyutlarının tartışılmasını sağlamıştır. Grup tartışmasından ortaya çıkan temalar: 1) yetkinlik gelişimi ile ilgili ortak anlayış geliştirme, 2) yetkinlik gelişimi ile ilgili ihtiyaç analizi bulgularının tartışılması, ve 3) antrenörlerin deneyim ve gözlemlerine dayanarak cimnastikçilerin yetkinlik gelişimini etkileyen faktörleri tartışmadır.

Tartışmanın bu boyutunun tamamlanmasından sonra tüm kazanımlarda mesleki ihtiyaçlara ilişkin farkındalık düzeyi artmış olan antrenörler, sporcularının

performansını artırırken genellikle spor psikolojisi alanını ilgilendiren bazı yanlış uygulamalar da yaptıklarını ifade etmişlerdir. Bunun üzerine kolaylaştırıcı, antrenörlerin bu boyutta algıladıkları mesleki ihtiyaçlarını tartışması amacıyla yarışmacı gençlik sporu ortamında çalışan bir spor psikoloğunu davet etmiştir. Tematik analiz bulguları, antrenörlerin yedi konuda mesleki gelişim ihtiyacı duyduğunu ve bu konuların spor psikoloğu ile tartıştığını göstermiştir. Bunlar 1) problemli antrenör – cimnastikçi etkileşimi, 2) zihinsel antrenman, 3) cimnastikçilerin düşmesi ve psikolojik toparlanmaları, 4) cimnastikçilerin yarışma kaygısını giderme, 5) cimnastikçilerin sorumluluk ve hedef belirlemesini geliştirme, 6) yarışmaları cimnastikçiler için anlamlı hale getirme ve 7) birer eğitimci olarak antrenörler.

b) **_Altı haftalık öğrenme grubu antrenörlerin bütüncül sporcu kazanımları ve öğrenme grubu deneyimi ile ilgili algılarını nasıl etkilemektedir?_**

Altıncı toplantıda antrenörler ile gerçekleştirilen odak grup görüşmesi ve program sonrasında kolaylaştırıcı ve spor psikoloğu ile yapılan yarı yapılandırılmış görüşmeler araştırma sorusunun verisini oluşturmaktadır. Tematik analiz bulguları dört ana tema ortaya çıkarmıştır. Bunlar: 1) motive eden faktörler, 2) içerik ve oluşturulan öğrenme ortamı, 3) yansıma ve değişim, ve 4) antrenörlerin önerileridir.

Motive eden faktörler

Gruptaki bazı antrenörler başlangıçta çekingen davransa da program süresince yüksek bir motivasyon sergilemişlerdir. Antrenörlerin programa katılım motivasyonları ve hisleri antrenörlük deneyimlerine bağlı olarak farklılaşmıştır. Ayrıca, antrenörler, motivasyonlarının sürekli yüksek olmasını sağlamada kolaylaştırıcının önemli bir rolünün olduğunu belirtmişlerdir. Kolaylaştırıcının engin saha deneyimi, yarışmacı spor ortamı ile ilgili bilimsel bilgisi ve tartışmaları yönetme kabiliyetine vurgu yapan antrenörler; ayrıca kolaylaştırıcının oluşturduğu rahat, güvenli ve kapsayıcı öğrenme ikliminin onların hem olumlu, hem de olumsuz uygulamalarını açıkça paylaşabilmelerini sağlamıştır. Antrenörler bunun kendilerine derinlikli bir öğrenme olanağı sunduğunu belirtmişlerdir.

Antrenörleri motive eden bir başka unsur da kendi ihtiyaçları ile ilgili bilimsel bilginin toplantılar boyunca kendilerine sunuluş şeklidir. Antrenörler, tartışılan konuların ve sunulan bilginin kendi ihtiyaçları ile ilgili olduğunu; ayrıca gruptaki diğer antrenörlerin de deneyimlerinden öğrendiklerini fark etmişlerdir. Bu da onların toplantıların başından itibaren yüksek motivasyona sahip olmalarını sağlamıştır.

Oluşturulan öğrenme ortamı

Antrenörler, öğrenme grubu deneyimlerini daha önce katıldıkları formal öğrenme ortamları ile kıyaslamışlardır. Öncelikle antrenörler bu kıyaslamayı fiziksel ortam bağlamında yapmışlardır. Antrenörler, formal mesleki gelişim programlarının yeterli faydayı elde etmeye izin vermeyecek kadar kalabalık olmasından yakınmışlardır. Federasyonun veya diğer kuruluşların oluşturduğu ortamların karşılıklı etkileşime ve bilgi alışverişine izin vermediğinin altını çizmişlerdir. Bu ortamlarda bilginin sunumunun "ders verme" şeklinde olduğunu ve genellikle tartışma ortamının oluşturulmasına izin verilmediğini vurgulayan antrenörler; öğrenme grubu programında ihtiyaç duydukları bilgiyi derinlemesine tartışabildiklerini, dolayısıyla güçlü bir bilgi alışverişi ve bilgi güncellemesi yaşadıklarını belirtmişlerdir. Kolaylaştırıcının her toplantıda sağladığı ilişkili bilgi paylaşımı ve grubun tartışılan konu ile ilgili deneyim paylaşımları, antrenörlere hem kendi uygulamaları hakkında yansıma yapmasını sağlamış, hem de sahada yapılan uygulamaların nedeninin anlaşılmasına olanak tanımıştır. Bu ortamda özellikle görece daha az deneyimli antrenörler öğrenme grubunun deneyimlerinden oldukça faydalanma imkânı bulmuşlardır.

Antrenörler öğrenme grubu ortamını psikolojik olarak güvenli bir ortam olma bağlamında da değerlendirmişlerdir. Antrenörlere göre öğrenme grubu toplantılarında düşüncelerin ve mesleki problemlerin özgürce paylaşılabildiği elverişli bir öğrenme ortamı oluşturulmuştur. Ayrıca bu ortamın karşılıklı iletişime izin veren, peşin hükümsüz ve hiyerarşik olmayan yapısı, grup üyelerinin toplantılar boyunca birbirlerine karşı güven duymasını ve açık sözlü olmasını kolaylaştırmıştır.

Antrenörler, özellikle kolaylaştırıcının her toplantının başında tartışılacak konu ile ilgili kavramları tanıtmasının tartışılan konuyu derinlemesine anlayabilmelerini sağladığını vurgulamışlardır. Ayrıca, kolaylaştırıcının tartışılan konu ile ilgili bilimsel

bilgiyi gruptaki herkesin anlayabileceği formda sunmasının, sunulan bilgiyi kendi ortamları ile bağdaştırmada oldukça etkili olduğunu savunmuşlardır. Formal mesleki gelişim ortamlarında böyle bir içselleştirme aşamasının olmadığını; tek yönlü ve genel olarak yapılan bilgi sunumlarının konuyu öğrenmeyi imkânsızlaştırdığını belirtmişlerdir.

Paylaşılan içerik

Tematik analiz bulguları, antrenörlerin toplantı konularını belirli mesleki ihtiyaçlara odaklı olduğunu ve bunun kendi uygulamalarına yansıma yapabilmelerini sağladığını belirtmişlerdir. Ayrıca bu sayede grupta tartışılan bilimsel ve deneyime dayalı derinlikli bilgi edindiklerini belirtmişlerdir. Antrenörler öğrenme grubu toplantılarındaki içeriği "bütüncül sporcu kazanımları kavramsal çatısı" ve "psikolog ile buluşma" başlıklarında değerlendirmişlerdir.

Antrenörler, bütüncül sporcu kazanımları kavramsal çatısının (the 4 Cs of athletes' outcomes), kendi antrenörlük ortamlarındaki sporcu gelişimini doğrudan tanımladığını ifade etmişlerdir. Ayrıca "yaratıcılık" kazanımının da bir sporcu kazanımı olarak tartışılmasını istemişlerdir. Öğrenme grubu toplantıları boyunca, antrenörler her bir gelişimsel kazanım hakkında tartışılan bilgiyi kendi spor ortamları ile bağdaştırmıştır. Antrenörler, programı tamamladıklarında bilinçlerindeki antrenörlük tanımının kapsamının genişlediğini belirtmişlerdir. Başka bir deyişle, antrenörler, optimal sporcu gelişiminin yalnızca fiziksel gelişim boyutuna odaklanmakla mümkün olmadığını; bunun ayrıca sporcunun psikososyal gelişim kazanımları ile doğrudan ilişkili olduğunu kanıksamışlardır.

Antrenörler, spor psikoloğu ile buluşmalarının kendi antrenman ortamlarına özgü mesleki ihtiyaçlarını karşılamada oldukça anlamlı ve etkili olduğunu belirtmişlerdir. Antrenörler ihtiyaç duydukları konuları alan uzmanı ile tartışabilmiş, bu da onların kendi eksikliklerinin ve doğru bildikleri yanlış uygulamaların farkına varmalarını sağlamıştır. Ayrıca antrenörler, bu buluşmadan sonra ileriki kariyerlerinde saha uzmanları ile doğrudan iletişime girmede hevesli olduklarını belirtmişlerdir. Antrenörler, yarışmacı spor ortamında ihtiyaç halinde diğer profesyonellerle çalışmanın önemini ve gerekliliğini kanıksadıklarını belirtmişlerdir.

Yansıma ve değişim

Antrenörler sporcu gelişimi ile ilgili hemen hemen her konuda fikir birliğinde olduklarını ve birçok konuda kendi mesleki ihtiyaçlarına ve ilgilerine ilişkin bilgiyi öğrendiklerini belirtmişlerdir. Özellikle antrenörler, grup öğrenmelerinden kendi antrenörlüklerine yansıma yaparak, bütüncül antrenörlük kavramı hakkında ve kendi geçmiş antrenörlük uygulamaları hakkında yüksek farkındalık geliştirmişlerdir. Bu sayede hem kendi yanlış uygulamalarını, hem de bilimsel önerilere uygun olan uygulamalarını keşfedebilmişlerdir. Örneğin gruptaki en deneyimli antrenöre göre bu öğrenme deneyimi kendisi için doğru antrenörlük uygulamalarının ve ideal antrenörlüğün bir hatırlatıcısı niteliğindedir. Çünkü sahada uzun zamandır deneyimlediği antrenörlük kültürünün, onu kendisine göre biçimlendirmeye başladığını ve idealden uzaklaştırdığını savunmuştur. Antrenörler, farkındalıklarının artmasında spor psikoloğunun da önemli etkisinin altını çizmişlerdir.

Antrenörler, grup toplantıları henüz devam ederken yeni öğrendikleri etkili antrenörlük bilgileri doğrultusunda uygulamalarını değiştirmeye başlamışlardır. Bunlar, sporcu özerkliği ve sorumluluk duygusu gelişimi, sağlıklı bir antrenör – sporcu etkileşiminin kurulması, hedeflerin birlikte koyulması konularıdır. Antrenörler kendi antrenörlük uygulamalarının çok daha "sporcu merkezli" olmaya başladığını savunmuşlardır.

Antrenörlerin önerileri

Gruptaki görece daha az deneyimli antrenörler, grup toplantılarının daha fazla sayıda olmasını önermişlerdir. Ayrıca antrenörler, farklı şehirlerden katılacak antrenörlerin de grup öğrenmelerini zenginleştirebileceğini belirtmişlerdir. Antrenörler ayrıca velilerin de sürece dâhil edilmesinin onların sporcu gelişimine karşı olan eksik ve yanlış kanılarının ve buna bağlı hatalı davranışlarının önüne geçmede; dolayısıyla bu konu hakkında velilerde farkındalık oluşturmada oldukça etkili olabileceğini savunmuşlardır.

Ayrıca, antrenörler sporcuların fiziksel ve psikososyal gelişimi konusunda anlaşılır, öğretim basamakları tanımlı ve sahanın ihtiyaçları ile doğrudan ilişkili kaynakların ihtiyacını duyduklarını belirtmişlerdir.

Üçüncü Araştırma Sorusunun Bulguları

Uygulanan 6 haftalık öğrenme grubu programının antrenörlerin uygulamaları ve sporcuların kazanımları üzerindeki uzun vadeli etkilerin nelerdir?

Üçüncü araştırma sorusu, öğrenme grubu programı bitiminden itibaren iki yıl süreyle yapılan katılımcı gözlemler ve bu süre sonunda iki katılımcı antrenör ile konuya ilişkin yapılandırılmamış görüşmeler vasıtasıyla elde edilen veriler neticesinde cevaplandırılmıştır.

Öğrenme grubu programı tamamlandıktan sonra, araştırmacı katılımcı antrenörlere ulaşılabilir olmak amacı ile kendi ortamlarında katılımcı gözlemci olarak yer almıştır (yaklaşım 2 yıl). Araştırmacı, bu süre boyunca onların uygulamalarını gözlemlemiştir. Bu gözlemler sırasında herhangi bir araştırmacı girişimi olmadan katılımcı antrenörlerden ikisi, öğrenme grubu programına katıldıktan bu yana yaşadıkları deneyimler üzerine yansıma yapmak üzere araştırmacı ile iletişime geçmişlerdir. Antrenörler, öğrenme grubu programına katılımlarının, kendi antrenörlük uygulamalarına ve cimnastikçilerinin spor kazanımlarına olan etkisine ilişkin deneyime dayalı bilgi paylaşımını sağlamışlardır. Bu deneyimlerin çoğu ayrıca araştırmacı tarafından sahada doğrudan gözlemlenmiştir.

Tematik analiz bulguları, "antrenörlerin bakış açıları ve uygulamalarında değişim" ve "bir cimnastikçinin bir yıl içindeki olumlu gelişimi" temalarını ortaya çıkarmıştır.

Görüşme bulguları, iki antrenörün de bütüncül antrenörlük kavramını benimsediğini; kişisel olarak yer aldıkları saha hakkında güçlü yansıma yapabildiklerini göstermiştir. Örneğin, artistik cimnastikte aynı zamanda antrenör eğitimcisi rolü de bulunan katılımcı antrenör, teknik konuların artık daha kolay çözümlenebildiğine; fakat sahada sporcunun psikososyal gelişimi ile ilgili önemli boşluklar olduğuna dikkat çekmiştir. Özellikle sahadaki antrenörlerin yalnızca fiziksel performans gelişimlerine

odaklandıklarını; ayrıca sporcuda hedef belirleme ve içsel motivasyonu geliştirme konularında önemli bilgi eksikliklerinin olduğunu savunmuştur. Sporcunun bütüncül gelişimi (bütüncül sporcu kazanımları) kavramsal çatısına uygun olarak saha değerlendirmesi yapan antrenör, sahada bu gelişim boyutları ile ilgili paylaşımda bulunduğunu; fakat antrenörlerin bu gelişim boyutlarını anlayamadığını ve bazılarının da öğrenmeye açık olmadığını savunmuştur. Tek boyutlu gelişim yaklaşımı ve yukarıda sözü geçen yanlış uygulamalar sonucu antrenörler, sporcuların hissiz ve becerileri öğrenmede düşük motivasyonlu hale gelmeye başladıklarını; kendilerine olan güvenlerini zamanla kaybetmeye başladıklarını ve antisosyal davranışlar geliştirdiklerini savunmuşlardır. Sonuç olarak da böyle bir ortamın uzun vadede antrenör ve sporcunun ayrılması ile sonuçlandığını savunmuşlardır.

Antrenörler, sporcu gelişimine ekolojik bir bakış açısıyla yaklaşmanın gerekliliğini savunmuşlardır. Örneğin, antrenörler sporcu gelişiminde antrenör dışında aile ve okul ortamlarının da oldukça önemli ortamlar olduğunu belirtmişlerdir. Antrenörler, bu değişkenlerin önemini daha fazla kanıksadıklarını ve bu unsurların, sporcu gelişimini destekleyici olması için stratejiler geliştirmeye başladıklarını belirtmişlerdir.

Geliştirilen stratejiler

Antrenörler, öğrenme grubu programına katılımlarından sonra cimnastikçilerinin gelişimsel kazanımlarını artırmak amacı ile çeşitli stratejiler geliştirmişlerdir. Bunlar sırasıyla 1) yansıma yapan bir antrenör haline gelmek, 2) bağ (antrenör – sporcu ilişkisi) ve karakter gelişimi için stratejiler geliştirmek, 3) beceri öğrenimi, 4) artırılmış özerklik ve antrenör – sporcu etkileşimi ve 5) velilerin sporcuların spor yaşamına olumlu dâhiliyelerini sağlamaktır.

Görüşmeye katılan bir katılımcı antrenör yukarıdaki stratejileri kullanarak bir sporcunun kariyerini nasıl olumlu anlamda değiştirdiğini paylaşmıştır. Antrenör, yarışmacı ortamda oldukça eski ve deneyimli bir antrenör ile sporcu arasındaki ilişkinin giderek kötüleştiğini ve sporcunun yeni beceri öğrenmek bir yana, önceki öğrendiklerini de zamanla yapamaz hale geldiğini belirtmiştir. Katılımcı antrenöre göre bunda a) antrenörün, sporcunun yapamadığı hareketleri hiçbir geribildirim sağlamadan tekrar

tekrar yaptırması, b) antrenörün, sporcu hareketleri yapamadığında onu azarlaması ve c) antrenörün, sporcunun kötü performansı sonucunda onu aşağılaması önemli unsurlardı. Bunun sonucunda sporcu hareket becerilerine başlarken daha korkak bir tavır sergilemeye başlamış, önceki öğrendiklerini karıştırmaya başlamış ve kendine güvenini kaybetmiştir. Sonunda antrenör ve sporcu zıtlaşmaya başlamışlardır. Katılımcı antrenör, deneyimli antrenöre sporcu ile bir sezon çalışma önerisinde bulunmuş ve bunun sonucunda sporcunun teknik performansında altı ayda önemli derecede olumlu değişimler gerçekleşmiştir. Bu olayda katılımcı antrenör, öğrenme grubu toplantılarında edindiği bilgiler ile paralel olarak sporcunun hem fiziksel, hem de psikososyal gelişimine uygun bir ortam yaratmıştır. Katılımcı antrenörün kullandığı antrenör merkezli stratejiler; a) toleranslı olma, b) sporcu ihtiyaçlarını gözetme, c) karşılıklı iletişim ortamı oluşturma, d) soru sorma ve e) öğretici ve olumlu geribildirim sağlamadır. Bunun sonucunda sporcu sporu bırakma eşiğinde iken o sezonda kendi kategorisinde ikinciliğe yükselmiştir. Antrenörün paylaşımları araştırmacı tarafından saha gözlemleri ile doğrulanmıştır.

Tartışma ve Sonuç

Birinci Araştırma Sorusu

Birinci araştırma sorusu bulguları çalışmaya katılan cimnastikçilerin bütün spor kazanımlarında yaşa bağlı değişimin gözlemlendiğini göstermiştir. Yaşları daha ileri olan cimnastikçilerin yetkinlik, özgüven, bağ ve karakter algıları daha düşük bulunmuştur. Ayrıca yetkinlik ve karakter kazanımlarında kız sporcuların puanları daha yüksek bulunmuştur. Sporcuların Gelişimsel Spora Katılım Modeli'nde belirtildiği üzere (Côté & Fraser-Thomas, 2007) 'antrenman için antrenman' döneminden 'yarışma için antrenman' dönemine geçiş aşamasında yüksek hacimli antrenmanlara ve birçok yarışmaya maruz kalması, bu yaş grubundaki cimnastikçilerin bütüncül gelişimini olumsuz etkileyecek antrenman deneyimleri yaşamalarına neden olabilmektedir.

Kız cimnastikçilerin kendini daha yetkin algılaması, ergenlik zamanı farklılığına bağlanabilir. Cimnastikte yarışma yaşının yedi olması ve yüksek performansa kızlarda genellikle ergenlik döneminden önce ulaşılması bu durumu kısmen açıklamaktadır. Kız

sporcuların ergenliğe erkeklerden daha önce girip daha erken güçlenmeleri (Behringer, Vom Heede, Yue, & Mester, 2010) bu yüksek yetkinlik algısını kısmen açıklamaktadır.

Sporcuların cinsiyete dayalı karakter kazanımı ile ilgili önceki çalışma bulguları, bu çalışmanın bulguları ile paraleldir (örn. Bredemeier & Shields, 1984; Kavussanu & Roberts, 2001). Bu çalışmalarda da kız sporcuların, karakter gelişimi boyutu ile ilgili erkeklere nazaran daha iyi oldukları saptanmıştır (örn. daha düşük antisosyal davranış, daha yüksek ahlaki olgunluk).

Sonuç olarak bu çalışma (Çalışma 1) yarışmacı genç çimnastikçilerin bütüncül spor kazanımları hakkında Türk antrenörlük ortamında oldukça önemli bilgiler sunmaktadır. Önceki birçok çalışma genellikle antrenörlük niteliğini, antrenör özelliklerine odaklanarak çözümlemeye çalışmıştır (Côté et al., 2010; Mallett & Côté, 2006). Ayrıca, sporcu kazanımları hakkında ortak bir anlayış sağlayan bu tür çalışmaların sayısı da oldukça azdır (Côté & Gilbert, 2009).

İkinci Araştırma Sorusu

Çalışma bulguları antrenörlerin öğrenme grubu program deneyimlerini; antrenörlerin motivasyonu, antrenörlerin değerlendirmeleri ve yansıma ve değişim boyutlarında açıklamıştır.

Motivasyon

Bulgular antrenörlerin katılıma yönelik motive olduklarını; fakat bilgi paylaşımı konusunda çekincelerinin olduğunu göstermiştir. Antrenörlük ortamı yüksek oranda yarışmacı olduğundan, antrenörlerin bu kaygılarının olması doğal karşılanmaktadır. İşbirliğine dayalı bir ortam oluşturmak amacıyla, alanyazında önerildiği üzere (Culver ve ark., 2009) öğrenme grubunu amaçlarına doğru yönlendirebilecek güçlü bir vizyoner liderin varlığı gerekmektedir. Çalışmada kolaylaştırıcının süreçte bu gerekliliği oldukça yerinde karşılaması sonucunda antrenörler toplantılar boyunca yüksek motivasyon sergilemişlerdir. Kolaylaştırıcının antrenörlük ortamında ve kolaylaştırıcı olarak deneyimli olması ve ayrıca bilimsel bilgiyi anlaşılır hale getirmesi antrenörleri en çok motive eden unsurlardır. Kolaylaştırıcı, Sosyal Öğrenme Teorisi (Wenger, 1998) ve

yetişkin öğrenme prensiplerini (Brookfield, 1986) etkili bir biçimde kullanmıştır. Bunun göstergesi olarak öğrenme grubu toplantıları rahat, güven veren ve kapsayıcı bir ortamda gerçekleşmiş; tartışma konuları antrenörlerin mesleki ihtiyaçlarına dayalı olarak tasarlanmıştır (Gilbert ve ark., 2009). Ayrıca bu öğrenme ortamı antrenörlerin soru sormasını ve yansıma yapmasını yüreklendirmiştir. Antrenörler grubun deneyimlere dayalı bilgisinden ve onlarla buluşturulan ilişkili bilimsel bilgiden faydalanmışlardır.

Antrenörler, bilginin içselleştirilmesini sağlayan "tartışma izlenceleri"ni kendilerine nitelikli antrenörlük kavramlarını tanıtması, akademik dil becerilerine aşınalığı artırması ve ihtiyaç duydukları bilimsel bilgiyi sunması bağlamında bir diğer motivasyon kaynağı olarak değerlendirmişlerdir. Spor bilimcileri ve antrenörler arasındaki bilgi alışverişi sorunu birçok antrenörlük kültüründe uzun süredir çözülememiş bir problemdir (Kılıç & İnce, 2015; Reade ve ark., 2008; Mesquita ve ark., 2010; He ve ark., 2018). Antrenörlük alanyazını, antrenörlerin hem yüksek motivasyon ve eğlenceyle katılabilecekleri hem de bütüncül sporcu kazanımlarını öğrenebilecekleri ortamların tanımlanmasının gerekliliğini (Lauer & Dieffenbach, 2013; Horn, 2008) vurgulamaktadır. Çalışmanın tasarımı bu iki kritik ihtiyacı karşılar niteliktedir.

İçerik değerlendirmesi

Antrenörler gelişimsel sporcu kazanımları kavramsal çatısını oldukça iyi benimsemişlerdir. Antrenörler, bu kazanımlar hakkında yüksek farkındalığa ve bilgiye sahip olmuşlardır. Antrenörler, özellikle bu kazanımlar bağlamında kendileri ile paylaşılan ihtiyaç analizi bulgularının, onların gerçek kişisel mesleki ihtiyaçlarını belirlemede oldukça öğretici olduğunu belirtmişlerdir. İhtiyaca dayalı bilimsel bilgi paylaşımının da mesleki gelişimlerine anlamlı katkılarını vurgulamışlardır. Antrenörler genellikle kendi antrenörlük stillerini geliştirmeleri konusunda yalnız bırakılmaktadır (Gilbert & Trudel, 2004). Ayrıca sporcu gelişimi bağlamında da antrenörler oldukça düşük seviyede eğitim fırsatı bulabilmektedir (Erickson ve ark., 2007). Bununla birlikte antrenörlerin, sporcuların gelişebileceği ortamları bilinçli olarak oluşturmaları gerekmektedir (Gould & Carson, 2008). Bu bağlamda her ne kadar antrenöre odaklanan değerlendirmeler değerli olsa da, asıl sporcuların gelişimsel kazanımları üzerine

odaklanılmalı (Côté et al., 2010) ve antrenörlerin mesleki gelişimi bu gelişimsel kazanımlar üzerinden yapılmalıdır. Alanyazında önerilen ölçüm kavramsal çatısı (Vierimaa ve ark., 2012), antrenörlerin saha uygulamalarını, sporcuların psikososyal gelişim çıktılarını da içeren daha objektif bir bakış açısıyla ele almayı mümkün kılmaktadır. Bu sayede antrenörler, sporun gelişim için bir anahtar olarak kullanıldığı bütüncül sporcu gelişimi felsefesini (Camire, Forneris, Trudel, & Bernard, 2011) benimsemiş ve bunun için gereken bilimsel bilgiye ulaşmışlardır.

Antrenörler ve cimnastikçiler karmaşık problemleri çözebilmeli ve performans rutinleri ve yeni hareketler bulmada yaratıcı olmalılardır. Pedagojik bakış açısıyla yaklaşıldığında sporda yaratıcılığı filizlendirmek için sporcuyu öğrenmede merkeze alan bir yaklaşıma ihtiyaç vardır. Mosston ve Ashworth (2008) buluş yöntemine dayalı öğrenme stilinin iç motivasyonu ve yaratıcı düşünmeyi artırdığını belirtmektedir (s. 69). Bununla birlikte mevcut antrenörlük uygulamaları, çoğunlukla antrenör merkezli davranışçı psikolojiye dayalıdır (Nelson & Colquhoun, 2013; Kılıç & İnce, 2017). Bu yaklaşımda sorgusuz uyma ve itaat etme ön plandadır (Cassidy ve ark., 2008; s. 120) ve atletik vücutların üretilmesi hedeflenirken, kişisel yaratıcılık göz ardı edilmektedir (Apple, 1979). Antrenörler, yüksek oranda davranışçı psikolojiye uygun öğretim yaklaşımını kullanmakta ve sporcu merkezli öğretim yaklaşımına değer vermemektedirler (Kılıç & İnce, 2017). Bu durum, antrenörlerin pedagojik alan bilgisi bağlamında mesleki gelişime ihtiyaç duyduklarının ciddi bir göstergesidir (Côté & Gilbert, 2009; Kılıç & İnce, 2017; Gilbert & Côté, 2012).

Spor kazanımları yalnızca spora katılım ile gerçekleşmemektedir (Danish, Forneris, Hodge, & Heke, 2004). Bunun için antrenörlerin sporcu gelişimine bütüncül bakmasını sağlayacak iyi planlanmış bilimsel çabalar gereklidir (Camire ve ark., 2011). Nitelikli antrenörlük tanımında belirtilen bütüncül sporcu kazanımları, antrenörlerin kendi ortamları ile ilgili mesleki gelişim konularının çerçevesini oluşturmaktadır. Trudel ve Gilbert (2006) antrenörlerin kendi mesleki ihtiyaçlarını tanımlamalarını, bu ihtiyaçlara yönelik stratejiler geliştirmelerini ve kullandıkları stratejilerin problemleri ne düzeyde çözdüğünü değerlendirmelerini önermiştir. Buna uygun olarak bu çalışmada antrenörlere sunulan ihtiyaç analizi bilgisi ve konuya ilişkin bilimsel bilgi sayesinde antrenörler, kendi ihtiyaçlarını kanıksamış ve bu ihtiyaçlara yönelik bilimsel temelli ve deneyimlere dayalı işleyen stratejiler hakkında bilgi sahibi olmuşlardır.

Öğrenme yaşantıları

Antrenörler öğrenme grubu program deneyimlerini şimdiye kadar deneyimledikleri formal eğitim ortamları ile kıyaslayarak değerlendirmişlerdir. Antrenörlerin değerlendirmede bulundukları boyutlar; a) oluşturulan fiziksel ve psikolojik ortam, b) bilginin transfer ediliş yolu ve c) paylaşılan bilgi türleridir.

Antrenörlere göre öğrenme grubu deneyiminde oluşturulan fiziksel ortam çok daha etkilidir. Antrenörlerin, genellikle çok kalabalık bir ortamda, genel bilginin tek yönlü olarak aktarımının hakim olduğu formal atmosferlerden ziyade küçük gruplar halinde, bilginin ve fikirlerin etkileşimli olarak paylaşıldığı öğrenme grubu ortamını tercih ettikleri görülmektedir. Süreç boyunca grup toplantılarında güçlü öğrenmeler oluşmuş, farklı deneyime sahip antrenörler birbirlerinden öğrenmiş ve mesleki ihtiyaçları hakkında derinlikli olarak tartışma fırsatı bulmuşlardır. Bu bağlamda formal öğrenme ortamları sığ olarak değerlendirilmiştir. Öğrenme grubu toplantıları boyunca yaratılan kişisel eleştiri içermeyen, özgün ifadeye açık ve hiyerarşik olmayan ortam, antrenörlerin güven algısının oluşmasını ve açıkça fikirlerini paylaşabilmesini sağlamıştır. Çalışma bulguları alanyazın ile paraleldir. Birçok araştırma Sosyal Öğrenme Teorisi'ne dayalı araştırmaların antrenörlerin mesleki gelişimini desteklediğini göstermektedir (Cassidy ve ark., 2006; Garner & Hill, 2017; Culver & Trudel, 2006). Öğrenme Grubu Yaklaşımı, antrenörlerin bütüncül antrenörlük ve sporcu gelişimi bakış açısını kazanmalarında önemli bir yöntemdir (Gilbert ve ark., 2009; Lyle, 2010). Çalışma bulgularına paralel olarak alanyazında antrenörlerin formal gelişim ortamlarında sunulan bilgileri kendi gerçek yaşamları ile ilişkisiz ve soyut buldukları görülmektedir (Lemyre, Trudel, & Durand-Bush, 2007; Vargas-Tonsing, 2007; Wright, Trudel, & Culver, 2007). Bununla birlikte informal mesleki gelişim ortamları, kendi başına bırakıldığında var olan antrenörlük kültürünün, güç ilişkilerinin ve uygulamaların (doğru ve yanlış) süregelme tehlikesini/riskini barındırmaktadır (Cushion ve ark., 2003). Dolayısıyla bu öğrenme ortamlarının antrenörlerin mesleki ihtiyaçlarına dayalı olarak dikkatli bir biçimde tasarlanması gerekmektedir (Mallett ve ark., 2009). Önceki çalışma bulgularına (örn. Garner & Hill, 2017; Bertram ve ark., 2017; Culver ve ark., 2009) ve alanyazın önerilerine (Culver & Trudel, 2008) paralel olarak bu çalışmada antrenörlerin kendi mesleki ihtiyaçları ile ilgili doğrudan iletişime geçebildikleri; bilimsel ve deneyime dayalı bilgi öğreniminde aktif rol oynadıkları ve

313

işbirliği yoluyla grupta üretilen bilgiyi kendi ortamsal ihtiyaçları bağlamında kavramsallaştırabildikleri az yapılandırılmış bir öğrenme ortamının oluşturulduğu görülmektedir.

Çalışma bulguları antrenörlerin, her bir tartışma konusu ile ilgili bir "bilgiyi içselleştirme" sürecinden geçtiğini göstermektedir. Bu süreç, antrenörlerin konu ile ilgili ortak anlayış geliştirmelerini, tartışılan konu ile ilgili motivasyonlarının artmasını ve öğrendikleri bilgiyi kavramsallaştırmalarını kolaylaştırmıştır. Araştırmalar formal eğitim olanaklarının genellikle antrenörlerin anlayışı ile ilgili konuyu hafife aldıklarını göstermektedir (Gilbert & Trudel, 1999). Bununla birlikte antrenörlerin öğrenmesini kolaylaştırmak için içeriğin ve ilişkili öğrenme deneyimlerinin dikkatlice tasarlanıp uzman bir kolaylaştırıcı ile sunulması gerekmektedir. Alanyazında oluşturan informal mesleki gelişim ortamlarının başarıya ulaşmasında uzman bir kolaylaştırıcının önemi sıklıkla vurgulanmaktadır (Cassidy et al., 2009; Culver & Trudel, 2006; Culver, Trudel, & Werthner, 2009). Çalışma bulguları, öğrenme grubu toplantılarının bir uzman kolaylaştırıcı tarafından yönetildiğini göstermektedir. Öğrenme deneyimlerinin tasarımının antrenörlerin kültürel ihtiyacına uygun olarak beş basamakta yapılması; antrenörlerin hem mesleki, hem de kültürel ihtiyaçlarına göre bir öğrenme deneyimi yaşamalarını sağlamıştır.

Çalışma, hem antrenör hem de spor psikoloğu tarafından etkili bir bilgi transferi süreci ile ilgili kritik aşamaları tanımlamıştır. Öncelikle beş aşamalı bilgiyi içselleştirme stratejisi yoluyla antrenörlerin mesleki farkındalığı ve bilimsel bilgiye ulaşılabilirliği artmıştır. Bunun sonucunda antrenörler, kendi mesleki ihtiyaçlarını kanıksayan ve bununla ilgili nitelikli bilgi arayışına geçen profesyoneller haline gelmişlerdir. Antrenör öğrenmesi ile ilgili alanyazına göre antrenörler kendi öğrenme ortamlarını oluşturmak için girişime geçebilmektedirler (Werthner & Trudel, 2006). Çalışmada, bu süreçler spor psikoloğunun antrenörlerin gerçek mesleki ihtiyaçlarını doğrudan kanıksamasını; ayrıca antrenörler ile kolayca aynı dilden iletişime geçebilmesini ve iletmek istediği kuramsal ve uygulamaya dayalı bilgileri antrenörlere kolayca aktarabilmesini sağlamıştır. Werthner ve Trudel'e (2006) göre yarışmacı spor ortamında spor psikoloğu olarak çalışmak ve antrenörler ile doğrudan iletişim içinde olmak, antrenörlerin öğrenme yolları ile ilgili farkındalıklarını artırmalarına yardımcı olabilmekte; bu da spor psikoloğu gibi profesyonellerin antrenörler ile çalışmasındaki verimliliği artırmaktadır.

Bu vasıtayla, spor psikoloğu da antrenörler ile değişik iletişim yollarının ipuçlarını elde edebilmekte ve antrenörlerin ileriki öğrenmeleri için yönlendirici olabilmektedir (Werthner & Trudel, 2006).

Antrenörleri nitelikli bilgi ile buluşturabilmek için öncelikle o antrenörlük kültürüne özel antrenör ihtiyaçlarının anlaşılabilmesi gerekmektedir. Örneğin bazı kültürlerde antrenörler bilimsel yayınları mesleki ihtiyaçlarını karşılamak üzere daha az kullanma eğilimindedirler. Bunun sebepleri ise nitelikli bilgiye ulaşmaya zaman bulamama, nitelikli bilgileri anlamak için gerekli akademik dil yeterliğinin ve yabancı dil bilgisinin eksikliği olarak sayılabilir (Kılıç & İnce, 2015; Reade ve ark., 2008a, b; He ve ark., 2018). Bu çalışmada antrenörler nitelikli ve kendi ihtiyaçlarına dayalı bilimsel bilgi ile buluşturulmuş ve kendi mesleki ihtiyaçlarını saptayıp bunları uzmanlarla tartışabilir hale gelmeleri sağlanmıştır. Bu süreç, antrenörlerin uygulamalarında öğrendikleri psikolojik stratejileri kullanma ve gerektiğinde uzmanlardan yardım isteme yönelimini geliştirmiştir. Ayrıca bu çalışma, antrenörlerin kendi ihtiyaçları ile ilgili yüksek farkındalığı, kavramsal anlayışı ve öğrenmeye açıklıkları sayesinde spor psikoloğunun onlarla daha etkili bir biçimde çalışabilmesini sağlamıştır. Alanyazında önerildiği üzere çalışma bulguları, öğrenme gruplarının nihai amacı olan antrenörlerin kendi öğrenmelerinde özerkleşmesini kolaylaştırmıştır.

Yansıma ve değişim

Çalışma bulguları antrenörler için etkili yansıma ortamı yaratma bağlamında diğer çalışmalar ile paraleldir. Bulgulara göre antrenörler 'geriye dönük' olarak kendi antrenörlük uygulamalarına ve sahada tanık olduklarına yansıma yapmışlardır (Gilbert & Trudel, 2001). Antrenörler, öğrenme grubu toplantılarında ulaştıkları bilgiler ile kendi uygulamalarını kıyaslamışlardır. Gilbert ve Trudel'in (2001) önerdiği üzere yaratılan öğrenme ortamı, antrenörler arasında güçlü bir iletişim ve işbirliği sağlamıştır. Çalışma bulguları öğrenme grubu toplantılarında, alanyazında önerilen (Gilbert & Trudel, 2001) yansıma süreçlerini besleyen, fikir özgürlüğünün hakim olduğu ve bunlar sonucunda yeni antrenörlük stratejilerinin geliştirildiği bir ortamın yaratıldığını kanıtlamaktadır. Ayrıca, yine alanyazında önerildiği üzere öğrenme grubu toplantılarında görüşülen konular, antrenörlerin güncel mesleki ihtiyaçlarına dayalıdır. Bu da antrenörlerin

tartışma konularına yüksek motivasyona sahip olarak odaklanmalarını sağlamıştır. Kişilerin gerçek deneyimlerinin tartışılması onların konuya daha odaklı olmasını sağlamaktadır; çünkü kişiler daha çok kişisel ve kendileri için birincil olan bilgiye yoğunlaşmaktadırlar (Shön, 1983).

Antrenörlerin yansıma yapma becerilerinin gelişimi, onların antrenörlük deneyimleri ile doğru orantılı değildir (Cushion & Nelson, 2012). Dolayısıyla bu becerinin gelişimi programlı bir girişime, zamana ve adanmışlığa ihtiyaç duyar (Gilbert & Trudel, 2006). Bu çalışmada antrenörlerin yansıma becerilerini geliştirebilmelerini sağlayacak bir öğrenme ortamı sunulmuştur. Alanyazında önerildiği üzere (Cushion ve ark., 2010), kolaylaştırıcı, tartışma ortamlarını ortama dayalı örneklerle zenginleştirmiş ve antrenörlerin de kendi örnekleri üzerinden yansıma yapmalarını yüreklendirerek, onların bu konulara derin ve kritik yansıma yapabilmelerini kolaylaştırmıştır. Antrenörler, önce uygulamalara ve olaylara yüzeysel yansıma yaparak başlamış; zamanla, kolaylaştırıcının sistematik girişimleri yardımıyla, tartışma konuları üzerinde daha derin yansımalar yapabilmeye başlamışlardır.

Çalışma bulguları, önceki çalışma bulguları ile paralel olarak (Cassidy ve ark., 2006; Garner & Hill, 2017; Bertram ve ark., 2017), antrenörlerin sporcu merkezli yaklaşım konusunda farkındalık geliştirdiklerini ve uygulamalarını iyileştirerek sporcularda olumlu değişimler gözlemlediklerini raporlamışlardır.

Üçüncü Araştırma Sorusu

Çalışma bulguları, öğrenme grubu programına katılımdan sonraki yaklaşık iki yıllık süreçte katılımcı antrenörlerin, antrenörlüğe ve sporcu gelişimine ilişkin bakış açılarındaki değişiklikler üzerine yansıma yapmış, sahadaki antrenörlük uygulamalarındaki değişiklikler üzerine de bilgi paylaşımı yapmışlardır. Ayrıca, bir katılımcı antrenör sorunlu bir kariyeri olan bir sporcuyu nasıl bir sezonluk bir süreçte başarıya ulaştırdığı ve bunda öğrenme grubu programının etkili rolü üzerine yansımalar yapmıştır.

Çalışma bulguları, önceki çalışmalarla paralel olarak antrenörlerin sporcu ihtiyaçları üzerine farkındalıklarının arttığını (Cassidy ve ark., 2006), gelişmiş yansıma

yapabilme becerileri sergilediklerini (Knowles ve ark., 2001; 2006), bilgi seviyelerinin ilerlediğini (Trudel ve ark., 2000), sporcu merkezli bakış açısı edindiklerini (Falcao ve ark., 2017) ve iletişim ve uyumu artırma becerilerini geliştirdiklerini göstermiştir. Bazı çalışmalar ayrıca antrenörlerin raporlarına dayalı sporcu gelişiminde iyileşmeler ile ilgili kanıt sunmaktadır (Garner & Hill, 2017; Falcao ve ark., 2012; 2017; Bertram, Culver, & Gilbert, 2017). Bu çalışma, bu bulgulara ek olarak antrenörlerin sporcu gelişiminde ekolojik farkındalıklarının arttığı ve çeşitli ekolojik katmanlarda sporcularının gelişimine etkisinin olumlu olması için strateji geliştirmeye başladıkları hakkında kanıt sunmaktadır.

Çalışma bulguları, antrenörlere bağlı raporlanmış olumlu değişikliklerin ötesine geçerek öğrenme grubu programının antrenör ve sporcuları üzerine uzun vadeli etkileri hakkında kanıt sunmaktadır. Alanyazında antrenörler için geliştirilen mesleki gelişim programlarının uzun vadeli etkisinin araştırılmasının gerekliliği vurgulanmaktadır (Trudel ve ark., 2010). Araştırmacı, katılımcı gözlemci olarak antrenörler ile onların antrenörlük ortamında, onların izni olarak ve onlara problem yaratmayacak şekilde, çalışmanın bir parçasını temsilen zaman geçirmiştir. (Marshall & Rossman, 2014). Bu yoğun ve neredeyse sürekli devam eden etkileşim, öğrenme grubu programına katılan üç antrenörün oldukça olumlu değişimini ortaya çıkarmış; fakat yalnızca iki antrenör doğal olarak kendi deneyimlerini paylaşmak için araştırmacı ile doğrudan iletişime geçmiştir. Katılımcı gözlem, genellikle gözlem verisini desteklemek üzere görüşmeler içermektedir (Spradley, 1979). İki katılımcı antrenör ile yapılan görüşmeler, araştırmacının saha gözlemlerini güçlendirmiştir. Çalışma bulgularında ayrıca göze çarpan nokta; bir katılımcı antrenörün gözlemlediği bir antrenör ve sporcusunun ihtiyaçlarını bütüncül bakış açısıyla belirleyip, öğrenme grubu deneyiminden edindiği bilgilerden faydalanarak kariyeri olumsuz devam eden bir sporcunun kariyerini olumlu yönde değiştirmesi olmuştur. Bu bulgu, öğrenme deneyimi programının nihai amacı olan (Gilbert & Trudel, 2005; Brookfield, 1986) antrenörleri, kendi mesleki ihtiyaçlarını kavramsal bir anlayışla belirleyebilen ve bunlara aktif olarak cevap arayan özerk öğrenenlere dönüştürdüğünü kanıtlamaktadır.

Program geliştirme bakış açısıyla yaklaşıldığında Türkiye'de antrenörler için sunulan formal eğitim olanaklarının antrenörlerin ihtiyacı olan mesleki bilgiyi karşılayamadığı anlaşılmaktadır (Kılıç & İnce, 2015). Çalışma 1'in bulguları, cimnastik

antrenörlerinin bütüncül sporcu gelişimini sağlayacak farkındalık ve mesleki bilgiye oldukça ihtiyaç duyduklarını açıkça göstermektedir. Dolayısıyla antrenörler için, ortamsal ihtiyaçlara dayalı ve sporcu gelişimi kazanımlarına odaklanmış informal mesleki gelişim olanaklarının geliştirilmesi oldukça önemli görünmektedir. Geliştirilecek olan bu tamamlayıcı programların etkili olabilmesi için, doğrudan sporcuların bütüncül gelişimsel kazanımlarına odaklı olarak tasarlanması gereklidir (Gilbert ve ark., 2009). Ayrıca bu programların etkililiği, onların ölçülebilir kazanımlar üzerine tasarımlanması ile doğrudan ilişkilidir (Trudel, Gilbert, & Werthner, 2010). Bu çalışma, bahsi geçen unsurları merkeze alarak antrenörler için etkili bir informal mesleki gelişim programının nasıl geliştirilmesi gerektiği konusunda ilham verici bir örnektir. Gelecekteki antrenörler için tamamlayıcı mesleki gelişim girişimlerinin; özellikle farklı antrenörlük kültürlerinde, bu çalışmada geliştirilen stratejilerin modellenerek tasarlanması şiddetle önerilmektedir.

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