THE IMPACT OF PERCEIVED PARENTAL CONTROL ON INTERNALIZATION AND EGO-DEPLETION

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ABSTRACT

THE IMPACT OF PERCEIVED PARENTAL CONTROL ON INTERNALIZATION AND EGO-DEPLETION

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The aim of the current study is to examine the potential parenting factors and mediating mechanisms that lead to ego-depletion within the framework of Self-Determination Theory. Previous research has suggested that whereas behaviourally controlling and autonomy-supportive parenting contributes to the development of autonomous motivation, psychologically controlling parenting leads to introjected motivation for self-regulation. Moreover, recent studies have shown that as compared to introjected regulation, autonomous regulation depletes less ego-resource. Thus, it was expected that parental psychological control positively, but behavioural control negatively, affects ego-depletion via controlled regulation style. In the first study, university students (N = 179) completed three groups of measures assessing parenting behaviours, motivation type of self-regulation, and state self-control capacity. The results of SEM analysis partially supported the proposed mediational model. Whereas both maternal and paternal psychological control indirectly predicted self-control capacity corresponding higher levels of ego

depletion via controlled regulation, parental behavioural control did not have direct or indirect effect on self-control capacity. In the second study, the same hypotheses were tested experimentally on a group of participants (N = 91) from the first study by exposing them either an upsetting or a funny video condition that requires emotional control. Results revelaled that perceived high levels of maternal psychological control and low levels of paternal behavioural control make individuals more vulnerable to ego-depletion under emotional control. Furthermore, those with high introjected motivation for emotion-control were relatively resistant to ego-depletion. Findings were discussed considering the practice effect of self-control, implications of diverging parenting behaviours and cultural factors.

Key Words: ego-depletion, introjected motivation, psychological control, behavioural control.

ÖZ

ALGILANAN ANNE-BABA KONTROLÜNÜN İÇSELLEŞTİRME VE BENLİK KAYNAKLARININ TÜKENMESİ ÜZERİNE ETKİLERİ

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Bu çalışmada, ebeveynlerin kontrol tarzlarının ve benlik düzenlemeyle ilintili aracı mekanizmaların benlik kaynaklarının tükenmesi üzerindeki etkisinin incelenmesi amaçlanmaktadır. Önceki çalışmalarda, anne-babanın davranışsal kontrolünün kendini düzenlemede özerk motivasyonun gelişmesine yol açtığı, buna karşılık anne-babanın psikolojik kontrolünün öze yansıtılmış (*introjected*) motivasyonun gelişmesine neden olduğu ileri sürülmüştür. Son zamanlarda yapılan araştırmalarda ise öze yansıtılmış motivasyon tarzının, özerk motivasyon ile karşılaştırıldığında, benlik kaynaklarının daha fazla tüketilmesine neden olduğu gösterilmiştir. Önceki araştırmaların bulguları doğrultusunda, bu çalışmada anne-babadan algılanan psikolojik kontrolün benlik kaynaklarını daha fazla, davranışsal kontrolün ise daha az tüketeceği ve kendini düzenlemedeki motivasyon tarzının da bu ilişkiye aracılık edeceği beklenmektedir. Birinci çalışmaya 179 üniversite öğrencisi katılmış ve algıladıkları anne-baba kontrol davranışları, kendini düzenlemedeki motivasyon tarzları, ve benlik kontrol kapasitesi özbildirim yoluyla

ölçülmüştür. Yapısal eşitlik modeli analizi sonuçları önerilen aracı değişkenli modeli kısmen desteklemiştir. Buna göre, ebeveynlerin psikolojik kontrolü benlik kontrolü kapasitesini öze yansıtılmış motivasyon aracılığıyla yordarken, anne-babadan algılanan davranışsal kontrol ne doğrudan ne de dolaylı olarak benlik kontrolü kapasitesi üzerinde anlamlı bir etki göstermemiştir. İkinci çalışmada, yukarıdaki hipotezler ilk çalışmaya katılan 91 öğrenci üzerinde deneysel olarak test edilmiştir. Öğrencilerden üzüntü verici veya eğlenceli video izleme koşullarında duygusal kontrol göstermeleri istenerek benlik kontrolü kapasitesi üzerindeki olası etkiler incelenmiştir. Sonuçlar, yüksek düzeyde psikolojik kontrol uygulayan anneye sahip ve düşük düzeyde davranışsal kontrol uygulayan babaya sahip olan katılımcıların benlik kaynaklarının daha fazla tükendiğini göstermiştir. Bununla birlikte, duygu kontrolündeki yüksek seviyedeki öze yansıtılımış motivasyona sahip olan katılımcıların benlik kaynaklarının daha az tükendiği bulunmuştur. Bulgular, benlik kontrolü üzerinde pratik yapmanın etkisi, anne-baba kontrol davranışlarının çeşitli doğurguları ve kültürel faktörler dikkate alınarak tartışılmıştır.
Anahtar Kelimeler: benlik kaynaklarının tükenmesi, öze yansıtılmış motivasyon, psikolojik kontrol, davranışsal kontrol.

To My Parents Mualla & Kemal

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INTRODUCTION

1.1 Purpose of the Study

Pioneer theorists of self-regulation and self-control, such as Mischel (1974) and Bandura (1977) proposed that capacity to alter one's own responses is one of the most unique and distinctively human traits. According to Heatherton and Vohs (1998), this capacity evolved through societal forces for harmonious social interactions. Unlike most other animals who get what they need (food, shelter, and the like) from the physical environment; humans get them from each other within their social system (Baumeister, 2010). Thus those living in a group can enhance the likelihood of survival and pass along their genes (Baumeister & Leary, 1995). The threat of exclusion from the group is a primary source of motivation to behave according to the group norms (Baumeister & Tice, 1990). As stated by Kahan, Polivy and Herman (2003), humans must learn to control themselves or manage their arousal and irritability to live together in a society. That is to say, they should be able regulate their selves through some external social standards and norms.

According to self-determination theory (SDT; Deci & Ryan, 1985), individuals internalize social standards and norms in varying degrees. Internalization is indeed a process of taking over the values and attitudes of society as if one's own values (Grusec & Goodnow, 1994). When this process functions optimally, externally self-regulation is transformed into the internal regulation (Deci, Eghrari, Patrick, & Leone, 1994). People who regulate their self system internally also have more enhanced performance and persistence at self-control ability, creativity,

heightened vitality, self-esteem, and general well-being, as compared to people with external motivation for self-regulation (Ryan & Deci, 2000).

Theories about self-regulation and self-control have flourished in the 1980s and 1990s and they have been tested empirically in last two decades (Baumeister & Vohs, 2003). Underlying reasons of this increasing interest to self-regulation theories is that many social and personal problems in today's societies are considered as deriving from self-regulation failures (Baumeister, 2000). Thus, a number of theories have been proposed to explain the reasons of the deficiencies in self control or self-regulation. Among these, *ego-depletion* or *self-control strength model* is one of the most empirically supported theories. The core idea behind the strength model is that the executive functions of the self such as self-control, drawn on a limited resource. Therefore, once expended it leads to depleted performance on a subsequent task only requiring self-control (Baumeister & Heatherton, 1996).

Although state fluctuations of the self-control capacity can be explained by ego depletion, numerous studies pointed the moderated role of certain individual differences. Accordingly, whereas certain traits may make individuals vulnerable to ego-depletion, some others may make them resistant. One of these moderated factors is the motivation type of self-regulation, namely, whether self-regulation is internally (autonomous) or externally (controlled). Recently, researchers have demonstrated that exerting self-control via autonomous motivation does deplete ego resources less than the self-control exerted via controlled motivation (e.g., Muraven, Rosman, & Gagné, 2007).

Although the challenge of developing internally motivated self-regulation for important but not intrinsically interesting activities is a matter of every age, it is

perhaps the most critical issue in childhood (Deci et al., 1994). Previous studies have suggested that the degree of internalization is closely associated with parental attitudes and practices especially in early years. Various studies have provided support for autonomy-supporting parenting that promotes integrated or identified internalization as the main source of autonomous or internal regulation (Joussemet, Koestner, Lekes, & Landry, 2005). In contrast, high levels of parental control has been shown to lead to the difficulties in internalization and heighten the chance of external or introjected regulation which refers to feel pressure and internal compulsion to meet requirements imposed from the environment (Soenens & Vansteenkiste, 2009).

Barber, Olsen and Shagle (1994) distinguished between parental psychological control and parental behavioural control, and demonstrated that both type of control had different effects on child's development. In general, whereas behavioural control refers to parents' monitoring and guiding behaviours and it is viewed as positive control style, psychological control refers to parental intrusiveness to children's feelings and thinking through the use of guilt-induction or love withdrawal (Barber, 1996).

While parental psychological control refers to general parental attitudes and behaviours toward child, in recent years, more domain-specific measurements, such as example in emotion-control or academic domain, were provided by Assor and his colleagues (i.e., 2004). These domain specific psychological control behaviours from parents, specifically including parental contingent regard and love withdrawal, which can be readily transformed into children's own self-regard. These behaviours are

accepted as the underlying factors in the development of introjected regulation (e.g., Roth, 2008).

Although past research on parental psychological control, especially parental conditional regard has demonstrated that this type of parenting has detrimental effects on child's self-regulation ability, its potential effects on ego-depletion has not been examined yet. Therefore, the aim of this study is to investigate the role of parental control style on ego-depletion via the effect of motivation type; introjected or integrated motivation. Specifically, in the first study, using the framework of ego-depletion, self-determination and parenting (socialization) theories, it is hypothesized that perceived parental psychological control would lead to introjected regulation in the emotion-control and academic domains, and in turn, it is expected to lead lower level of state self-control capacity representing high levels of ego-depletion. However, parental behavioural control would lead to autonomous regulation in the domains of academic and emotion-control, and in turn, it would be associated with low levels of ego-depletion.

In the following sections, main theoretical perspectives and recent studies on self-regulation and ego-depletion will be summarized.

1.2 Executive Function of the Self

Baumeister (2000) has proposed that one of the core aspects of selfhood is its executive function which involves the agentic nature of the self. Executive function of the self mainly encompasses volition and decision making processes, such as planning, making choices, deciding, initiating and maintaining action, filtering irrelevant information, exerting control over the physical and social environment (Baumeister, 2000; 2010).

One of the main functions of the executive self is to alter and change the states of the self. In other words, it refers the ability to exert control over the self, representing *self-regulation* which is adaptive and responsible from a variety of human activities from suppressing undesired thoughts or changing one's mood to resisting temptation or delaying gratification (Baumeister & Vohs, 2003). From the evolutionary perspective, the ultimate purpose of this psychological capacity of self control is to improve the fit between the self and the environment (Gazzaniga, Ivry & Magnum, 1998; cited in Baumeister & Vohs, 2003). In sum, the ability to override or to inhibit automatic, habitual behaviours, urges, emotions, or desires (Muraven, Schmueli, & Burkley, 2006) serves for harmonious social interactions (Heatherton & Vohs, 1998). Therefore, it can be claimed that self-regulation is also shaped by societal forces to bring these automatic behaviours into the line with social standards and norms (Heatherton & Vohs, 1998). Baumeister (2010), and Gailliot and Baumeister (2007) defined the term "regulate" as not just changing the self, but rather changing it on the basis of moral rules, laws, social norms, goals, ideals or prescriptive expectations. These authors asserted that self-regulation would have no meaning or would not make sense without these social standards or rules.

In the previous studies, the terms of self-control, self-regulation, self-discipline, self-management, and willpower have been used interchangeably (see, Baumeister & Vohs, 2003). However, Baumeister (2002; 2010) viewed that whereas self-control refers more narrowly to conscious efforts to alter behaviours, especially restraining impulses, resisting temptations or changing one's emotions and thoughts, *self*-regulation, as a broader term, involves any effort to control or alter its own responses both consciously and unconsciously, even including the bodily processes

that keep the temperature constant and regulate the speed of the heartbeat. In the light of this distinction, self-control as a narrower sense was used in the present study.

1.3 Self-Regulation Related Outcomes

In the following section, possible self-regulation related outcomes will be reviewed briefly. Because its crucial role in human life, theories about self-regulation (or self-control) has attracted increasing attention among psychologists (see, Muraven, Baumeister & Tice, 1999). Whereas lack of self-control is associated with the majority of personal and social problems in the modern Western societies (Baumeister, Heatherton, & Tice, 1994), the presence of it seems to be associated with well-being for both the society and the individual (Baumeister, 2000).

Individual difference in trait self-control has been extensively studied in the past studies beginning with the studies on delay of gratification which showed that some individuals demonstrate a strong capacity to self-regulate consistently from the early childhood through adulthood, whereas others are consistently less successful at self-regulation (Gailliot & Baumeister, 2007).

Trait self-regulation has been accepted as a central and relatively stable feature of personality (Muraven et al., 1999). For example, in the previous longitudinal studies, it was found that as compared to children who were not good in delay of gratification, those who were good at this ability at the age four were also found to be more successful both socially and academically in their high school and college years (Shoda, Mischel, & Peake, 1990). Other studies have documented that being able to delay gratification is also associated with being calmer, resisting frustration better, being less irritable and aggressive, concentrating better, and

getting higher grades in school (Funder & Block,1989; Funder, Block, & Block, 1983).

Past correlational studies have also shown that trait self-control is closely related to a number of positive outcomes (see, Hagger, Wood, Stiff, & Chatzisarantis, 2010). For example, in a comprehensive study, Tangley, Baumeister, and Boone (2004) showed that higher scores on self-control were correlated with better adjustment (i.e., fewer reports of psychopathology and higher levels of self-esteem), less binge eating and alcohol abuse, better relationships and interpersonal skills, better management of anger and more optimal emotional response, and even higher grade point average.

Past studies have also shown that self-regulation failure is related to a number of negative outcomes. According to Heatherton and Baumeister (1996), many of the problems individuals face involve self- regulatory failure, which refers to the problems that arise when one intentionally tries to initiate, alter, or inhibit a specific response or behaviour and fails to do so. In their review, Baumeister and his colleagues (1994) concluded that the problems in today's societies, including alcohol and drug abuse, smoking, overeating, failure to exercise, crime and violence, teen pregnancy, school failure and underachievement, procrastination, money and credit problems including personal debt, bankruptcy and gambling and failure to save, AIDS and other sexually transmitted diseases, unplanned pregnancy, and domestic violence, have their roots, directly or indirectly, in self-regulation failure. Some other researches also demonstrated that failure at self-control has been linked to psychopathology, such as depression (Beck, 1976; Pyszczynski, Holt, & Greenberg,

1987; Wenzlaff, Wegner, & Roper, 1988), and obsessive or ruminative thoughts (Martin & Tesser, 1989; Wegner, Schneider, Carter, & White, 1987).

Because of its critical effects on behavioural outcome, many theories have attempted to understand the process of self-regulation and the causes of self-control failures (e.g., Bandura, 1977; Carver & Scheier, 2001; Koestner, Bernieri, & Zuckerman, 1992; Sansone & Smith, 2000). However, recent theories emphasized the state self-control as variations within individuals across time, as well as trait self-control as individual differences (Gailliot, Schmeichel, & Baumeister, 2006). One of the recent approaches is *strength model of self-control* or *ego-depletion model* developed by Baumeister and his colleagues (Baumeister & Heatherton, 1996; Baumeister, Bratslavsky, Muraven, & Tice, 1998). In the present study, within the framework of ego-depletion model, it is aimed to examine the possible factors that may cause self-control failures by depleting state self-control capacity.

1.4 Self-Control Strength Model (Limited Resource Model)

Besides trait self-control as a dispositional ability, individuals also differ on state self-control capacity which refers to the current and momentarily available resources for exerting self-control (Gailliot &Baumeister, 2007). Self-Control Strength Model (SCSM) has its roots from this idea of state fluctuations in self-control. SCSM propose that the self's executive function operates like a muscle, and thus, self-regulation as a strength requires energy to perform, and becomes weakened by excessive use or strengthened by exercise across time (Heatherton & Baumeister, 1996; Muraven, et al., 1999). As stated by Schmeichel and Baumeister (2004, p.86), self-regulatory strength refers to "the internal resources available to inhibit, override, or alter responses that may arise as a result of physiological processes, habit,

learning, or the press of the situation". The idea that exerting self-control consumes a limited resource makes a specific prediction suggesting that when people engage in an act demanding self-control, they should tend to fail at self-control on the other tasks (Muraven, Tice, & Baumeister, 1998). Baumeister et al. (1999) proposed the term "ego-depletion" to explain temporary reduction in the self's capacity or willingness caused by an initial act of self-control. SCSM proposed that only self-regulated performance is affected by ego-depletion status (Schmeichel & Baumeister, 2004).

Main assumption of SCSM is that all of different acts of self-regulation draw upon the same common limited resources (Muraven, et al., 1998). In other words, the same capacity is used for a wide range of self-control behaviours from controlling thoughts, emotions or impulses to persistence on frustrating task (Baumeister, 2000; 2002). For instance, past studies have documented that ego-depletion has an detrimental effect on impression management (e.g. Vohs, Baumeister, & Ciarocco, 2005), suppressing stereotypes and prejudice (e.g. Richeson, Trawalter, & Shelton, 2005), coping with thoughts and fears of dying (e.g. Gailliot et al.,2006), controlling one's monetary spending (e.g. Faber &Vohs, 2004), restraining aggression (e.g. DeWall, Baumeister, Stillman, & Gailliot, 2007), and managing one's intake of food and alcohol (e.g. Muraven, Collins, Shiffman, & Paty, 2005).

In the early studies of the model, self-regulatory capacity was viewed as mainly cognitive and attentional resources to cope with temptations, urges, and desires (Heatherton & Baumeister, 1996; Heatherton & Vohs, 1998). However, recent studies investigating physiological mechanism underlying ego-depletion have

shown that the self can be seen as a real energy resource rather than just a metaphor for it (Schmeichel, 2007). Gailliot et al. (2007) found that effective self-control indeed requires glucose to function completely and an act of self-control depletes blood glucose level so that any subsequent self-control attempts are impaired.

Furthermore, Inzlicht and Gutsell (2007) demonstrated the neural mechanisms underlying the self-regulation process. Lastly, Sagerstrom and Nes (2007) have shown that heart rate variability as physiological measures predicts self-regulatory strength. These studies have provided evidence that self-control effort is similar to the effort used for muscle strength and they both use the same ego energy resources. Although a few studies have measured trait self-control and demonstrated its relation to other related constructs in Turkish culture (e.g., Özbay, 2008), the state self-control capacity has not been examined in previous studies in Turkey. Therefore, one of the aims of this study is to investigate state self-control capacity in a Turkish sample by using ego-depletion procedure and to test if the controlling emotions in an experimental setting would reduce the subsequent self-control performance in a different domain.

1.4.1 Measurement of Ego-Depletion

Self-control resources may become depleted by not only brief exertions in the laboratory, but also in everyday life problems, such as stresses, academic or work demands (Twenge, Muraven, & Tice, 2004). In this study, state self-control capacity will be assessed by using both behavioural and self-report measurements.

1.4.1.1 Experimental Measurement of Ego-Depletion

Past studies have commonly used a dual-task paradigm with two unrelated self-control tasks for testing the SCSM empirically (e.g., Baumeister et al., 1998,

Muraven et al., 1998). In these experimental studies, participants are assigned to either an ego-depletion condition in which they have to consume regulatory resources in the first task, or to the control (non-depletion) condition in which participants usually engage in a task requiring nominal investment of resources. Afterward, performance on a subsequent self-regulatory task on a separate domain is assessed as a primary dependent variable. As compared to the control group, participants in the ego-depletion condition exhibit diminished performance on a second self-regulatory task as a consequence of their prior self-regulation effort (e.g., Tyler & Burns, 2008; Baumeister, Vohs, & Tice, 2007).

For example, in an early ego-depletion studies using dual-task paradigm, Muraven and colleagues (1998) demonstrated that participants instructed not to think about 'white bear' (see, Wegner, et al., 1987) were less able to suppress outwards signs of amusement while watching a funny video clip, compared to control participants who were instructed simply to list their thoughts. Similarly, in another study Vohs and Heatherton (2000) asked chronic dieters to view a sad video while either inhibiting their emotional expressions or acting naturally. They demonstrated that participants who suppressed their reactions showed decreased performance on a subsequent restraining ice-cream consumption task. In parallel with the dual-task paradigm, second part of the present study is designed to examine that emotion-regulation can impair performance on an unrelated task involving attention control.

1.4.1.2 Self-Report Measurement of Ego-Depletion

Daily life experiences such as physical health problems, psychological stresses, sleep deprivation or relationship conflicts may also lead to the depletion of ego resources (Twenge et al., 2004). For example, people are more prone to self-

control failures at the end of the day than at the beginning (Baumeister, et al., 1994) or after coping everday life stresses they become less successful at dieting (e.g., Cohen & Lichtensein, 1992) or quiting smoking (e.g., Greeno & Wing, 1994) outside the laboratory. There exist self-report measures of ego-depletion that assess the level of self-control capacity. For example, 10-item Concurrent Depletion Scale (e.g. "I felt overwhelmed with work/school", "I felt tired") and 26-item Recent Depletion Scale (e.g. "I had been trying to be more 'responsible' ") have been developed by Finkel and Campbell (2001) to assess level of ego depletion at a given time or during the week, respectively. Additionally, Twenge and his colleagues (2004) developed The Self-Control Capacity Scale (SSCCS) to measure participants' state self-control level in a classroom or other field settings. They tested the internal reliability and predictive validity of the SSCCS in two questionnaire studies and three laboratory studies. In these studies participants obtained lower scores on the SSCCS when their self-control was depleted by laboratory manipulation or those with low levels of the SSCCS scores were found to fail at self-control on a subsequent task. Other researches using the SSCCS also demonstrated that participants who reported lower levels of self-regulatory resources failed to restrain aggression (DeWall, et al., 2007), and failed to suppress death related thoughts (Gailliot, et al., 2006).

One of the aims of the present study is to adopt and validate the SSCCS into the Turkish language and employ it in examining the meditational model proposed in the study.

1.4.2 Executive Functions that Deplete Ego Resources

According to Gailliot and Baumeister (2007, p.308), "Executive control can dictate and choose what information is noticed and processed by the mind, as opposed to letting salience and the environment dictate". Accumulated studies have shown that the ego depletion hypothesis has been supported by an increasing body of research across a wide range of domains including executive self-function (Baumeister & Vohs, 2007). Baumeister et al. (2007) proposed that these domains can be categorized as emotion-control, attention-control, impulse-control, thought-control, cognitive processing, choice and volition, and social processing. Although there is an extensive amount of research testing the SCSM across all of these domains, the studies on the emotion-control and attention control domains only will be addressed in the following sections considering that these two domains are closely associated with the main theme of the present study.

1.4.2.1 Emotion Control Domain

One important sphere of self-regulation is considered as affect regulation. Muraven et al. (1998, p. 776) stated that "regulating an emotion requires overcoming one's current emotional state and replacing it with a different one". In previous studies have consistently shown that emotion regulation is an effortful process and deplete the ego resources (e.g., Baumeister et. al, 1998; Muraven & Slessareva, 2003).

In a classical ego-depletion manipulation involved emotion regulation, while participants in the experimental ego-depletion conditions are given instruction to suppress or exaggerate their emotional responses while watching the emotionally evocative (humorous or sad) film, participants in the control condition are free to

express their emotions and thus did not have to exert self-control (Moller, Deci, & Ryan, 2006). The main hypothesis is that participants who control over their emotions and emotional reactions should have decreased performance on subsequent self-regulatory task, compared to participants who let their feelings. These specific hypotheses have been supported by studies which demonstrated the detrimental effects of emotion regulation, for example, on a physical stamina measured by squeezing a handgrip (Muraven et al., 1998, study 1), persistence at unsolvable anagram or puzzle (Baumeister et al., 1998, study 3, Gailliot et al, 2007, study 6), attention control including stroop task (Inzlicht & Gutsell, 2007), impulse control including resist temptation to appetizing food (Vohs & Heatherton, 2000), tendencies toward accommodation (Finkel & Campbell, 2001, study 2), higher order cognitive processes including logic and reasoning (Schmeichel, Vohs, & Baumeister, 2003, study 2), decision making (Zyphur, Warren, Landis, & Thoresen, 2007, study 2), working memory (Schmeichel, 2007, study 4), and self-disclosure (Schmeichel, et al., 2003, study 2).

Emotion regulation was selected as the experimental manipulation for the present study for two reasons. First it is considered to be a reliable ego-depletion manipulation as demonstrated by previous studies consistently. Second, it will be used for testing the hypothesis regarding the moderating effect of parental control on depletion ego resources. Parental control practices are assumed to have a significant effect on emotion regulation domain relative to other domains. This issue will be detailed in following sections.

1.4.2.2 Attention Control Domain

Executive function of the self including attention control because "attention automatically orients toward various stimuli in the environment, and it takes self-control to override these automatic responses so as instead to remain focused on any single task or stimulus" (Gailliot & Baumeister, 2007, p. 308). Therefore, controlling attention in the dual-task paradigm is one of the most frequently used self-control domains as both independent and dependent variable (see Hagger et al., 2010).

Tasks requiring attention control to deplete self-regulatory resources are generally comprises of video of a woman being interviewed which is adopted from Gilbert, Krull, and Pelham (1988). Participants assigned to experimental ego-depletion condition are instructed to direct their attention away from the words that appeared at the bottom of the screen while a woman is talking. Participants assigned to control condition, however, are instructed to watch simply the video (Schmeichel, et al., 2003). Previous studies using this manipulation indicated that attention-regulation has detrimental effects on cognitive performance on a reasoning task and reading comprehension task (Schmeichel et al., 2003, study 1& 3); confirmatory information processing (Fischer, Jonas, Frey, & Kastenmüller, 2008, Study 1); persistence at unsolvable puzzle and blood glucose level (Gailliot et al., 2007, study 3 & 4); and thought control measured by death-thought accessibility (Gailliot, et al., 2006, study 3).

Another classical test of attention control named Stroop task requires participants attention away from the word's meaning and toward the color ink (Gailliot & Baumeister, 2007). There are both congruent and incongruent tasks in the Stroop task, in which the color and text of the printed words were matched and

mismatched, respectively (Bray, Ginis, Hicks, & Woodgate, 2008). Main hypothesis is that incongruent trials would be more time-consuming than congruent trial, because of suppressing the urge to name the target word instead of the typeface color is harder if they are mismatched (Muraven et al., 2006). Previous studies demonstrated that performance on the Stroop requires self-control and impairs subsequent persistence on self-control task (Wallace & Baumeister, 2002).

Stroop task has also been used for dependent measurement like most of other self-control tasks within the SCSM. For example, previous studies have shown the negative effect of keeping attention focused on the woman being interviewed and not on the words while watching it (Gailliot et al., 2007, study 7), defending against the threatining idea of death (Gailliot et al., 2006, study 6) or interracial interactions with black people if having a racial attitude (Richeson & Shelton, 2003) on Stroop performance.

The present study was specifically designed to investigate the effects of emotion regulation, namely suppressing emotional reactions while watching the funny or upsetting video on a subsequent Stroop color-naming task which requires attention control, and also examine some individual differences that may influence the amount of ego-depletion.

1.4.2.3 Other Self-Control Domains

Other than controlling emotion and attention, SCSM has been tested within the impulse control, thought control, cognitive processing, choice and volition, and the social processing spheres, which will be briefly explained below.

Impulse control generally defined as the ability to resist the desire for immediate gratification or override well-learned habits (Hagger et al., 2010). For

example, in ego-depletion literature impulse control is generally measured by controlling appetite require by experimental manipulations to override the desire to eat delicious chocolates and cookies and had to make themselves eat radishes instead (Baumeister & Vohs, 2003). Resisting the temptation to eat delicious food caused participants give up more rapidly on a subsequent unsolvable puzzle (Baumeister et al., 1998), and demanding cognitive task (Vohs & Heatherton, 2000, study 2). Muraven and Schmueli (2006) also created ego depletion by limiting the amount of alcohol intake, and found that the greater the temptation to drink, the greater the decline in overcoming unpleasant feelings. However, more abstract forms of impulse-control task are usually used as dependent measure in ego-depletion dual-task procedure, such as 'e-hunting task' by crossing out each letter *e* in a page of text, unless doing so violated one of several rules (do not cross off an *e* that is adjacent to another vowel) (e.g., Baumeister et al., 1998, study 4; Muraven et al., 2006, Study 2 & 4), avoiding using speech fillers in speech control task (Muraven & Slessareva, 2003, Study 2), and persistence at unsolvable geometric figure-tracing task or anagram task (e.g., Baumeister et al., 1998, studies 1 & 2; Moller et al., 2006, study 1; Wallace & Baumeister, 2002).

Thought-control task used in ego-depletion experiments is generally adopted from Wegner and colleagues' (1987) "white bear" paradigm. Participants in the ego-depletion condition are instructed to write down all their thoughts on paper but not to think about a white bear. Studies demonstrated that trying to suppress unwanted thoughts such as avoiding thinking of a white bear leads to diminished capacity of self-control (e.g., Burkley, 2008, Studies 3 and 4; Tyler, 2008, Study 4.).

Although main cognitive processes occur automatically without active direction by the self, some other higher-level cognitive operations, such as logical reasoning require self-regulation (Schmeichel & Baumeister, 2004). For example, a study by Schmeichel and his colleagues (2003) demonstrated that controlling attention and emotion had a negative effect on analytical subtest of the Graduate Record Examination (GRE) and Cognitive Estimation Test (CET) which require higher order cognitive processing, but not on the General Mental Abilities Test (GMAT) which requires basic information processing.

Making choices may also take place within the self's executive functions (Schmeichel & Baumeister, 2004). For example, in a study by Vohs, Twenge, Baumeister, Schmeichel, and Tice (2003), participants in the ego-depletion condition were asked to make a series of choices among products persisted less at immerse their hand in ice-water and consume bad-tasting drink as long as possible, compared to participants in control condition who simply were asked the frequency of their using such products.

Social processing is another self-regulatory task which is sensitive to depletion of self-control resources. They involve impression management, resistance to social influences, cognitive correction of social inference that is inhibit and replace a dispositional attribution with a situational attribution, accommodative tendencies towards romantic partner, resisting the temptation by alternatives other than current romantic partner, self-disclosure, ostracism, and suppressing stereotypes (see, Vohs & Ciarocco, 2004).

1.4.3 Moderators of Ego Depletion

Although ego-depletion effects on the subsequent self-control task in the face of failure have been mostly supported by previous research as mentioned above, some other factors may also influence the size of ego-depletion effect (Hagger et. al., 2010). Trait self-control or delay of gratification capacity is one of these factors that may influence the basic reservoir of self-control strength (Baumeister & Heatherton, 1996; Muraven & Baumeister, 2000). Additionally, Seelay and Gardner (2003) found collectivism as another individual factor that protects an individual from regulatory depletion because of its socially-oriented and chronic "practice" at self-control nature. Moreover, attachment style (Vohs et al., 2005; study 6), self-monitoring level (Wan & Sternthal, 2008), and fluid intelligence level (Shamosh & Gray, 2007) have been found to be moderating the amount of ego-depletion.

Some other researchers emphasized the situational factors, such as beginning a diet, which makes people more vulnerable to resource depletion (Vohs & Heatherton, 2000) or that a series of self-regulatory exercises make people more resistant to ego-depletion (Muraven et al., 1999). Furthermore, positive mood (Tice, Baumeister, Shmueli, & Muraven, 2007) and thinking at a highly meaningful, abstract level that incorporates long-range perspectives (Fujita, Trope, Liberman, & Levin-Sagi, 2006) are other situational factors that encourage people to overcome depletion and perform effectively.

Motivation is found as another situational factor that moderates the depletion effect. Muraven and Slessareva (2003) demonstrated that depleted participants could compensate for a lack of self-control resources when they were high in motivation. Indeed Hagger et al. (2010) proposed that mechanisms

underlying all of these individuals and situational moderators can be explained through greater motivation to allocate self-regulatory resources. Thus, understanding the mechanisms underlying the effects of motivation may help to explain state self-control failures.

1.5 Autonomous vs. Controlled Motivation

The term "self-regulation" is based on the standards of what ought (or ought not) to be indeed stems from the external (social) sources, such as laws, norms, and expectations; and individuals need specific motivation to self-regulate themselves to internalize these external standards and/rules (Baumeister, 2010). In their self-determination theory (SDT), Deci and Ryan (1985, 1991) deal with question of "how people have acquired or internalized this capacity, the possibility that there could be more than one form of self-regulation, and that different forms of self-regulation may lead to different outcomes," (Pelletier, Fortier Vallerand, & Briére, 2001, p. 280). According to SDT, degree of internalization and optimal functioning depend on the satisfaction of three basic psychological needs for autonomy along with relatedness and competence (Deci & Ryan, 2000; Ryan & Deci, 2004).

Grolnick, Deci, and Ryan (2007) defined internalization as "a process in which children progressively integrate societal values and proscriptions into a coherent sense of self". It is assumed that individuals have natural motivational propensity to internalization where external regulations about values, behaviours, and attitudes in the social surrounding are transformed into regulations by the self (Ryan, 1995). Deci and Ryan (1985) suggested that like all natural processes, the amount and quality of internalization can be either facilitated or hindered by the social context. Although the real goal of socialization is for children is assumed to carry

out these social standards volitionally (Deci & Ryan, 1997), socializers' often forestall this occurrence and lead less adaptive regulatory processes (Grolnick, Deci, & Ryan, 1997).

Unlike most other theories of internalization (e.g., Bandura, 1996), SDT views internalization as a continuum rather than dichotomy (Ryan & Deci, 2004). Different forms of self-regulation stem from well-internalized autonomous motivation to partially internalized controlled motivation on this continuum (Deci & Ryan, 2000). In this internalization continuum, the key concept that distinguishes forms of regulation is autonomy (Grolnick et al., 1997). Therefore, the regulation type in a certain domain is usually assessed by computing a general index of relative autonomous motivation (Ryan & Connell, 1989). The need for autonomy can be satisfied only by experience of freedom or sense of choice in initiating or endorsing behaviours, as opposed to being controlled or dictated by outside forces (Joussemet, Landry, & Koestner, 2008; Baumeister, 2010).

Two opposite ends of this continuum were proposed as amotivation and intrinsic motivation. Both of them refer to a lack of internalization. When people amotivated they act without intent, whereas when people are intrinsically motivated they engage in behaviour for their own sake, for the pleasure, fun and spontaneous curiosity (Deci, 1975). Other regulatory types between these two pole can be separated as autonomous or self-determined which includes identified and integrated regulations, and controlled which includes external and introjected regulations (Assor et al., 2004).

Autonomously regulated or self-determined behaviours refer to the sense of volition or willingness when engaging in a task (Deci & Ryan, 2000; Vansteenkiste,

Ryan, & Deci, 2008). While behaviour is perceived as a personally meaningful and valued in identified regulation, it is reciprocally assimilated with other aspects of one's self in integrated regulation (Deci & Ryan, 1991; Soenens & Vansteenkiste, 2009). Both of them represent autonomous regulation which suggests successful internalization (Koestner, Losier, Vallerand, & Carducci, 1996).

In contrast to autonomous motivation, controlled motivation refers to the pressure or obligation on the behaviour, which can be originated from both outside or inside the person (Deci & Ryan, 2000). When the originator is an external factor, such as controlling reward contingencies, deadlines, or pressuring expectations from others, external regulation would occur (Soenens & Vansteenkiste, 2009). When motivation originates from internal pressures, such as anxiety, emotions related to self-esteem (e.g. guilt and shame) or self-criticism, behaviours occur with introjected regulation (Ryan & Connell, 1989). People who have controlled motivation feel pressure, anxiety, and a sense of "should", instead of sense of willingness and choice (Grolnick et al., 1997). Studies that have been conducted in last three decades have provided evidence that people can differentiate internally controlling regulation from self-determined (autonomous) regulation (e.g., Ryan, 1982; R. Koestner, Zuckerman, & J. Koestner, 1987; Plant & Ryan, 1985; Ryan, Koestner, & Deci, 1991).

In sum, there exist four types of extrinsically motivated regulation reflecting different degrees of perceived autonomy. Identified and integrated regulations represent autonomous motivation and involve doing what one finds interesting or important and would be inclined to do more freely. External and introjected regulation, however, involve a sense of pressure and coercion and thus represent the

instances of controlled motivation (Ryan, Deci, Grolnick, & La Guardia, 2006; Moller et al., 2006).

1.6 Autonomous Self is Less Depleting

Extensive research has revealed found that individuals who exert self-control in an autonomy supportive situation have better outcomes and decreased likelihood of failure than the feeling forced to exert self-control (Muraven, Gagné, & Rosman, 2008). For example, Hom and Fabes (1985) found that when children were given a chance to choose between incentives, they performed better at delaying of gratification. Similarly, more recent studies have found that those who exert self-control activities for more personal reasons rather than external ones tend to be more successful at self-controlling tasks, such as dieting (Williams, Grow, Freedman, Ryan, & Deci, 1996), smoking cessation (Curry, Wagner, & Grothaus, 1990; Williams, Gagne´, Ryan, & Deci, 2002), and alcohol abstinence (Ryan, Plant, & O'Malley, 1995).

Based on the SDT, researchers assumed that being forced or pressured to exert self-control via external forces may lead to greater ego-depletion than the feeling autonomous while exerting self-control (Muraven et al., 2007; Muraven et al., 2008). A support for this assumption came from Moller et al. (2006). These researchers found that autonomously made decisions lead to less depletion than the decisions that are compelled. In another study, Muraven and his colleagues (2007) found that making participants feel compelled to exert self-control by given performance contingent rewards leads more ego-depletion than given them non-contingent rewards. Following the same line of research Muraven et al. (2008) obtained similar findings in their experimental setting in which they created

autonomy-supportive situation by manipulating experimenter's attitude and by giving participants a chance to choose. First manipulation included explaining the purpose of the task, asking how it makes participants feel participating, and trying to alleviate any concerns the participants may have, contrasted with that they generated controlling situation by ordering and expressing little interest in participants' concern. Second manipulation included giving participants a chance to choose eat or not to eat cookies conditions. These studies suggested the interactive effect of motivation between ego-depletion and self-control outcomes, and this relationship could not be explained by any other factors, such as mood, arousal or demographic variables.

1.7 Autonomy-Supportive vs. Controlling Socialization Process

Because activities that need to be internalized are not inherently interesting but useful for effective functioning in the social world (e.g., clean-up, homework, overcoming frustration), such behaviours are typically prompted by significant others (Deci et al.,1994; Ryan & Deci, 2004). Thus, SDT propose that social context is the crucial factor for determining whether the internalization will be only partial (as in introjection) or will be much fuller (as in integration) (Grolnick et al., 1997; Ryan & Deci, 2004). To better explain this, Deci et al. (1994) stated that if people do internalize behaviour regulations in circumstances that are controlling, the internalization that occurs will take the form of introjection rather than identification or integration. They will perform the behaviour because they think they should, despite not liking it and not feeling free. This stands in sharp contrast to the individuals who internalized the regulation under autonomy-supportive conditions and came to enjoy the task and felt free in performing it.

By contrast, autonomy-supportive social context is defined by providing a meaningful rationale, acknowledging the behaver's perspective, and conveying choice rather than control (Deci et al., 1994). Previous studies provided evidence that autonomy-support, when it is operationalized in this manner, is associated with greater internalization and integration (Joussemet, Koestner, Lekes, & Houlfort, 2004) across different domains, such as education (Deci et al., 1994; Williams & Deci, 1996; Assor, Kaplan, & Roth, 2002; Roth, Assor, Kanat-Maymon, & Kaplan, 2007), students functioning (Assor, Kaplan, Kanat-Maymon, & Roth, 2005), sports (Gagné, Ryan, & Bargmann, 2003), health care (Letzring, Block, & Funder, 2005), relationships (Blais, Sabourin, Boucher, & Vallerand, 1990), politics (Koestner et al., 1996), and religion (O'Connor & Vallerand, 1990).

On the other hand, internalization can take the form of introjection resulting in using controlling instruments, such as giving rewards, using deadlines, surveillance or generate expectation of gaining implicit or explicit approval for doing so (Ryan & Deci, 2004). Assor et al. (2002) define controlling teacher behaviours as suppressing criticism and independent opinions, intruding (intervening in ongoing behavioural sequences), and forcing meaningless or uninteresting activities. Deci, Schwartz, Sheinman, and Ryan (1981) found that autonomy-supportive teachers enhance the children's intrinsic motivation by encouraging children to take initiative and try to solve their own problems, in contrast to controlling teachers who prompt children's introjected regulation by pressuring them to behave by using sanctions and comparisons with other children. Controlling methods were also found to be highly correlated with anxiety and with anxiety amplification following failure (Ryan & Connell, 1989).

In short, whereas autonomy-supportive context contributes to a greater internalization and integrated or identified regulation, controlling environments are expected to be associated with external or introjected regulation (Soenens & Vansteenkiste, 2009). Deci et al. (1994) stated that although developing willingness to uninteresting activities is relevant at all developmental periods, it is perhaps most acute for children. The main reason is that parents are primary socializers at the beginning of child's birth whose aim is to make sure that their children internalize the social norms and expectations (Joussemet et al., 2008).

1.8 Parental Autonomy Support vs. Parental Control

Although autonomy supportive conditions endorse intrinsically motivated behaviours, internalized regulations must typically be introduced to the child by a socializing agent who has some relationship with that child (Grolnick et al., 1997). Therefore, parenting research in the SDT tradition has focused on the parents' role in helping or undermining how children internalize important values and guidelines (Joussemet et. al., 2008).

Grolnick and Ryan (1989) define autonomy supportive parenting as encouraging children to take initiative, allowing them to solve their own problems, take children's perspectives, and minimize the use of pressure and controls. In previous studies, it has been shown that autonomy supportive parenting is associated with greater internalization and integration. Grolnick, Ryan, & Deci, (1991) found that children who perceived their parents as more involved and as providing greater autonomy support exhibited more autonomous regulation in school. This was also shown for preschool period. For example, infants and 5- and 6-year-old children exhibited more intrinsic motivation to persist and explore in a free-play situation

when their mothers were more autonomy supportive (Grolnick, Frodi & Bridges, 1984; Deci, Driver, Hotchkiss, Robbins, & Wilson, 1993).

Furthermore, the types and patterns of parental controlling behaviours and their effects on children's development may have differential effects. Whereas parental autonomy-support is relatively a single dimensional concept, parental control involves different aspects, such as psychological or behavioural control, which have diverging implications for child's behavioural outcomes. (Barber et al., 1994; Roth, 2008).When parents are psychologically controlling, they value obedience and conformity, force children to meet demands, solve children's problems for them, take the lead in interactions, and take parental rather than the child's perspective (Grolnick & Ryan, 1989; Grolnick & Pomerantz, 2009). In addition, children in a controlling context feel they have no choice but to think or feel in ways that are dictated by socializing agents (Soenens & Vansteenkiste, 2009). Negative effects of controlling parenting on child's autonomous regulation and adjustment have been supported by various studies (e.g., Grolnick, & Ryan, 1989)

As mentioned previously, controlling socialization can be either externally or internally originated (Plant & Ryan, 1985; Ryan, 1982; Vansteenkiste, Simons, et al., 2005). Children of externally controlling parenting who use deadlines, surveillance, punishment, or rewards might have thoughts and feelings about pressured to meet requirements imposed from the environment (Soennens & Vansteenkiste, 2009). In addition, through use of guilt-induction, shaming or love withdrawal, parents may prompt internal contingencies in children such as feeling an internal compulsion to engage in the requested behaviour for not losing their self-worth (Assor et al., 2004; Deci & Ryan, 1995; Vansteenkiste, Simons, et al., 2005;

Soennens & Vansteenkiste, 2009). Considering their different effects, it is important to make a distinction between different forms of parental control (Grolnick & Pomerantz, 2009). Making distinction between internally or externally controlling socialization seems to be similar to Barber's (1996) distinction between psychological and behavioural parental control.

1.8.1 Psychological Control vs. Behavioural Control

Grolnick et al. (1997) proposed that, according to SDT, both parental structure and control are important for satisfying basic human needs, which are also essential for children's optimal socialization. Correspondingly, Barber and his colleagues (e.g., Barber, Stolz, & Olsen, 2005) argued that children have need for psychological autonomy and "controlled" at the same time, which are met by their parents when they permit children to experience, value and express their own thought and emotions, and also set consistent limits on their behaviours. Researchers have pointed out the difference between behavioural and psychological parental control, which is related to need for autonomy and relatedness especially in childhood and adolescence (Barber et al., 1994).

In previous studies on parenting (e.g., Baumrind, 1978; Maccoby & Martin, 1983) behavioural control with parental acceptance and autonomy support were viewed as components of authoritative parenting and has often been found to be associated with the positive child outcomes (Joussemet et al., 2008). Behavioural control includes effective communication and clear expectations about appropriate behaviours between parent and child, and using rewards (praise, attention, taking out to dinner) and punishments (removal of privileges) to give guidance children's behaviour related to those expectations (Barber, 1996; Barber et al., 2005; Soenens,

Vansteenkiste, Luyckx, & Goossens, 2006; Manzeske & Stright, 2009). In addition, Stattin and Kerr (2000) argued that parental "monitoring" is an important part of behavioural control which is defined as parental knowledge about child's activities outside the home (e.g., how much parents try to know where their children are after school). This behavioural parental control conceptualization is also parallel with the structure which refers to the provision of guidelines and constraints on behaviour (Grolnick et al., 1997). Given that using structure by parents was found to be facilitating children's internalization (Grolnick & Pomerantz, 2009),it is predicted in the present study that parental behavioural control would also lead autonomous regulation.

Behavioural control, if it is used moderately and in an autonomy-supportive manner, is associated with children's positive emotional and behavioural adjustment, and supports competence and fosters healthy development (Barber et al. 2005; Barber, 2002; Grolnick, 2003). Contrary, parental inadequate behavioural control is generally found to be child's problems about externalizing problems such as norm breaking behaviour, drug use, truancy, anti-social behaviour which were stemmed from self-control deficiency (e.g., Stattin & Kerr, 2000; Brody, 2003; Barber et al., 2004; Bradford et al., 2004). It can be hypothesized that these self-control deficiencies might be the result of introjected regulation type. The current study also aims to test this expectation.

In contrast to behavioural control, psychologically controlling parenting was originally identified by Schaefer (1965) as being intrusive, overprotective, possessive, directive, and controlling through guilt. Based on early work by Schafer (1965), Barber (1996) extends this concept by defining four parental tactics,

including guilt induction, contingent love or withdrawal, instilling anxiety, and invalidating of the child's perspective. When parents are psychologically controlling, they pressure their child to think, feel, or behave in particular ways by using these tactics (Joussemet et al., 2005). According to Soenens and Vansteenkiste (2009), parental psychological control is very similar concept of internally controlling parenting, and in line with the SDT literature both of them undermine intrinsic motivation and threat to the development of optimal forms of internalization (Joussemet et al., 2005). Given that healthy socialization demands that children are in need of an adequate degree of psychological autonomy and feeling of competence, inhibiting experience of autonomy through use of intrusive techniques may interfere with their ability to develop a healthy sense of self (Barber, 1996; Barber et al., 1994; Barber & Harmon, 2002). Recent studies have demonstrated the negative effect of psychologically controlling parenting on the development of a stable and integrated personal identity during the emerging adulthood (Luyckx, Soenens, Vansteenkiste, Goossesns, & Berzonsky; 2007). Past studies have also provided evidence showing that psychological control is related to child's internalization behaviours, such as depression, anxiety, loneliness, confusion, low levels of self-esteem and social competence (Barber, 1996; Garber, Robinson, & Valentiner, 1997; Petit, Laird, Dodge, Bates, & Criss, 2001, Laible & Carlo, 2004), fear of failure (Elliot & Trash, 2004), maladaptive perfectionism (Soenens et al, 2005), and low levels of self control (Finkenauer, Engels, & Baumeister, 2005).

The early studies on parental psychological control have emphasized on the consequences of using love withdrawal on children, especially. Grolnick et al. (1997), for example, showed that using of love withdrawal tends to promote

introjected rather than identified or integrated forms of internalization. More domain-specific measurements are provided by using the concept of parental conditional regard, which is extended form of love withdrawal.

1.8.1.1 Parental Conditional Regard

Parental conditional regard (PCR), as a specific form of parental psychological control, is the socialization practice that involves parental contingent affection and appreciation to their child's based on whether children display a desired behaviours or not (Assor & Roth, 2007). "PCR includes both withdrawing attention and affection when the child fails to act as expected and providing more attention and affection when the child does act as expected" (Roth, Assor, Niemiec, Ryan, & Deci, 2009, p. 1120).

In early parenting literature, researchers demonstrated the detrimental effect of PCR (especially love withdrawal) on children's developing self-esteem and adjustment (Rogers, 1951; Coopersmith, 1967). More recently, researchers have argued that PCR prompts contingent self-esteem and diminished psychological functioning (Assor et al., 2004; Grolnick et al., 1997; Roth, 2008).

From the SDT perspective, it is asserted that using performance-contingent rewards undermine autonomously intrinsic motivation (see, Deci, Koestner, & Ryan, 1999, for meta-analysis) and lead to alienated self-regulation (Joussemet et al., 2004). In parallel with this, parental conditional regard is also result in the children's introjected regulation by pressuring children to behave out of a desire to gain affection and fear of losing it (Roth, 2008). Thus, it represents a prototypic social context prompting children's own self-regard becomes intertwined with parental regard which underlies introjected regulation (Assor & Roth, 2007). For example,

Assor et al. (2004) found that parental conditional regard lead to children's feeling of shame and guilt after failure, anxiety before performance, short-lived satisfaction after success, and internal compulsion, which are indicator of introjected internalization according to SDT, and feeling disapproved of by parents and resentment toward them. In line with Assor et al. (2004), recent researchers have extended these findings in prosocial, academic and emotion control domains by showing that PCR is associated with problematic type of internalization where motivation for child's behaviour originated in concerning self-esteem (Roth ,2008; Roth et al., 2009).

In the present study, perceived parental psychological control was measured as general parenting behaviours, as well as parental conditional regards which are specific to emotion-control and academic domains. Hence, it was aimed to examine the relationship between introjected regulation and parental conditional regard on the both academic and emotion control domains.

1.9 The Current Study

Since self-regulation capacity is viewed as an unique capacity for human beings and a key for success and happiness, a number of theories have been proposed to explain how people regulate themselves (e.g., Mischel, 1974; Bandura, 1977; Baumeister et al., 1994). Extensive studies have shown that self-regulation is a crucial factor for the well-being of both society and the individual (Baumeister, 2000). Thus, its failure has been found to cause many problems including crime, addictions and substance use, teen pregnancy, and school failure (Baumeister et al., 1994).

One of the most recent theories attempted to explain the self-regulation failure is the strength model of self-control, proposed by Baumeister and his colleagues (e.g., 1996, 1998). This model is based on the idea of engaging in act of self-control depletes the limited "reservoir" of self-control capacity (Hagger et al., 2010). Until recently, this was viewed as a direct cause-effect relationship, that is, more self-control leads to more depletion (Muraven et al., 2008). However, the recent studies have shown that the influence of exerting self-control on the ego-resources differs depending on the motivation type (Moller et al., 2006).

Previous experimental studies have shown that exerting self-control in a controlling setting is more depleting of self-control strength than exerting self-control in autonomy supportive setting (Muraven et al., 2008). Self-regulation ability is shaped by societal context (Heatherton & Vohs, 1998), and the most determinant social context is generated by parents' controlling behaviours and attitudes. Behavioural controlling parenting in an autonomy-supportive fashion contributes to development of intrinsic motivation and autonomous internalization, whereas psychologically controlling parenting activates an internal pressure that leads to the introjected motivation among children (Soenenes & Vansteenkiste, 2009).

Although parenting controlling (depicted as psychological and behavioural) on motivation type of self- regulation, and the effects of motivational type on ego-depletion have been proposed, their associations have not been examined yet in the same model. Hence, one of the main purposes of this study is to examine the meditational role of self-regulation on the relationship between parenting control and ego-depletion in the same model as presented in Figure 1. In particular, it was hypothesized that perceived parental psychological control would lead to high levels

of controlled self-regulation, in turn this, would result in heightened ego-depletion. Additionally, it was expected that perceived parental behavioural control would lead to a lower levels of controlled self-regulation, in turn this, would result in a diminished ego-depletion.

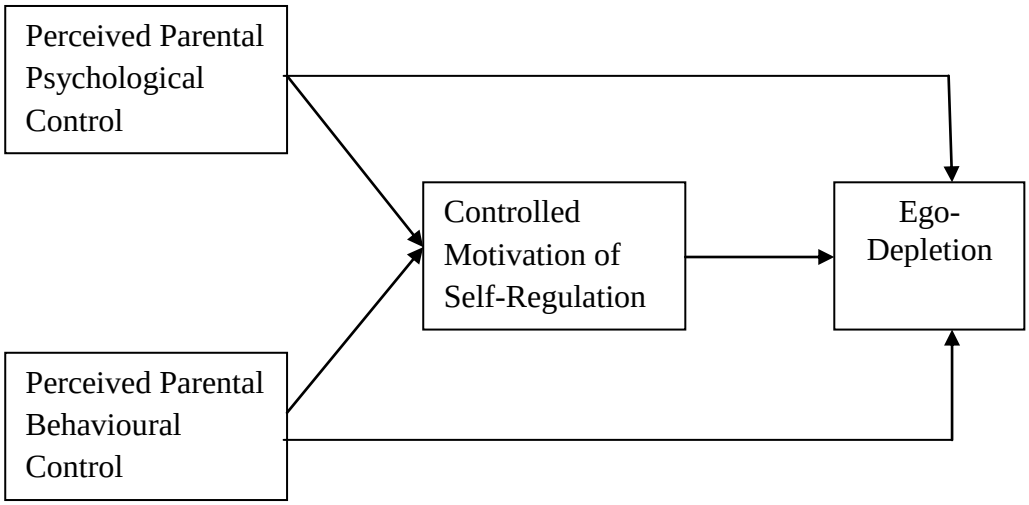


Figure 1. The Hypothetical Model of the Predictive Relationship Between Parental Psychological and Behavioural Control, Controlled Motivation of Self-Regulation, and Ego-Depletion.

The second purpose of this study is to test these hypotheses in an experimental setting. More precisely, it was predicted that participants who were asked to suppress their emotions and facial expressions while watching funny or upsetting movie would be more depleted than those who were watching them naturally. Thus, those who are assumed to deplete more are expected to perform more poorly on Stroop task (Stroop, 1935) which is shown to be associated with more general self-regulation and requires executive attention (Ellis et. al., 2004; cited in Inzlicht & Gutsell, 2007). These participants are also expected to report more ego-depletion on a measure of state self-control capacity.

Finally, using the same experimental procedure, it is aimed to examine whether levels of parental control and motivation type of self-regulation would moderate the effects of ego-depletion manipulation. In particular, the following hypotheses are proposed: 1) participants who perceived high levels of parental psychological control would show more ego-depletion, compared to participants who perceived low levels of parental psychological control; 2) participants who perceived high levels of parental behavioural control would show less ego-depletion than participants who perceived low levels of parental behavioural control; 3) participants who reported high levels of controlled/introjected motivation would show more ego-depletion, compared to participants who reported low levels of controlled/introjected motivation; and 4) participants who reported high levels of autonomous motivation would show less ego-depletion than participants who reported low levels of autonomous motivation.

CHAPTER II

STUDY 1

2.1 METHOD

2.1.1 Participants

One hundred and eighty undergraduate students (137 female and 43 male; mean age = 21.45 years, *SD* = 1.54, range = 19 - 33) from different departments of Middle East Technical University participated in the study. One participant was excluded from the data set since she/he didn't fill out three of the scales. Students received one point course credit added to their final grade for their participation.

Of participants, 57% were from the Department of Psychology and the rest were from 19 different departments at METU, who were taking the Introduction to Psychology course. The majority of the participants reported that they were staying in a dormitory (60.6%). About half of the participants (48.30%) reported that they spent most of their lives in metropolitan areas.

Whereas about half of the participants' fathers have graduated from universities (49.4%), one-third for their mothers (30.5%) had university degrees. The majority of the participants (63.3%) reported their monthly family income was between 1000 and 2999 TL. that can be considered as low to moderate level of SES in Turkey. Relatively few participants reported their family income was lower than 999 TL (7.8%) or higher than 5000 TL. (11.7%), which are considered as low and high family income levels, respectively.

2.1.2 Instruments

The questionnaires used in this study consisted of the demographic questions and three groups of measures for assessing the major constructs in the study. The first group of measures assessing the parenting behaviours included Perceived Parental Psychological and Behavioural Control Scale, and Domain-Specific Perceptions of Parental Conditional Regard Scale. These measures mainly assess participants' perceptions of their parental behaviours retrospectively. Thus all items in parenting measures were reworded to make them appropriate for participants' childhood and adolescence years. All items were asked separately for mothers and fathers in a counterbalanced order. The second group of measures was about motivation and self-regulation style which represented the dependent variables and included Introjected Regulation Questionnaire and Learning Self-Regulation Questionnaire. The final measure was the State Self-Control Capacity Scale representing another indicator of the dependent variables.

A series of principal components (exploratory factor) analyses (PCA) was performed using SPSS Version 15 to examine the dimensionality of the major measures. Prior to performing PCA, the suitability of data for factor analysis was assessed. For all measurement, inspection of the correlation matrix revealed the presence of adequate number of coefficient over .30, or above for all of the measures and The Kaiser-Mayer-Oklin value was exceeding the recommend value of .6 (Kaiser, 1970, 1974) and Bartlett's Test of Sphericity (Bartlett, 1954) reached statistical significance, supporting the factorability of the correlation matrix.

2.1.2.1 Demographic Information

Before major questionnaires, first participants filled out the demographic questions including their gender, birthday, department and class, where they live

currently, their mothers and fathers level of education, the place where they have spent most of their lives, and their families monthly income (see Appendix B1). Demographic characteristics of the sample are presented in Table 2.1

Table 2.1. Demographic Characteristics of the Sample

		N (%)
Gender	Female	136 (76%)
	Male	43 (24%)
Department	Psychology	101 (56.4%)
	Other than psychology	78 (43.6%)
Living in	House with family members	38 (21.2%)
	House with relatives	1 (0.6%)
	House with friend(s)	21 (11.7%)
	House alone	8 (4.5%)
	Dormitory	109 (60.9%)
Mother education	Illiterate	7 (3.9%)
	Literate without education	4 (2.2%)
	Primary school	42 (23.5%)
	Secondary school	13 (7.3%)
	High school	58 (32.4%)
	Graduate	51 (28.5%)
	Post-graduate	4 (2.2%)
Father education	Illiterate	2 (1.1%)
	Literate without education	1 (0.6%)
	Primary school	22 (12.3%)
	Secondary school	16 (8.9%)
	High school	49 (27.4%)
	Graduate	83 (46.4%)
	Post-graduate	6 (3.4%)
Region	Village	6 (3.4%)
	Country	3 (1.7%)
	Town	34 (19%)
	City	48 (26.8%)
	Metropolis	87(48.7%)
Income	< 999 TL.	13 (7.3%)
	1000 – 1999 TL.	69 (38.5%)
	2000 – 2999 TL.	45 (25.1%)
	3000 – 3999 TL.	23 (12.8%)
	4000 – 4999 TL.	7 (3.9%)
	5000 – 5999 TL.	7 (3.9%)
	6000 – 6999 TL.	3 (1.7%)
	7000 – 7999 TL.	2 (1.1%)
	8000 TL. <	9 (5%)

2.1.2.2 Perceived Parental Psychological Control

Sixteen-item Psychological Control Scale-Youth Self Report (PCS-YSR) developed by Barber (1996) was used to assess perceived parental psychological control. The PCY-YSR measures different aspects of parental psychological control including verbal expression (items 1 – 3), invalidating feelings (items 4 – 6), personal attack (items 7 – 9), guilt induction (items 10 – 11), love withdrawal (items 12 – 14), and erratic emotional behaviour (items 15 – 16) of parents. In Barber's (1996) original study, eight items of 16 items were retained to form a single-dimensional measuring. Internal reliabilities for this eight-item scale ranged from .85 to.72 for mothers and .86 to.74 for fathers.

The 16-item PCS-YSR was adapted to Turkish adolescence sample by (Kındap, Sayıl, & Kumru, 2008). Later, Harma (2008) used this adapted version of PCS-YSR as part of their 32-item Psychological Control Scale. Besides defined aspects at above, he added items including comparison (item 17) and shame induction (items 18 – 19) to be able to make the measure appropriate for Turkish culture. This adapted version of 19-item Perceived Parental Psychological Control Scale was presented in Appendix B2 (mother form) and B3 (father form). Four items refering to parental conditional regard (11^{th}, 12^{th},13^{th}, and 14^{th} items) were excluded from the analyses considering that these items are partially overlap with the items of Domain-Specific Perceptions of Parental Conditional Regard Scale to avoid a potential singularity effect.

Principal component analysis with varimax rotation was performed on Perceived Psychological Control Scale for both mother and farther forms separately. Initial results revealed the presence of three components for mother form, and four

components for father form with eigenvalues exceeding 1. However examination of Cattell's (1966) scree test, explained variances for factors, and other criteria for interpreting factor solution suggested a one dominant factor solution. Thus, it was decided to limit the number of factors to one component.

Since one item ("My Mother/Father is a person who acts like she/he knows what I'm thinking or feeling.") loaded under the cut-off point .32 (Tabachnick & Fidell, 2001) on both mother and father forms, it was excluded from the further analysis. The final one factor solution accounted for 42.53 % of the total variance for mother form and 50.07 % of the total variance for father form. The loadings of the items on mother form ranged from .82 to .41, and .79 to .54 for the father form. An internal consistency (Cronbach's α) for mother form was .88, and for father form was .91. A result of factor analyses was illustrated in Appendix C1.

2.1.2.3 Perceived Parental Behavioural Control

Participants' perception of their parents' monitoring their behaviours was measured using 20-item Parental Behavioural Control Scale (see Appendix B4 for mothers and Appendix B5 for fathers). This Scale was adapted to Turkish sample by Doğruyol (2008) and Harma (2008) from Kerr and Stattin's 22-item Behavioural Control Scale (2000). Original scale consisted of four subscales namely parental monitoring, child disclosure, parental solicitation, and parental control with internal reliabilities were .82, .78, .70, and .78 respectively. First factor refers to parents' knowledge of the child's whereabouts, activities, and associations; the remaining three factors refer to parental monitoring including sources of the information about child's daily activities.

In the adopted version of Parental Behavioural Control Scale, it was found single factor solution explaining 53.21% of the variance when it was administered to college students (Doğruyol, 2008). However, when it was used for adolescence sample (Harma, 2008), two interpretable dimensions were found which representing parental knowledge and parental monitoring with explained 50.85% of the total variance.

In the current study, considering scree plot and Parallel Analysis, 20-item Parental Behavioural Control Scale was limited to one component for both mother and father forms. Single factor explained 51.97 % of the total variance for mother form and 57.46% of the total variance for father form. The loadings of the items ranged from .85 to .53 on mother form, and .88 to .60 on father form. Internal reliability of maternal behavioural control scale was .95 and paternal behavioural control scale was .96. Results are presented in Appendix C2.

2.1.2.4 Domain-Specific Perceptions of Parental Conditional Regard Scale (DPCRS): Academics and Emotion-Control Domains

The Domain-Specific Perceptions of Parental Conditional Regard Scale (DPCRS) was originally developed by Assor et al. (2004) to measure college student's perceptions about degree of their parent's using conditional regard when they were child or adolescent. The DPCRS assesses parent's behaviours on four independent domains, prosocial, academics, sports, and emotion controlling behaviours. However, the items for academic and emotion control domains only were used in the present study. First, the items were translated from English to Turkish, and then, back-translated to English. Back-translated items were found to be comparable with the original English version.

Each subscale includes three items (see Appendix B6). Items in the emotion control domain refer to the suppression of anger, fear, and sadness (e.g., ‘‘As a child or adolescent, I often felt that my father’s affection toward me depended on my not showing fear and/or not crying.’’). Items in the academic subscale correspond to being engaged in and doing well at school (e.g., ‘‘As a child or adolescent, I often felt that I would lose much of my father’s affection if I did poorly at school.’’). Cronbach’s alphas were above .76 for all subscales for mothers and fathers (Assor et al., 2004).

Factor analyses with varimax rotation were performed separately for father and mother forms. Parallel with the Assor et al. (2004) findings, the results showed that participants clearly distinguished among domains for the mother form. Items loaded on academic domain between .96 to .92 with explained 88.71% of variance, and items loading ranged from .91 to .74 for emotion control domain explaining 70.58% of variances. Internal consistencies for academic and emotion control subscales were .94 and .76, respectively.

For the father form, items loadings were ranged from .98 to .94 for academic domain explaining 92.04% of the variance, and .95 to .88 for emotion control domain explaining 85.46% of the variance. Internal consistencies of subscales were .96 and .90 for academic and emotion control domains, respectively. The results of factor analyses were presented in Appendix C3.

2.1.2.5 Introjected Regulation (Controlled Motivation) Questionnaire

This measure was developed by Assor et al. (2004) to assess the feelings of internal compulsion to perform behaviours that were instrumental for receiving conditional regard based on the description of the experience of introjection in Self

Determination Theory (Deci & Ryan, 1985). There were three items for academic domain (e.g. "Sometimes I feel that my need to study hard controls me and leads me to give up things I really want to do") and three items for emotion control (e.g."I feel like there is something inside me that, in a way, drives and compels me to suppress my anger and not show it"). Cronbach's alphas were .70 for academic domain and .82 for emotion control domain in the original study (Roth et al., 2009).

The standard translation and back translation procedure was applied for this measure (see Appendix B7). Principle component analysis with varimax rotation was run and similar to Assor et al.'s (2004) findings, two interpretable dimensions were found clearly separating between emotion control and academic domain. Emotion control domain explained 46.82% of total variance with .82 internal consistency, and academic domain explained 22.93% of total variance with .70 internal consistency. The correlation between the two subscales was .66. The results of factor analyses were given in Appendix C4.

2.1.2.6 Learning Self-Regulation Questionnaire (the SRQ-L)

The Learning Self-Regulation Questionnaire was developed by Black and Deci (2000) for college students, and concerns the reasons why people learn in school course. Controlled Regulation (external or introjected regulation) and Autonomous Regulation (identified or intrinsic motivation) were formed the two subscales of the SRQ-L. The controlled regulation subscale includes 7 items and the autonomous regulation subscale includes 5 items. In the original studies, the alpha reliabilities for these two subscales ranged between .75 to .80 for the subscales.

This scale was adapted into Turkish in the present study using translation and back-translation procedure (see Appendix B8). Results of principal component

analysis revealed two interpretable dimensions representing autonomous and controlled motivation to learning. These subscales explained 43.33% of the variance together, and had eigenvalues 3.34 and 1.86 for autonomous and controlled scales, respectively. Items loaded on autonomous subscale ranged from .82 to .50, and on controlled subscale they ranged from .68 to .34. Internal consistency of autonomous motivation scale was found .78, and .64 for controlled motivation scale. The correlation between these factors was .55 (see Appendix C6).

2.1.2.7 The State Self-Control Capacity Scale (the SSCCS)

The State Self-Control Capacity Scale was designed to measure participants' self-control levels in laboratory, classroom, and field settings by Twenge et al. (2004). The PCA on 25 items demonstrated a single factor structure explaining 46.2% (Eigenvalue = 11.56) of total variance, and had highly internal consistency (Cronbach's alpha was .95).

In the present study, following translation-back translation procedure, considering theoretical background PCA with varimax rotation was limited to single-factor solution was performed on 25 items (see Appendix B9). Since one item (item 9, "If I were tempted by something right now, it would be very difficult to resist", see AppendixC7) did not load on this one-factor solution, it was excluded from the analysis. The remaining 24-item scale had a high eigenvalue (12.77) with item loading ranged from .84 to .57. Internal consistency was found .96, and explained 51.06% of the total variance.

2.1.3 Procedure

After receiving the ethic approval for the study from Middle East Technical University Human Participants Ethic Committee, this study was announced at the

psychology courses and students were invited to participate. Participants were informed about the purpose of the study, administration of the questionnaire, and experimental sessions via informed consent.

The sample of the study was composed of the students who accepted the invitation to participate in the classroom session for filling out the measures and the experimental sessions. After they signed the informed consent form, questionnaire set was applied in the classroom. Participants were asked not to write their name or any information about their identification. However, they were asked to pick a nickname and to recall it when they come to the laboratory for the experiment session in order to match a participant's data from the questionnaire and experimental sessions.

2.2. RESULTS

2.2.1. Descriptive Statistics for the Major Variables

Mean values, standard deviations, possible and observed range of variables in the study was presented in Table 2.2. As can be expected, participants generally reported low levels of psychological control from both their mothers and fathers on the indicators of general psychological control (M_{mother} = 1.88, M_{father} = 1.77) and parental conditional regard on emotion control domain (M_{mother} = 1.43, M_{father} = 1.52) and academic domain (M_{mother} = 1.48, M_{father} = 1.59). However, participants perceived moderate level of behavioural control from their parents (M_{mother} = 4.59, M_{father} = 3.53).

To test the associations between descriptive variables pearson correlations were computed. Results demonstrated that mothers and fathers education levels were highly correlated with each other (r = .71, p < .001); and they were also positively

related with monthly income level (r = .46, p < .001 for mother education level; r = .32, p < .001 for father education level).

Table 2.2. Descriptive Statistics for the Major Variables Measured in the Study.

		Mean	Standard Deviation	Possible Range	Obtained Range
Parental Psychological Control	Mother Psychological Control	1.88	.68	1 to 6	1 to 4.79
	Father Psychological Control	1.77	.81	1 to 6	1 to 4.71
Parental Behavioural Control	Mother Behavioural Control	4.59	.95	1 to 6	1.65 to 6
	Father Behavioural Control	3.53	1.21	1 to 6	1 to 6
Parental Conditional Regard (PCR)	Perceived PCR from Mother Emotional Control Domain	1.43	.68	1 to 6	1 to 5
	Perceived PCR from Mother Academic Domain	1.48	.90	1 to 6	1 to 5.33
	Perceived PCR from Father Emotional Control Domain	1.52	.95	1 to 6	1 to 5.33
	Perceived PCR from Father Academic Domain	1.59	1.10	1 to 6	1 to 6
Introjected Regulation	Emotion Control Domain	4.08	1.52	1 to 7	1 to 7
	Academic domain	3.96	1.43	1 to 7	1 to 7
Self-Regulation for Learning	Autonomous Regulation	5.75	1.03	1 to 7	2 to 7
	Controlled Regulation	3.95	.88	1 to 7	1.57 to 5.71
Self-Control Capacity	SSCC	4.28	1.32	1 to 7	1.25 to 7

To examine the mean difference between perceived maternal and paternal psychological and behavioural control, a series of paired-sample t test analyses were conducted (see table 2.3). Results revealed that there were no significant differences between parents for psychological control and parents for perceived parental

conditional regards on both domains. However, participants perceived higher levels of behavioural control from their mothers (M = 4.59) than their fathers (M = 3.53), [t (178) = 13.11, p < .001].

Table 2.3. Differences Between Perceived Parental Control Styles from Mothers' and Fathers'

	For Mothers		For Fathers		
Variables	M	SD	M	SD	t
Psychological Control	1.88	0.68	1.77	0.81	1.80
Conditional Regard on Academic Domain	1.48	0.90	1.59	1.10	-1.73
Conditional Regard on Emotion Control Domain	1.43	0.68	1.52	0.95	-1.67
Behavioural Control	4.59	0.95	3.53	1.21	13.11*

*p < .001

2.2.2 Group Comparisons on Major Variables

Gender differences on the major study variables and means for females and males were presented in Table 2.4. Independent samples t tests results revealed that compared to male participants, females perceived higher level of behavioural control from their mothers [t (177) = 6.52, p < .001], and their fathers [t (177) = 2.31, p < .05], among all parental control variables. There were no gender differences on the level of introjected regulation on both emotion control and academic domain. Whereas females had more autonomous regulation for learning than males [t (177) = 2.69, p < .01], gender difference on controlled self-regulation style was not significant. Lastly, for ego-depletion measures, results indicated that males have higher levels of state self-control capacity than females [t (177) = -1.97, p = .05], after completed 30-minute questionnaire booklet.

Table 2.4. Gender Differences on Major Variables

	Females		Males		
Variables	M	SD	M	SD	*t*
Maternal Psychological Control	1.86	0.72	1.93	0.53	-0.61
Paternal Psychological Control	1.75	0.85	1.83	0.67	-0.63
Maternal Conditional Regard on Academic	1.48	0.93	1.45	0.80	0.21
Maternal Conditional Regard on Emotion Control	1.40	0.67	1.54	0.68	-1.25
Paternal Conditional Regard on Academic	1.61	1.19	1.54	0.76	0.38
Paternal Conditional Regard on Emotion Control	1.47	0.88	1.68	1.13	-1.31
Maternal Behavioural Control	4.82	0.85	3.84	0.88	6.52***
Paternal Behavioural Control	3.64	1.23	3.16	1.07	2.31*
Introjected Regulation on Emotion Control	3.98	1.60	4.42	1.18	-1.68
Introjected Regulation on Academic	4.06	1.43	3.64	1.42	1.72
Autonomous Self Regulation	5.86	.97	5.39	1.15	2.69**
Controlled Self Regulation	3.92	.91	4.04	0.79	-0.80
State Self-Control Capacity	4.17	1.34	4.62	1.19	-1.97†

†$p = .05$, *$p < .05$, **$p < .01$, ***$p < .001$,

Comparisons between samples composed of psychology and other students via a series of independent samples *t* tests on major variables of the current study indicated that these two groups were differed on perceived parental behavioural control from their mothers [t (177) = 2.46, $p < .05$], and autonomous motivation for learning [t (177) = 2.68, $p < .01$]. According to results, mothers (M = 4.74, SD = 0.91) of the participants from psychology department had more behavioural control on their child than mothers (M = 4.39, SD = 0.97) of the participants from other department. Additionally, while participants from psychology department (M = 5.93,

SD = 0.94) reported higher levels of autonomous motivation for learning than students from other departments (*M* = 5.52, *SD* = 1.10).

2.2.3 Correlations among Study Variables

Table 2.5 presents pairwise correlations between mothers' and fathers' education level, perceived parental psychological and behavioural control, introjected, autonomous and controlled regulation, and ego-depletion status.

As seen in Table 2.5, correlations revealed that mothers' and fathers' education level were positively related with perceived behavioural control both from mothers and fathers (ranged from .22 to .29, $p < .01$). Similarly, fathers' education level was negatively related with perceived psychological control from both mothers ($r = -.19$, $p < .01$) and fathers ($r = -.15$, $p < .05$), and paternal conditional regard on academic domain ($r = -.19$, $p < .01$). However, only mother education was negatively related with maternal conditional regard on emotion control domain ($r = -.15$, $p < .05$).

Perceived psychological control from mothers and fathers ($r = .45$, $p < .001$) and perceived behavioural control from mothers and fathers ($r = .52$, $p < .001$) were highly correlated with each other. Moreover, the constructs of perceived parental psychological and behavioural control were found to be negatively correlated from each other (ranged from -.16, $p < .05$ to -.37, $p < .001$).

Whereas introjected regulation in emotion control domain was positively correlated with perceived parental psychological control from mothers ($r = .22$, $p < .01$) and fathers ($r = .29$, $p < .001$), it was negatively correlated with perceived parental behavioural control from mothers ($r = -.15$, $p < .05$) and fathers ($r = -.24$, $p < .001$). As well, introjected regulation in emotion control domain was highly

correlated with perceived parental conditional regard for both emotion control (r = .32 and r = .42, p < .001, for mothers and fathers respectively) and academic (r = .30 and r = .33, p < .001, for mothers and fathers respectively) domains. Introjected regulation in academic domain was positively correlated with maternal psychological control (r = .19, p < .05), paternal psychological control (r = .26, p < .001), maternal conditional regard for academics (r = .20, p < .01), and paternal conditional regard for both academics (r = .28, p < .001) and emotion control (r = .19, p < .01). Besides, it was unrelated with parental behavioural control.

Autonomous motivation for learning was found to be positively correlated with perceived behavioural control from mother (r = .18, p < .05), and father (r = .25, p < .001). Though, controlled motivation for learning was positively correlated with perceived psychological control from father (r = .19, p < .05). It was also found to be positively correlated with perceived conditional regard from mother (r = .18, p < .05) and father (r = .17, p < .05) for academic domain.

Finally, state self control capacity was negatively correlated with maternal psychological control (r = -.24, p < .001), paternal psychological control (r = -.15, p < .05), and paternal conditional regard for academic (r = -.18, p < .05) and emotion control (r = -.20, p < .01) domains. It was also found to be negatively correlated with introjected regulation for both domains (r = -.27, p < .001, for emotion control domain; r = -.34, p < .001, for academic domain), and controlled regulation type for learning (r = -.18, p < .05).

Table 2.5. Bivariate Correlations among Major Variables (N = 179)

		Education level		**Parental Psychological Control**								**Regulation Type**				**Ego.dep**
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
***Education Level**	1. Mothers'															
	2. Fathers'	.71*														
Parental Psychological Control	3. PCMother	-.06	-.19*	(.88)												
	4. PCRM_EC	-.15†	-.11	.39**	(.75)											
	5.PCRM_A	-.04	-.10	.51**	.56**	(.94)										
	6. PCFather	-.14	-.15†	.45**	.33**	.40**	(.91)									
	7. PCRF_EC	-.01	-.05	.40**	.68**	.58**	.53**	(.90)								
	8. PCRF_A	-.14	-.19*	.38**	.56**	.62**	.65**	.70**	(.96)							
Parental Behvioural Control	9. BCMother	.25**	.27**	-.37**	-.29**	-.14	-.16†	-.20*	-.24**	(.95)						
	10. BCFather	.22*	.29**	-.22*	-.20*	-.14	-.31**	-.16†	-.31**	.52**	(.96)					
	12. IR_A	-.13	-.09	.19†	.09	.20*	.26**	.19*	.28**	.07	-.06	.38**	(.70)			
	13. AutoR	-.05	-.01	-.12	-.04	.05	.00	-.06	.05	.18†	.03	.00	.06	(.78)		
	14. ContR	-.10	-.06	.12	.11	.18†	.19†	.13	.17†	-.02	-.06	.23*	.27**	.30**	(.64)	
Ego-depletion	15.SSCC	-.08	-.05	-.24**	-.12	-.13	-.16†	-.20*	-.18†	-.00	-.01	-.27**	-.34**	.12	-.18†	(.96)

†$p < .05$, *$p < .01$, **$p < .001$ *Note.* Conbach's alpha were given at diagonals

Note: PCMother: Perceived psychological control from mother; PCRM_EC: Parental conditional regard from mother on emotion control domain; PCRM_A: Parental conditional regard from mother on academic domain; PCFather: Perceived psychological control from father; PCRF_EC: Parental conditional regard from father on emotion control domain; PCRF_A: Parental conditional regard from father on academic domain; BCMother: Perceived behavioural control from mother; BCFather: Perceived behavioural control from father; IR_EC: Introjected regulation on emotion control domain; IR_A: Introjected regulation on academic domain; AutoR: Autonomous self-regulation for learning; ContR: Controlled self-regulation for learning; SCC: State self control capacity

* For mothers' and fathers' education levels: 1: illiterate, 2: literate without education, 3:primary school, 4:secondary school, 5: high school, 6:graduate, 7: post-graduate

2.2.4 Predicting Motivation Type and Self-Regulatory Style from Parenting Variables

A series of hierarchical regression analysis were conducted to test the unique contributions of parental psychological control and behavioural control on motivation and self-regulatory style after controlling for the effect of gender. Results indicated that parental control variables significantly predicted introjected regulation on emotion control domain [R^2 = .22, F (9, 177) = 5.21, p < .001] and academic domain [R^2 = .14, F (9, 177) = 3.06, p < .01]. However, only unique contribution of perceived conditional regard from father for emotion control domain (β = .32, p < .01) and perceived behavioural control from father (β = -.18, p < .05) on introjected regulation in emotion control was significant. Specifically, as the level of perceived conditional regard from father in emotion control domain increases and the level of perceived behavioural control from father decreases, introjected regulation regarding emotion control also increases. Furthermore, introjected regulation on academic domain was significantly predicted by perceived behavioural control from mother (β = .21, p < .05), that is the level of maternal behavioural control increases introjected regulation regarding academics also increases.

On the other hand, autonomous or controlled regulations for learning were not predicted by any of the parenting variables.

Table 2.6. Predicting Introjected Regulation from Parental Psychological Control Behaviours

	Introjected Regulation	
	Emotion Control Domain	Academic Domain
Variables	β	β
Gender	.13	-.13
R^2	.02	.02
Maternal Psychological Control	.02	.15
Paternal Psychological Control	.04	.06
Maternal Conditional Regard on Academic	.06	.00
Maternal Conditional Regard on Emotion Control	.04	-.11
Paternal Conditional Regard on Academic	.08	.22
Paternal Conditional Regard on Emotion Control	.32**	.05
Maternal Behavioural Control	.08	.21*
Paternal Behavioural Control	-.18*	-.12
R^2	.22	.14

*p < .05, **p < .01

2.2.5 Predicting State Self-Control Capacity from Self-Regulatory Styles

To see the unique contributions of self-regulatory styles on state self-control capacity, after controlling for the effect of gender, hierarchical regression was performed. Results revealed that state self-control capacity was significantly predicted by gender (β = .15, p = .05), [R^2 = .02, F (1, 178) = 3.90, p = .05]. After unique contribution of gender was eliminated, motivation and self-regulatory styles were still significantly predicted the state self-control capacity [R^2 = .21, F (5, 178) = 8.95, p < .001]. According to results, as the levels of controlled regulation style for learning (β = -.15, p < .05), introjected regulation on emotion control (β = -.18, p < .05) and academic domain (β = -.22, p < .01) decreased, and autonomous regulation style for learning (β = .22, p < .01) increased, state self-control capacity was heightened.

Table 2.7. Predicting State Self-Control Capacity from Self-Regulatory Style.

Variables	State Self-Control Capacity β
Gender	.15†
R^2	.02
Introjected regulation on emotion control	-.18*
Introjected regulation on academic	-.22**
Controlled self-regulation	-.15*
Autonomous self-regulation	.22**
R^2	.21

†p = .05, *p < .05, **p < .01

2.2.6 Mediation of Self-Regulation between Parenting Control Style and Ego-Depletion

The current study proposed a conceptual model positing that the effects of perceived parental control style from mothers and fathers on ego-depletion would be mediated by controlled self-regulation style. Specifically, it was expected that while there would be a positive effect of parental psychological control on controlled regulation style, which in turn decreases the state self-control capacity. Parental behavioural control, in contrast, would have negative effects on controlled regulation, which leads increased state self-control capacity (see Figure 1).This proposed model was tested by a structural equation modelling (SEM) analysis using Lisrel 8.30 program (Jöreskog & Sörbom, 1993). Partial correlation matrix controlling for gender was used as input and the maximum likelihood estimation technique was employed in all SEM analyses.

Perceived parental behavioural control and self-control capacity variables were unidimensional structures. To have analyses with latent variables with multiple indictors, these two variabls were categorized into parcels for SEM analyses to provide better fitting solutions and less bias estimates of structural parameters

(Bandalos, 2002). Thus, perceived parental behavioural control and state self-control capacity were categorized into three- and two-parcels, respectively using principal component analyses.

Standard two-step approach suggested by Anderson and Gerbing (1988) was followed. To do that, first, a measurement model was tested to examine how well the measured variables serve as the indicators for the proposed latent variables and to test the correlations between latent variables. Second, proposed structural model together with the several alternative models were tested.

2.2.6.1 The Proposed Mediational Model

In the proposed mediational model in Figure 2, there were six latent variables, which were represented by oval shapes, namely perceived psychological control and behavioural control from mothers and fathers, controlled regulation style, and ego-depletion. The indicator variables were represented by rectangle shapes. In all SEM analyses, both perceived psychological control and behavioural control from parents had three indicators. Maternal psychological control was measured by general psychological control perceived from mother (MPC), maternal conditional regard for academic domain (MCRA), and maternal conditional regard on emotion control domain (MCREC). Similarly paternal psychological control was measured by general psychological control perceived from father (PPC), paternal conditional regard for academic domain (PCRA), and paternal conditional regard on emotion control domain (PCREC).The three parcels of perceived parental behavioural control from mother (BCMP1, BCMP2, BCMP3) and father (BCFP1, BCFP2, BCFP3) were the indicators of latent variables representing perceived maternal behavioural control and paternal behavioural control. Controlled self-regulation style had three

indicators, namely introjected regulation for academics (IRA), introjected regulation for emotion control (IREC), and controlled regulation style for learning (CONT). Finally, SSCCP1 and SSCCP2 were the parcels of state self-control capacity which was reversed coded.

After the three paths (correlated errors) between the indicators were added between the error terms regarding the suggestions of modification indices, estimation of the measurement model provided a good fit to the data [$\chi^2(101, N=179) = 207.65$, $p<.001$, GFI=.88, AGFI=.82, NNFI=.86, CFI=.90, RMSEA=.08]. These paths were between (1) perceived conditional regard form father on emotion control domain and perceived conditional regard from mother on emotion control domain; (2) first parcel of paternal behavioural control and first parcel of maternal behavioural control; and (3) second parcel of paternal behavioural control and second parcel of maternal behavioural control. All of these correlated errors added to the model can be theoretically justified and consistent with the expectations within the parenting dynamics.

As presented in Figure 2, all of the indicators loaded significantly on their latent variables. The loadings of the three indicators for each latent variable ranged between .38 to .63 for maternal psychological control, between .21 to .48 for paternal psychological control, between .13 to .53 for maternal behavioural control, between .10 to .44 for paternal behavioural control, and between .51 to .91 for controlled regulation style. The loading of the ego-depletion were .50 and .51 (reverse coded) after its unreliability was accounted for.

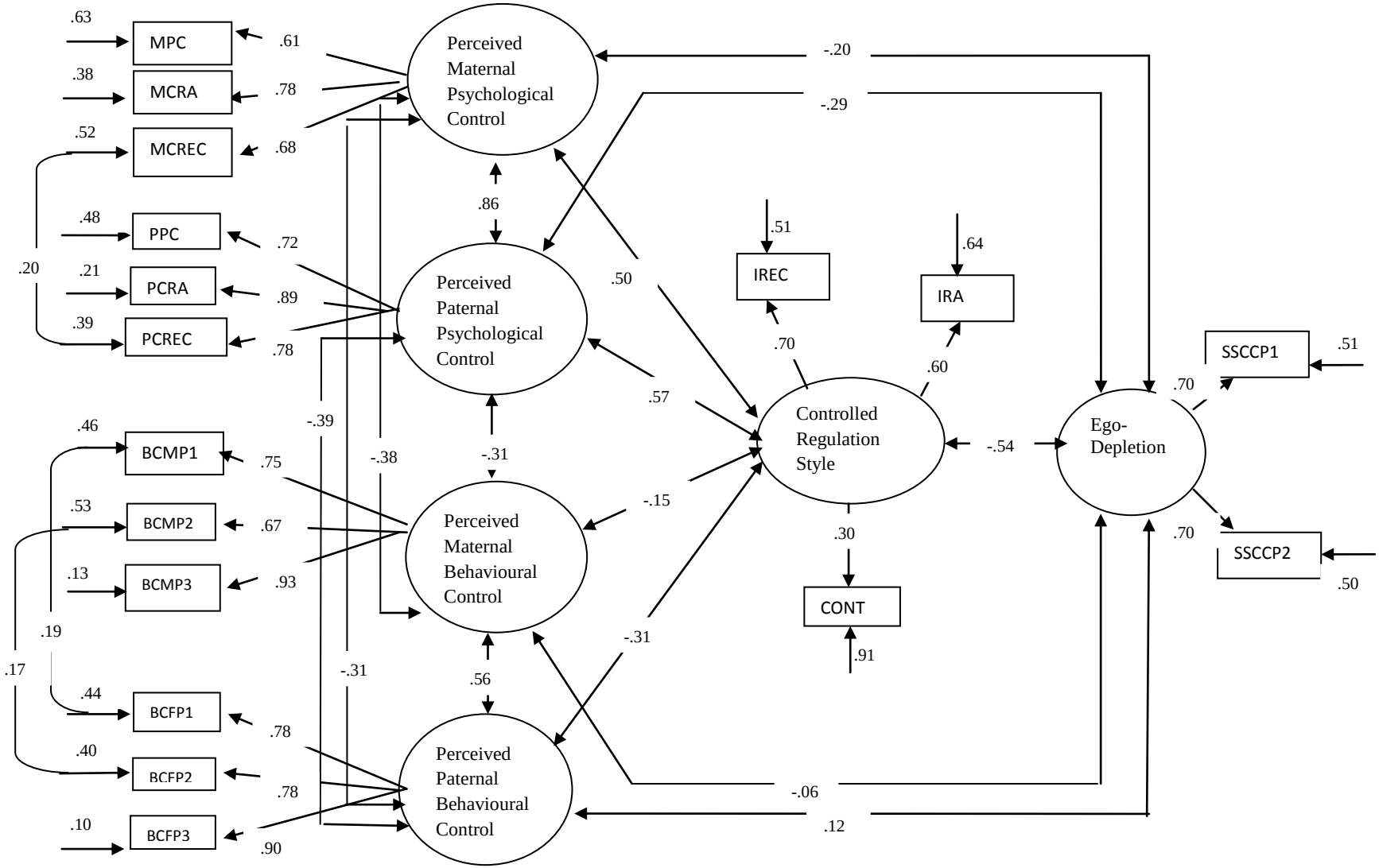
Structural correlations between latent variables demonstrated a very strong positive relationship between perceived maternal psychological control and paternal

psychological control (r = .86, p < .01) suggesting that particapants perceive a general parental psychological control rather than a specific maternal or paternal control. The structural correlation between perceived maternal behavioural control and paternal behavioural control (r = .57, p < .01) was strong. As expected, perceived maternal psychological control was negatively correlated with maternal behavioural control (r = -.38, p < .01) and parental behavioural control (r = -.31, p < .05). Furthermore, a negative relationship was found between perceived paternal psychological control and paternal behavioural control (r = -.39, p < .01) and maternal behavioural control (r = -.31, p < .01). Moreover, controlled regulation style was positively correlated with perceived psychological control from mother and father (r = .50, r = .57, p < .01, respectively), whereas negatively correlated with perceived behavioural control from father (r = -.31, p < .05). Finally, ego-depletion (reverse coded) representing self-control capacity was negatively and significantly correlated withpaternal psychological control (r = -.29, p < .05) and positively with controlled self-regulation (r = -.54, p < .01).

Considering that strong structural correlation between the latent variables of maternal and paternal psychological control (r = .86) suggests a possible overlap between these variables, a single latent variable tapping parental control with 6 indicators were created. Indicators satisfactorally loaded on this new psychological control latent variable .54 for maternal psychological control, .71 for maternal conditional regard on academics, .64 for maternal conditional regard on emotion-control, .70 for paternal psychological control, .88 for paternal conditional regard on academics, and .79 for paternal conditional regard on emotion-control. The new model with 5 latent variables fit to the data better than the initial model [χ^2(106,

N=179) = 231.23, p<.001, GFI = .87, AGFI = .81, NNFI = .85, CFI = .88, RMSEA = .08].

Figure 2. Measurement Model for the Proposed Mediational Model



2.2.6.2 The Proposed Structural Model

To test the mediational model, which posited that ego-depletion would be predicted by parenting control style via mediational role of controlled regulation style, the structural model was formed with specific paths. Because of perceived psychological control from mother and father were highly dependent to each other, these were combined under one latent variable, namely parental psychological control. In proposed model, the specified paths were from: 1) perceived parental psychological control to controlled self-regulation; 2) perceived maternal behavioural control to controlled self-regulation; 3) perceived paternal behavioural control to controlled self-regulation; 4) controlled self-regulation to ego-depletion.

For testing the proposed model, first, full-mediation model including all specified paths above was tested. The test of the proposed mediational model provided a weak fit to the data [χ^2(109, N=179) = 231.51, p<.001, GFI = .87, AGFI = .81, NNFI = .86, CFI = .88, RMSEA = .08]. The results indicated that perceived parental psychological control (β = .55) but not perceived behavioural control form mothers (β = .13) or fathers (β = -.17), predicted controlled self-regulatory style. Moreover, ego-depletion was predicted by controlled self-regulatory style (β = -.53). Proposed full-mediational model presented in Figure 3.

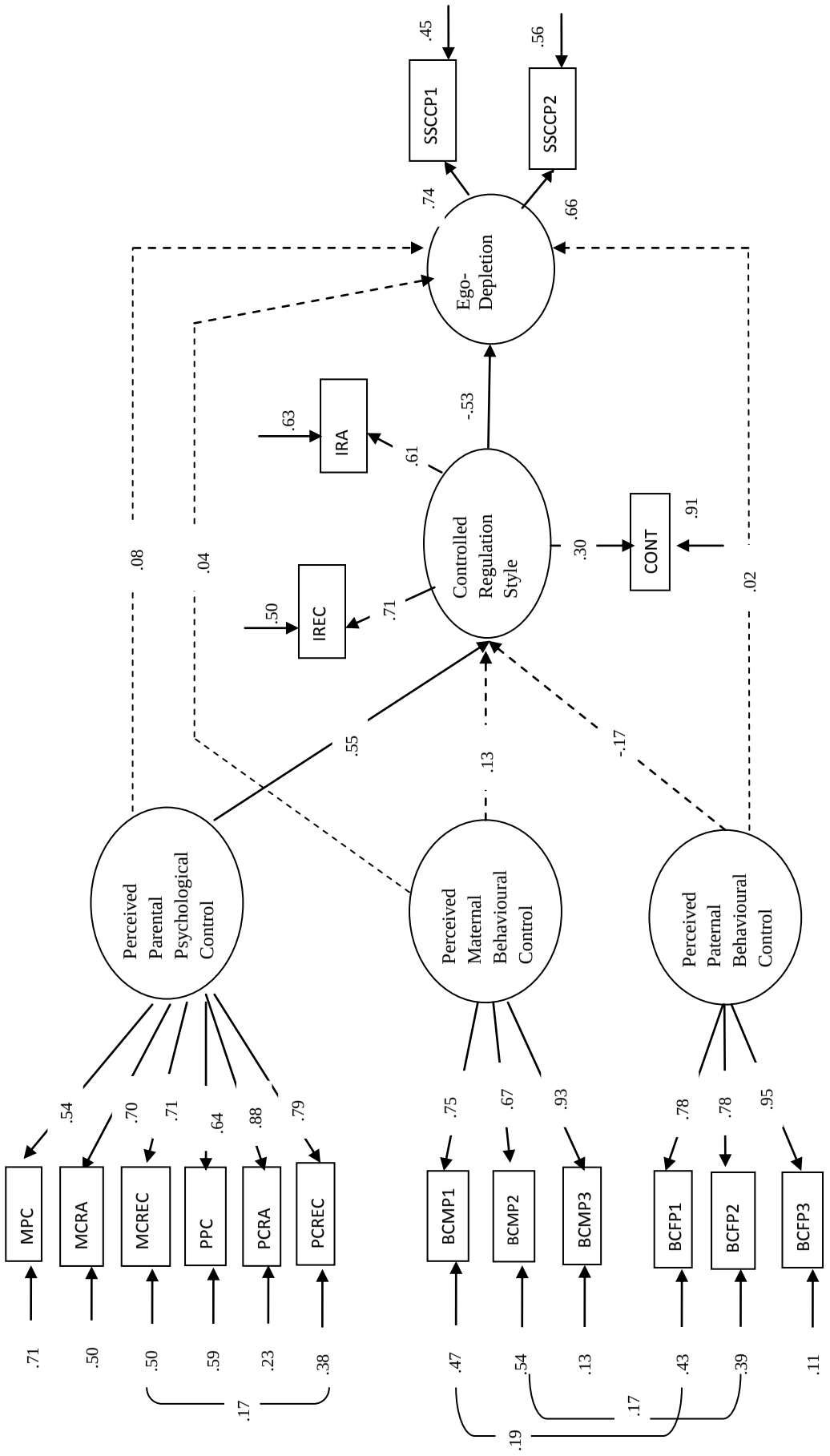


Figure 3. The Structural Model for Full-Mediation Model

The results of the full-mediation model suggested that perceived psychological control from parents predicted more controlled motivation for self-regulation, and in turns leads to high levels of ego-depletion. However, perceived behavioural control from mother and father did not predict ego-depletion and controlled self-regulation. Therefore, the final proposed mediation model was tested after trimming these insignificant paths, including paths were from perceived parental psychological control to controlled self-regulation, and from controlled self-regulation to ego-depletion, only (see Figure 4). The results of the testing proposed mediation model indicated an acceptable fit to the data [χ^2(111, N=179)=234.33, p<.001, GFI=.87, AGFI=.82, NNFI=.86, CFI=.88, RMSEA=.08]. According to results, perceived psychological control from parents predicted controlled self-regulation (β = .57), and controlled self-regulation, in turns, predicted state self-control capacity (β = -.53). In particular, participants perceived more psychological control from their parents, reported more controlled self-regulation style, which leads to less state self-control capacity (standardized indirect effect size = .30, p<.01). Perceived psychological control from parents explained %30 variance in controlled self-regulation, and perceived psychological control from parents together with controlled self-regulation explained %32 variance in ego-depletion.

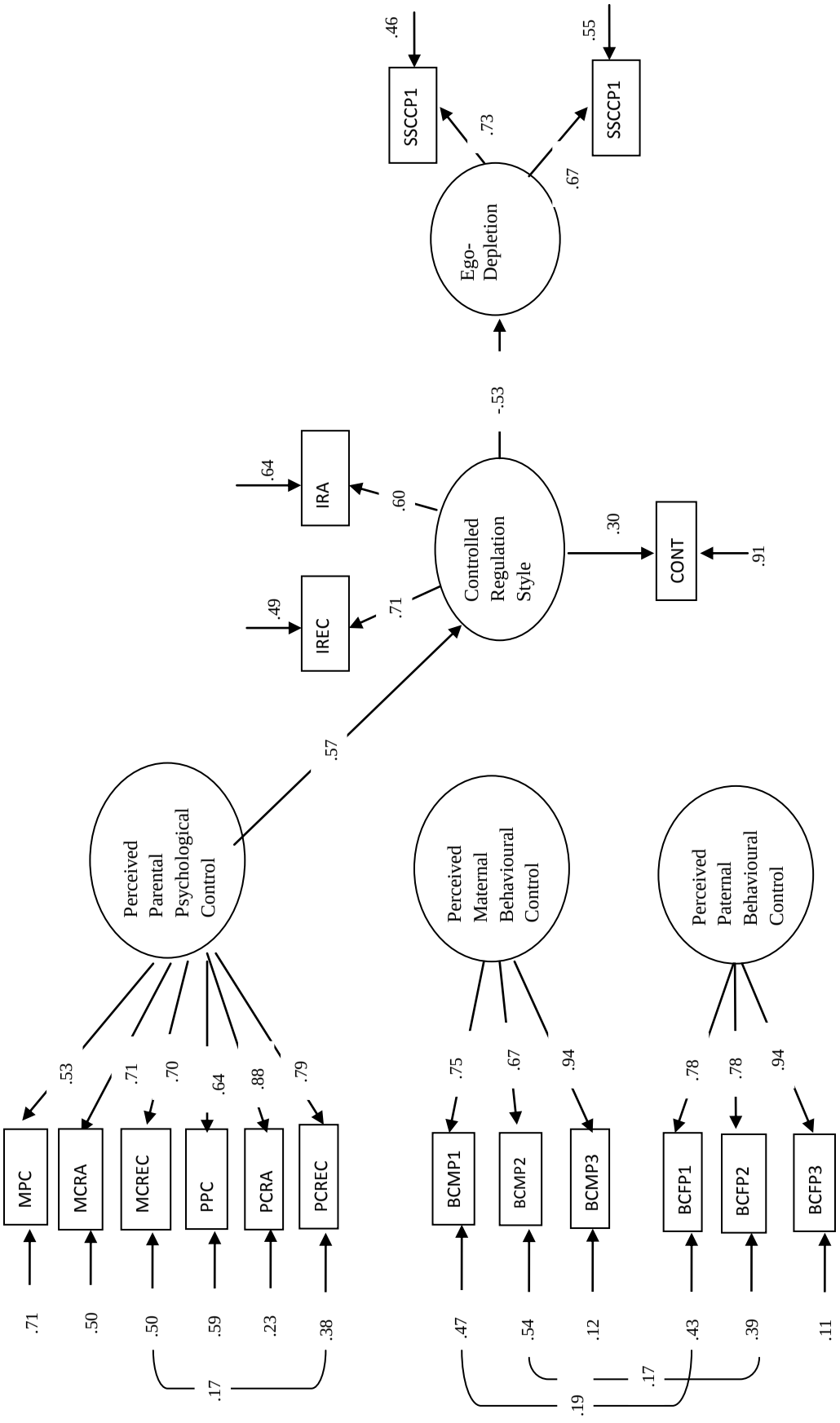


Figure 4. The Proposed Structural Mediation Model

CHAPTER III

STUDY 2

The results of the first study has shown that parenting control and self-regulation capacity were associated with ego-depletion capacity as an indication of self-control strength. Considering that first study provided correlational evidence, in the second study, the effect of parenting control on self-control-strength was tested in an experimental design. It was hypothesized that performing emotion regulation undermines performance both on a subsequent unrelated self-control task and reduced self-control capacity. More precisely, participants who were asked to suppress their emotions and facial expressions while watching a funny or an upsetting movie would be more depleted ego energy than those who were watching them naturally, and therefore, they would perform more poorly on Stroop task which is thought to be associated with more general self-regulation and requires executive attention (Ellis et. al., 2004; cited in Inzlicht & Gutsell, 2007) and would show reduced self-control capacity on the measure of the State Self-Control Capacity Scale.

It was further examined whether self-regulatory style, emotion-regulation style, or perceived parental control style would moderate the relation between ego depletion conditions and self-control performance on the Stroop task or self-control capacity.

3.1 METHOD

3.1.1 Participants and Design

Those who participated in the first study and filled out the measures of parental control and self-regulation were invited to participate in the second study. Ninety two of these participants took part in the laboratory sessions about 2 to 6 weeks following the completion of the first study and received partial course credit for their participation. Because of Turkish is not his first language, one participant's data were excluded from all analyses. Thus the final sample was 91 students (70 female and 21 male) with a mean age of 21.73 (*SD* = 1.31).

Participants were randomly assigned to the conditions of a 2 (ego depletion: emotion control vs. no control) X 2 (Type of video: funny vs. upsetting) between subject design. The main dependent variables were the Stroop performance and self-reported scores on the SSCCS.

3.1.2 Procedure

Individual self-report measures including perceived parental control style, self-regulation and motivation type were assessed in the first study. When participants arrived at the laboratory, they were seated in the small chambers in front of the personal computers (PCs) and webcam. All participants were individually tested in approximately 30 minutes. After participants signed a consent form, general procedure was briefly explained. Based on the conservation of resources model (Muraven et al., 2006) as mentioned in chapter 1, the aim of the experiment was presented and explained to the participants as to see whether expression or suppression of emotions would affect memory. They were told that after watching an 11-min video film, they would ask to fill out some memory questions about the film.

Participants received instructions corresponding to ego depletion and no depletion conditions adapted from Baumeister et al. (1998) and Vohs and Heatherton (2000). Participants received the following instruction in the *emotion-control condition*: "During the film, please completely suppress all of your internal feelings and emotional response you may have show on your face. Try to remain facially and affectively neutral as possible as you can. Your facial reactions will be videotaped while watching the film, so it is essential to try to conceal any emotional reactions." Participants received following instruction in the control (no emotion control) *condition*: "During the film, please show all of your internal feelings and emotional response you may have show on your face naturally. Try to be as natural as possible, both on inside and out. Your facial reactions will be videotaped while watching the film, so it is essential to try to let them flow naturally." Past research has shown that suppressing emotions require much more self-control than express them (e.g., Muraven and Slessareva, 2003; Muraven et al., 1998). It was hypothesized that participants who were instructed not to show emotions would deplete more self-control strength than participants who were instructed to show them naturally.

Participants were randomly assigned to either a funny video condition or an upsetting video condition. In funny video condition, participants watched some parts from Cem Yılmaz's very funny stand-up show (2009) for 11 minutes. In the upsetting video condition, participants watched a series of very severe traffic accidents scenes for 11 minutes. Especially for participants who watched an upsetting video, it was emphasized that regardless of their extra course credit for participation, they could stop watching the video whenever they want as was already stated in the informed consent form.

After giving the instructions above, webcam was started for videotaping participants while they were watching the video to ensure that participants were followed the instructions and to rate their emotional expressivity. It was expected that participants who were asked to suppress their emotions while watching video film would be less expressive than those who were asked to watch it naturally. After starting the video recorder, the experimenter explained them how to start the video film and left the room for 11 minutes to make sure that the participants feel more comfortable.

When the video film ended, the experimenter returned the room and asked participants to answer the question about the difficulty of watching the video film as instructed (*1* = not at all difficult to *7* = very difficult). This measure served to check of the effort required to accomplish the emotion control task. Because of emotion regulation involves active attempts to suppress or modify emotions, participants in the ego-depletion condition would expected to rate the task as more difficult than participants in the control condition (Schmeichel et al., 2003; Schmeichel, 2007).

Participants also rated the emotional charging the video film (*1* = not at all funny/upsetting to *7* = very funny/upsetting). There should be no significant difference between emotional-control depletion and no depletion conditions just because of the content of the video film.

After completing the manipulation checks, participants were asked to fill out an adapted version of the SSCCS (Twenge et al., 2004). It was hypothesized that participants in the emotion-control condition would show reduced self-control capacity on the SSCCS than participants in the no control condition.

After the video film ended, parallel with Baumeister et al.'s (1998) experiment procedure, the experimenter told a fake story to participants that they would have to wait at least 10 min. after the film to allow their sensory memory of the movie to fade. They were asked if they want to help the experimenter to collect some preliminary data for future research by completing a Stroop task during that time. The reason of using the Stoop task, which was the main behavioural dependent measure, was not concealed considering the purpose of the experiment.

In the color-naming Stroop task, the ink colors (red, green, blue, black) were congruent at 36 times and incongruent at 36 times to the semantic meaning of the same four color words. Each condition contained equivalent numbers of color words. Participants were asked to read the words out loud while ignoring the ink color. The Stroop tasks were presented on the computer screen and reaction time were recorded by the Direct RT software. First five trials were presented as practice and were not included in the analysis. The number of error rates for each participant was recorded. It was demonstrated that the Stroop task requires the participant to override an automatic response and in that sense it requires self-regulation (e.g. Gailliot et al., 2007) and challenge people executive functioning capacities (Kane & Engle, 2003). Therefore, it was hypothesized that emotion-control would deplete self-control capacity, as measured by Stroop task (e.g., Wallace & Baumeister, 2002).

In the light of the previous research, it was expected that participants who suppressed their emotions and facial expressions while watching the video film would show more stroop effect and errors than participants who watched the same video film naturally.

After participants completed the Stroop task, a final two probe questions about video film ("how many scenes the film included and what they were") that assess the memory were asked. This was done to maintain the cover story about the study of emotion-regulation and memory. Thus, participants were not aware of the actual purpose of the study, nor did they have any reason to suspect that their reasons for suppressing their emotions and facial expression might influence their self-control performance. Lastly, they were given a debriefing form, thanked, and dismissed.

3.2 RESULTS

3.2.1 Manipulation Checks

As the first manipulation check an independent judge blind to the conditions and the hypotheses of the study counted the facial expressions of the participants while they were watching the emotionally charged video film and rated how emotionally expressive participants' faces were on a continuous scale from 0 (not at all) to 100 (extremely) (Baumeister et al, 1998; Schmeichel, 2007). While the first manipulation was checked, it was noticed that one participant was sleeping when she was watching the film; therefore she was excluded from all analysis. A 2 (ego depletion: emotion control vs. no control) x 2 (video type: funny vs. upsetting video) between-subjects ANOVA on participants' emotional expressivity was conducted. As expected, results demonstrated that participants assigned to ego-depletion condition (M = 15.85, SD = 20.76) were less emotionally expressive than participants assigned to control condition (M = 51.93, SD = 28.69), [F (1, 78) = 51.73, $p < .001$, $\eta^2 = .40$]. However, the type of video's main effect was also significant [F (1, 78) = 15.32, $p < .001$, $\eta^2 = .16$].This results suggesting that participants assigned to funny

video condition (M = 43.39, SD = 30.35) were more emotionally expressive than participants assigned to upsetting video (M = 24.39, SD = 28.55) condition. On the other hand, interaction between ego-depletion and type of video conditions was not significant.

As a second manipulation check, a 2 ego depletion (emotion control vs. no control) x 2 video type (funny vs. upsetting video) between-subjects ANOVA on participants' perceived difficulty of the task was conducted to examine the effect of the ego-depletion manipulation. As expected, participants in the ego depletion condition (M = 3.80, SD = 1.44) found the task was more difficult than those in no control condition (M = 1.92, SD = 1.22), [F (1, 86) = 46.95, $p < .001$, $\eta^2 = .35$]. In addition, the difference between participants who watched funny video and who watched upsetting video also reached significant level in terms of perceived task difficulty. Participants who watched the upsetting video (M = 3.16, SD = 1.74) found the task more difficult than the participants watching the funny video (M = 2.57, SD = 1.48), [F (1, 86) = 5.22, $p < .05$, $\eta^2 = .06$]. The interaction between ego depletion conditions and type of video did not reach significance.

Another 2 x 2 between subject ANOVA on participants' perceived funniness or upsetting about the video revealed no significant differences, for ego-depletion manipulation main effect [F (1, 46) = 1.08, n.s.], for video type main effect [F (1, 46) = 1.55, n.s.], and for the interaction [F (1, 46) = 0.58, n.s.]. These results indicated that the differences in the dependent measures between the conditions cannot be attributed to a perception of upsetting or funniness of the video film.

3.2.2 Stroop Task Performance

After the stroop data of 8 participants were excluded from the sample due to the various reasons, such as color blindness or cannot respond to stroop task accurately consistent with the instructions, remaining 83 participants' data were included analyses. The Stroop effect scores as a first dependent variable was obtained by mean congruent trials reaction times subtracted from mean incongruent trials reaction times. Mean reaction time did not include wrong answers. A 2 (ego-depletion: emotion-control vs. no control) x 2 (type of video: funny vs. upsetting) between-subjects ANOVA on stroop scores revealed a significant main effect of ego-depletion condition [F (1, 79) = 9.14, $p < .01$, $\eta^2 = .10$]. Consistent with the prediction, in emotion-control (ego depletion) condition, participants showed more stroop effect (M = 132.13, SD = 60.66) than participants in the control condition (M = 95.49, SD = 52.02). The main effect for video type [F (1, 79) = 2.45, n.s.] and the interaction between ego-depletion and video type [F (1, 79) = 0.88, n.s], however, did not reach significant level. These results can also be interpreted as an indication of the effectiveness of ego-depletion manipulation.

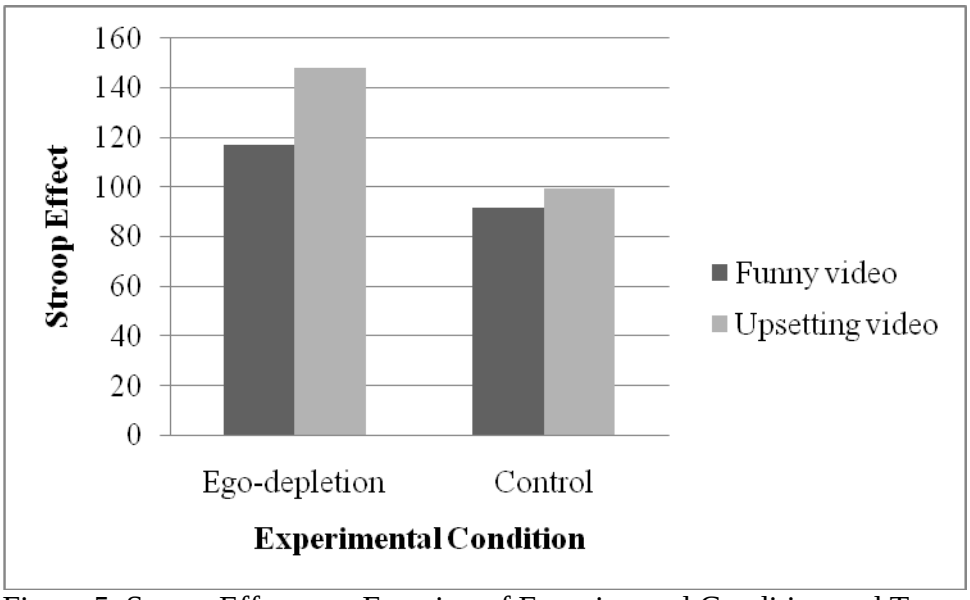


Figure 5. Stroop Effect as a Function of Experimental Condition and Type of Video. Note: A higher score equals more depleted self capacity.

On the other hand, same 2 (ego-depletion: emotion-control vs. no control) x2 (type of video: funny vs. upsetting) between-subjects ANOVA on the number of the errors on the stroop task were conducted to test the effects of experimental conditions and type of video task. Results revealed that, neither main effects nor interactions were statistically significant.

3.2.3 The State Self-Control Capacity Scale.

To test the hypothesis that people tend to have more reduced self-control capacity when suppressing their feeling and facial expressions compared to the control condition which were let them naturally, 2 (ego depletion) x 2 (type of video) ANOVA was performed on the state self-control capacity. Contrary to expectations, main effect of ego-depletion was not significant. However, participants who watched the funny video film showed more self-control capacity (M = 5.23, SD = 1.21) than those who watched the upsetting video M = 3.50, SD = 1.28), [$F(1,86) = 43.79$, $p < .001$, $\eta^2 = .34$). Interaction effect was not significant (see Figure 6).

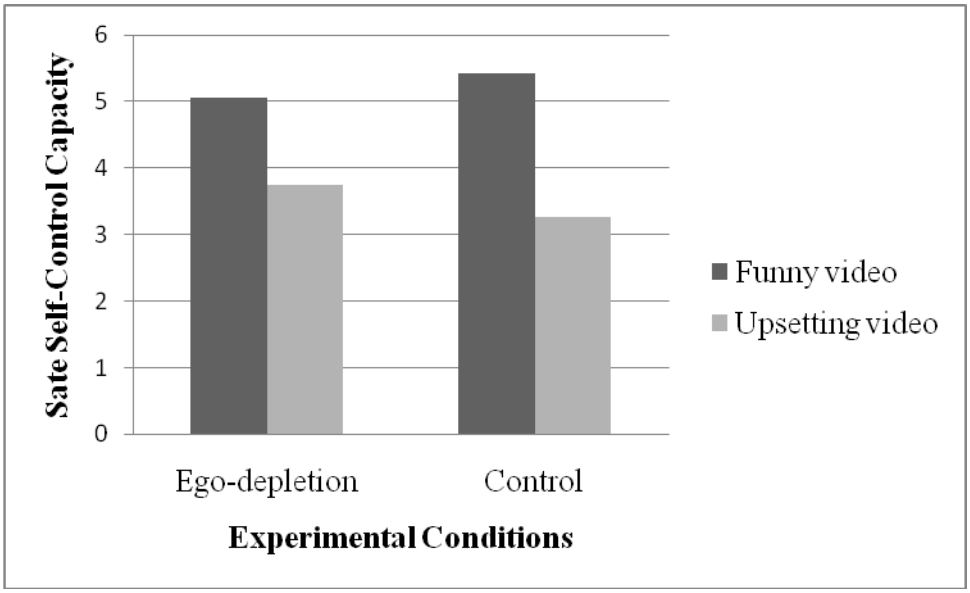


Figure 6. Scores on the SSCCS as a Function of Ego-Depletion and Video Type. Note: A higher score equals less depleted self capacity

3.2.4 Interactive effect of parenting control and regulation style on ego-depletion

To examine the possible interaction effects of parenting control style and regulation style on ego-depletion, all of the self-report variables, namely perceived psychological and behavioural control from mothers and fathers, introjected regulation on academic and emotion control domains, autonomous and controlled regulatory type for learning were categorized into two groups by using median split. A series of between subject ANOVAs by using these dichotomized variables and two conditions on stroop performance and state self-control capacity were conducted, separately.

Results of a 2 (depletion) x 2 (video type) x 2 (maternal psychological control: low vs. high) between subjects ANOVA on Stroop performance revealed that the ego-depletion main effect was significant F (1, 76) = 10.24, $p < .01$, η^2 = .12), suggesting that participants in the emotion control condition showed more

stroop effect (M = 132.91, SD = 59.92) than participants in the control condition (M = 95.50, SD = 52.02). However, the other main effects of type of video and level of perceived maternal psychological control were not significant. The interaction between perceived level of maternal psychological control and ego-depletion was marginally significant, [F (1, 76) = 3.78, $p \leq .05$, $\eta^2 = .05$].

Table 3.1. Stroop Performance as a Function of Experimental Condition and Level of Psychological Control Perceived from Mother

	Ego-depletion	Control condition
Low maternal psychological control	114.41_a	99.65_a
High maternal psychological control	151.41_b	90.97_a

Note: Higher scores reflect depleted ego resources. Across rows and columns, means that do not share a subscript differ at $p < .05$.

Participants showed more stroop effect in the ego-depletion condition than participants in the control condition if they perceived higher psychological control from their mothers. However there was no significant difference between these two conditions if they perceived lower psychological control from their mothers. On the other hand, while there was no significant difference between control conditions, participants perceived high psychological control from their mothers showed more ego-depletion compared to participants perceived low psychological control from their mother (see Figure 7, Table 3.1.).

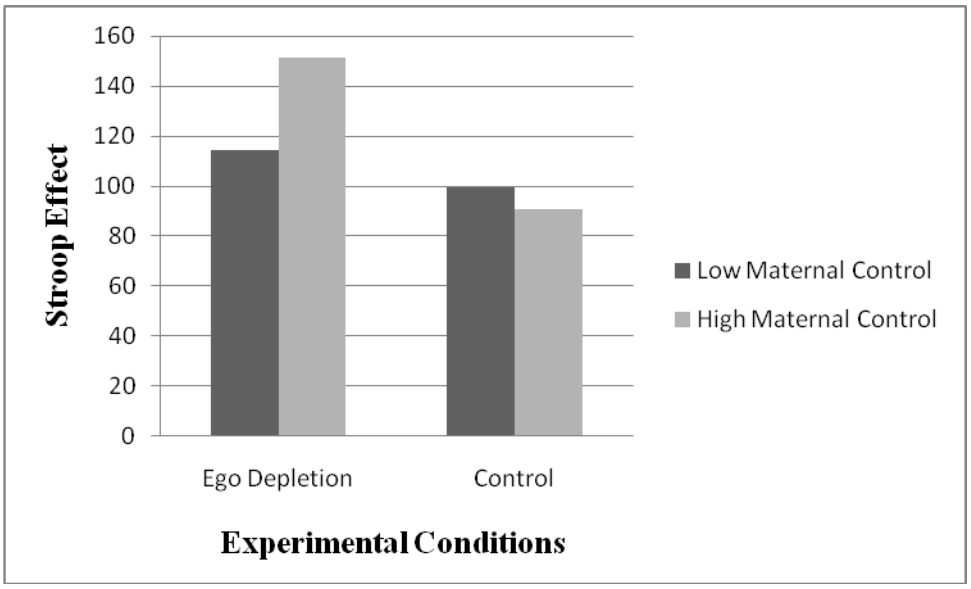


Figure 7. Stroop Effect as a Function of Level of Maternal Psychological Control and Experimental Conditions.
Note: A higher score equals more depleted self capacity.

A second depletion) x 2 (video type) x 2 (paternal behavioural control: low vs. high) between subjects ANOVA on stroop performance results revealed that while the main effect of type of video did not reach significant level, main effects of the experimental condition [F (1,76) = 5.34, $p < .05$, $\eta^2 = .07$], and perceived behavioural control from father [F (1,76) = 10.97, $p \leq .001$, $\eta^2 = .13$] were significant. As expected, participants assigned to experimental condition (M = 132.19, SD = 59.92) showed more ego-depletion than participants assigned to control condition (M = 95.50, SD = 52.02) regardless of the video they watched. Furthermore, participants who perceived their fathers more behaviourally controlling (M = 138.82, SD = 53.01) showed more ego-depletion on the stroop task compared to participants who perceived their fathers less behaviourally controlling (M = 88.87, SD = 53.83).

The last 2 (depletion) x 2 (video type) x 2 (introjected regulation on emotion control: low vs. high) between subjects ANOVA on stroop performance results revealed that main effect of experimental condition was significant [F (1,69) = 12.59, $p < .001$, $\eta^2 = .15$]. According to this, participants in the emotion control condition (M = 135.16, SD = 64) performed more poorly on stroop test than no control condition (M = 94.24, SD = 52.93). Besides, type of video [F (1,69) = 4.05, n.s.] and levels of introjected regulation on emotion control domain [F (1,69) = 1.62, n.s] main effects were not significant. Moreover, interaction effect between ego depletion and introjected regulation on emotion control was significant [F (1, 69) = 4.42, $p < .05$, $\eta^2 = .06$]. Bonferroni post-hoc comparisons on this interaction effect revealed that, for ego-depletion condition, participants having lower level of introjected regulation for emotion control domain showed more depleted capacity on stroop test than participants having higher levels of introjected regulation, whereas these two groups did not differ on their stroop performance for control condition (see Table 3.2, Figure 9).

Table 3.2. Stroop Performance as a Function of Experimental Condition and Level of Introjected Regulation on Emotion Control Domain

	Ego-depletion	Control condition
Low introjected regulation	161.96 $_{a}$	88.96 $_{b}$
High introjected regulation	118.34 $_{b}$	99.64 $_{b}$

Note: Higher scores reflect depleted ego resources. Across rows and columns, means that do not share a subscript differ at $p < .05$.

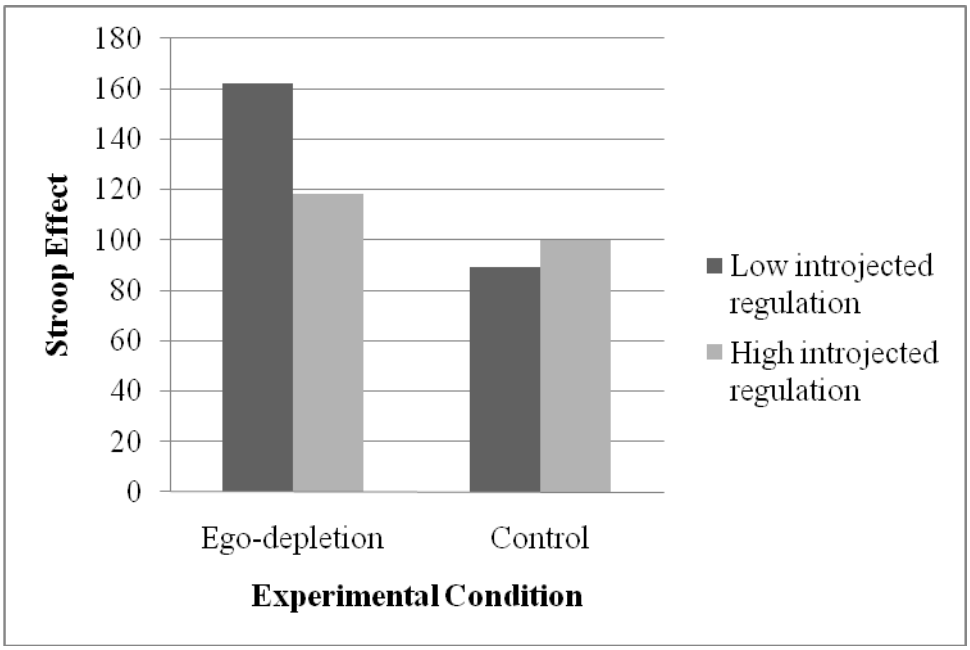


Figure 8. Stroop Effect as a Function of Experimental Conditions and Level of Introjected Regulation on Emotion Control Domain.
Note: A higher score equals more depleted self capacity.

CHAPTER IV

DISCUSSION

The purpose of this study was to better understand the role of parenting control on ego-depletion via internalization processes. In line with this aim, specifically, associations between parental psychological and behavioural control, autonomous and controlled self-regulation, and ego-depletion were examined. Based on the previous theoretical and empirical studies, ego-depletion status was measured by using both a self-report measure and an experimental design. In the following chapter, main findings will be discussed in the light of relevant literature including parenting, Self-Determination Theory, and Self-Control Strength Model. Finally, contributions and implications of the present study will be mentioned. After that, limitations of the study and suggestions for future research will be presented.

4.1 General Associations among the Study Variables and Descriptive Information

Initial descriptive analyses showed that, taken together, parental behavioural control was perceived higher than psychological control. This result was predictable for this sample composed of college students who have parents with relatively high level of education (see Table 2.1). In their study examining mother-reported parental control, Smetana and Daddis (2002) found that mothers' education level was significantly and negatively correlated with their ratings of psychological control, and positively with monitoring. Consistently with their results, correlational analysis in the present study revealed that parental education level was positively related with perceived behavioural control, and negatively related with psychological control.

Therefore, it can be concluded that parents of the participants in this sample primarily used behavioural control rather than psychological control.

Moreover, participants perceived their mothers more controlling than their fathers. These results were consistent with the past research indicated that mothers are perceived more behaviourally controlling than fathers (e.g., Barber et al., 2005; Doğruyol, 2008) and might be attributed the primary role of mothers in child socialization processes (Collins, 1992).

Comparisons of means between men and women on the major study variables demonstrated that women perceived more behavioural control from their mothers and fathers than men. These results were in line with previous studies conducted with Turkish adolescents, in which mothers of girls reported more behavioural control than mothers of male adolescent (Harma, 2008), and girls perceived more behavioural control from their mothers than boys (Kındap et al., 2008). These results might be related with the desires of Turkish parents to make sure that they have knowledge about the activities of their growing girls and acting overprotective for girls as compared to their boys (Harma, 2008).

Another gender difference was found on the self-regulatory style for learning which is consistent with the previous studies (e.g., Williams & Deci, 1996). Findings revealed that women had more autonomous motivation for learning than men. Contrary to this, men reported slightly higher level of state self-control capacity than women. These sex differences can be interpreted as gender based motivational differences on self-regulation. Twenge et al. (2004) showed that women usually report lower levels of state capacity for self-control in the SSCCS since they also experience more physical and psychological stresses.

Differences between participants studying in psychology department and other departments on the study variables were found to be not significant on major variables as expected with the exception of perceived behavioural control from parents and autonomous self-regulation. These differences may have resulted from the gender differences considering that women participants in the sample were overrepresented in the psychology department.

Correlational analyses were mostly in the expected directions. Although the relationships between psychological and behavioural control was expected to be independent from each other rather than opposite end of a continuum in the light of previous studies (e.g.,Barber, 1996; Smetana & Daddis, 2002; Kındap et al., 2008), findings of the present study demonstrated that these two types of parental control were weakly and negatively correlated with each other (see Table 2.5). One of the reasons of those negative correlations might be the retrospective nature of this study; to be precise participants may not evaluate their parents controlling techniques independent from each other. Secondly, as suggested by Wang et al. (2007; cited in Soenens & Vansteenkiste, 2009) "there may not be a clear-cut line between psychological and behavioural control, in that parents could use psychological control for behavioural outcomes in children [. . .] whereas behavioural control could affect how children think and feel" (p.10).

The rest of the correlations between parental control variables and self-regulation variables were in congruent with the assumptions of Self Determination Theory suggesting that parenting behaviours play a substantial role in determining child's type of internalization in self-regulation (Deci et al., 1994). The results, overall, have shown that perceived parental behavioural control styles were

positively related with autonomous and negatively related with introjected and controlled self-regulation. Moreover, perceived psychological control from parents were positively related with introjected and controlled self-regulation supporting previous empirical studies proposing that psychologically controlling parenting leads to internally pressuring regulation style (i.e., introjection) (see, Soenens & Vansteenkiste, 2009). On the other hand, the relationship between psychologically controlling parenting and autonomous self-regulation was found to be insignificant suggesting that the presence of psychological control is associated with introjected self-regulation, whereas the absence of it does not guarantee the optimal (i.e., autonomous) self-regulation..

Although mothers play a primary role in parenting, fathers' parenting behaviours generally were found to be more influential on child's self-regulation style. For example, introjected and controlled regulations were found to be related with paternal psychological control more than maternal control. In addition, perceived behavioural control from father, but not from mother, was positively related with autonomus self-regulation. Furthermore, self-control capacity was related with perceived psychological control from fathers rather than the same control from mothers.

Consistent with the findings demonstrating that perceived psychological control from fathers had more negative effect on child's internalization than mothers's control, the results of the regression analysis after controlling for gender effect revealed that only perceived conditional regard from fathers for emotion control had an unique contribution to introjected regulation on emotion control domain (see Table 2.6). That is, perceived conditional regard from fathers on

emotion control domain predicted introjected regulation in terms of feeling internal compulsion for emotion control. For example, saying that "*As a child or adolescent, I often felt that my father's affection toward me depended on my not showing fear and/or not crying*" leads to feelings of internal compulsion like "*I often feel a strong internal pressure to exert control over my negative emotions, even in situations where such control is necessary*" (Assor et al., 2004). Introjected regulation on emotion-control was especially predicted by conditional regard for emotion-control domain but not by conditional regard for academic domain or by general perceived parental psychological control. The possible reason for this result might be that both of them share the same emotion-control domain. In other words, these results also signify the domain-specific relationship between the parental conditional regard and introjected regulation.

Parallel with the effect of paternal control, as expected, perceived paternal behavioural control seem to increase introjected regulation for emotion control decrease. However, perceived behavioural control from mothers leads to more introjected regulation for academics. This might be resulted from the participants' perception that higher maternal behavioural control is linked with demanding and stressful situations.

Second regression analysis was conducted on the state self-control capacity after gender effect was controlled. The results indicated that self-control capacity was predicted by introjected and controlled regulations negatively, and autonomous self-regulation positively (see Table 2.7). These results provide a support to the previous findings demonstrating that controlled self-regulation depletes more ego-resources as compared to autonomous regulation (Muraven et al., 2007; 2008).

4.2 Mediating Role of Self-Regulation Style

One of the aims of the present study was to examine the possible mediation role of self-regulation type on the relationship between parenting control and ego-depletion. Although previous studies have shown that maternal and paternal paternal control has unique effects on child's outcome behaviors, in this study, perceived parenting psychological control from mother and father were very similarly their latent constructs were highly correlated (.86). Therefore, single latent variable representing parenting control was created for the SEM analyses.

Hypothesized model specifically proposed that perceived parental psychological control leads to controlled self-regulation type, in turns it affects self-control capacity negatively. Perceived parental behavioural control, however, was expected to predict self-control capacity positively via autonomous regulation type (see Figure 1). This proposed mediational model was partially supported, in which the first path was found to be significant, suggesting that psychological control only, but not behavioural control, did have a direct effect and indirect effect via controlled regulation on self-control capacity. The first path of the model was consistent with previous studies demonstrating that the mediation role of self-regulation on the relationship between psychological control and adjustment problems (e.g., Finkenauer et al., 2005). The results indicated that parental psychological control implying an attempt to interfere child's inner world through guilt induction, contingent love or withdrawal, and invalidating the child's perspective seems to lead the child to experience an internal pressure and feel obliged to obey the rules set by their parents. This feeling of internal compulsion, in turns, results in low levels of state self-control capacity.

On the other hand, the second proposed path suggesting that parental behavioural control would predict ego-depletion negatively via autonomous regulation was not supported. In parallel with this result, using a Turkish sample consisted of early adolescents, Harma (2008) also found that parental behavioural control did not predict self-regulation abilities. One possible reason for this insignificant path between behavioural control, autonomous self-regulation and self-control capacity might be due to the different conceptualizations between behavioural control and autonomy-support. Whereas behavioural control refers to the provision of guidelines, monitoring and constraints on child's behaviour, autonomy-support (opposite to control) includes encouraging choice, self-initiation, and making decision (Grusec & Kuczynski, 1997). For example, in a recent study in education arena, it was suggested that structure (i.e., behavioural control) and autonomy-support are different dimensions (Jang, Reeve, & Deci, in press; cited in Soenens & Vansteenkiste, 2009). Future studies should test if perceived parental autonomy-support rather than behavioural control would predict self-control capacity (ego-depletion) directly and/or indirectly via self-regulation.

4.3 Experimental Manipulation of Ego-Depletion

4.3.1 Manipulation Checks

First, to make sure that participants followed the instructions, participants' facial expressions were rated by an independent judge who was blind to experimental conditions. As expected, participants in the suppressing emotion condition were found to be less expressive as compared to the participants in the control condition. This result signified that participants assigned to the emotion suppression conditions

tried to control their facial expressiveness indicating that manipulations were effective.

In addition, participants assigned to the ego-depletion condition reported that they found the manipulation of regulatory exertions much harder on a 7-point scale compared to participants assigned to the control condition. Consistent with previous studies (e.g., Muraven et al., 1998), this result supported the expectation that suppression of emotions was effortful and requires more difficult and strenuous act of self-control than freely expressing emotions.

However, it was further hypothesized that there were no significant differences between upsetting and funny video conditions in terms of a general emotional expressivity and perceived difficulty of the tasks. Contrary to the expectations, participants who were assigned to the funny (Cem Yılmaz) video condition showed more emotional expressions and found the task less difficult than participants assigned to upsetting (traffic accidents) video condition. The first result might be due to the judge bias in which smiling and laughing can be detected more easily than the distressing facial reactions. Therefore, having the ratings of more than one judge would be more objective in assessing the emotional tones resulted from two different videos. The possible reason of the latter result might be due to the participants' answers of the question "how hard the instruction" depend on the assessments of the watching video generally, and watching Cem Yılmaz clearly was easier than watching traffic accidents regardless of suppressing or not the facial expressions.

The last manipulation check examined the level of the film's emotional burden was perceived by participants. Results showed that the films were perceived

almost similar on the item asking participants to rate the movie on a scale 0 (not at all) to 7 (very funny/sad). As expected, there were no differences as a function of ego-depletion or type of video condition on how the movie was perceived. These findings were consistent with Baumeister et al.'s (1998) findings.

4.3.2 Stroop Task Performance Reflection Ego-Depletion

According to self-control strength model, exerting self-control consumes ego strength or energy, and depletes the limited ego-resources. In particular, based on the previous research, the current study hypothesized that suppressing emotions require self-control and leads to diminished performance on a subsequent Stroop task in which it requires executive and additional attention (Ellis et al., 2004).

First, the effect of ego-depletion manipulation was tested using average reaction time on the Stroop task. As expected, results demonstrated that participants' reaction time in the ego-depletion condition was longer than that of in the control condition. This effect was significant independent from the content of the video film. These results provided support for the assertion that executive function of the self depends on a limited capacity. In other words, suppressing facial expressions while watching the emotion evocative video can deplete ego-resources and participants were less able to override their automatic response to read the word printed on Stroop task.

Second dependent variable was the number of errors in the Stroop task. However, ego-depletion and control conditions did not differ in terms of the number of errors in the Stroop task. Previous studies in which Stroop task was used as a dependent variable on ego-depletion dual-task paradigm, usually relied on reaction time rather than the number of errors which does not reflect attentional capacity

objectively (see Hagger et al., 2010). In sum, the possible reason underlying this preference might be the reliability of reaction time measure rather than simply counting the number of errors.

4.3.3 Self-Reported State Self-Control Capacity

One of the aims of the current study was to adapt and validate a self-reported measure of ego-strength, namely the State Self-Control Capacity Scale (SSCCS; Twenge et al., 2004) to Turkish culture. The results of the first study indicated that the SSCCS was highly internally reliable (see Appendix C7) and was significantly associated with several measures of parental control and self-regulation in the expected directions. To test its validity in the controlled experimental laboratory setting, participants filled out the SSCCS after they watched the video film. If the SSCCS is a valid measure of ego-depletion, participants should have had lower levels of self-control in an emotion-suppression condition compared to participants in control condition (Twenge et al., 2004). Contrary to expectations, main effect of ego-depletion condition on SSCCS scores was not statistically significant. However, participants who watched funny video film had higher scores on SSCCS than those who watched upsetting video.

Results suggested that the mean scores on SSCCS were not consistent with the Stroop task performance. In that case, results depend on experimental manipulation is thought to be more reliable than self-report measurement, because both emotion-control task and Stroop task were conducted for testing ego-depletion many more times than the SSCCS. In addition, in the case of measuring the amount of ego-resources depletion, physiological or behavioural measures can be more reliable than self-reports.

However, considering the relationship between self-control capacity with the major variables in the first study, and its sensitivity to mood induced by video film rather than self-control performance, it might be concluded that the SSCCS measures general fatigue or construct similar to trait self-control capacity rather than the state self-control capacity as targeted.

4.3.4 Interactive Effects of Introjected Regulation and Parental Control Style on Ego-Depletion

Considering the previous studies (e.g., Muraven and his colleagues, 2007; 2008) demonstrating that feeling of autonomy make individuals more resistant to ego-depletion than controlled motivation, it was hypothesized that participants who have introjected motivation for suppressing emotions should have more ego-depletion and perform poorly on the subsequent Stroop task than the participants who had less introjected self-regulation. Contrary to this expectation, for ego-depletion condition, participants having lower level of introjected regulation for emotion control domain showed more depleted capacity on Stroop task than the participants having higher levels of introjected regulation, whereas these two groups did not differ on their Stroop performance for control condition.

This finding requires further elaborations. There can be plausible explanation for these unexpected results. First, for instance, Muraven et al. (1999) indicated that practicing at self-control is able to improve self-regulatory abilities. Consistently, Seeley and Gardner (2003) suggested that collectivist orientation, creating a motivation to behave in accordance with others' expectations mostly, can improve a person's self-regulatory performance since chronic self-regulatory effort protects an individual from the regulatory depletion. Considering that introjected

regulation includes an internal compulsion for not showing emotional expressions, these results may reflect an internal pressure to chronically "practice" at emotion-regulation over time. Hence, this chronic practice stemmed from introjected regulation might result in strength against emotion-suppression task.

Second, it was assumed that perceived parental psychological control was the primary reason for controlled regulation. Hence, high level of psychological control was expected to heighten depletion in emotion suppression conditions, but not in control conditions. These expectations were supported for the perceived psychological control from mother only, in which participants who perceived their mothers more psychologically controlling showed more depleted ego capacity than those perceived their mothers less psychologically controlling if they instructed to control their emotions.

It is plausible to suggest that one of the primarily demands of psychologically controlling mothers from their children are to suppress their emotions. Thus, psychologically controlling their emotions externally may easily become controlled motivation for emotion control. Hence, suppressing emotions does deplete more ego-resources for participants who have psychologically controlling mothers.

Third, it was expected that parental behavioural control may protect participants against ego-depletion because of its relation with autonomous motivation. Consistent with this prediction, participants who perceived high behavioural control from their fathers showed less ego-depletion than participants who perceived less behavioural control from their fathers. This result consistent with the finding of the first study indicated that the negative effect of paternal behavioural

control on introjected regulation for emotion control. It may be concluded that paternal behavioural control may prompt autonomous motivation for self-regulation, which in turn, may buffer ego-depletion effect partially. Future studies should explore these plausible explanations.

Furthermore, consistent with the hypothesis tested on the Stroop task would be similar on self-report state self-control capacity. That is, participants who have more introjected motivation for self-control and who have perceived their parents psychologically controlling would be more vulnerable to ego-depletion. Contrary to these hypotheses, none of the interactions were found significant when self-reported SSCCS was used as dependent variable. It is possible that self-reported SSCCS may represent a measure of general fatigue rather than specific depletion of ego-resources. Therefore, it may not have reflected the effect of experimental manipulation objectively.

4.4 Contributions and Implications of the Study

Although previous studies have separately demonstrated that psychological control is linked with controlled regulation style, and controlled motivation of self-control would predict more ego-depletion, these constructs have not been examined in a single model. A meditational model was proposed to test these links in a structural model. The results of the first part of the study indicated that parental psychological control including both maternal and paternal control strongly predicts controlled motivation of self-regulation, which in turns, had an indirect effect on diminished self-control capacity. Therefore, the results of the study have provided evidence supporting the assumed underlying mechanisms (see Finkenauer et al., 2005, as an example) between parental psychological control and problematic

behavioural outcomes originated self-regulation failure (i.e. lower levels of trait self control).

The second contribution of the present study is to examine the associations between parenting control, self-regulation and state self-control capacity in a non-Western sample. For this aim, a number of scales, namely Domain-Specific Perceptions of Parental Conditional Regard Scale, Introjected Regulation Questionnaire and Learning Self-Regulation Questionnaire, and State Self-Control Capacity Scale were adopted into Turkish. Results revealed that parental psychological control seems to operate similarly in both Turkish and Western cultures, especially in terms of harmful effects on internalization of self-regulation. These findings have implications for educators, practitioners, and parents in terms of using controlling strategies including guilt induction, conditional regard, or love withdrawal and for restraining problem behaviours of children resulting from self-regulation failures.

Furthermore, this study was the first attempt to test self-control strength model experimentally with a dual-task paradigm in a Turkish sample. Results yielded findings consistent with previous studies within the framework of SCSM, in which attempts at self-control resulted in depleted ego-resources. Therefore, these results suggested that underlying mechanisms of ego-depletion seems very similar across cultures.

However, level of depletion differs depending on the degree of internalization of self-regulation. Results of the present study suggested that having introjected motivation for emotion-control may make individuals more resistant to ego-depletion. Additionally, perceived psychological control from mother leads to

more ego-depletion, but only for suppressing of feelings in funny video. In other words, participants feel internal compulsion to not to show their negative feelings showed less depleted ego resources after instructed to suppress their emotional expressions while they were watching the upsetting film. The possible reason of the effects of introjected regulation on ego-depletion differed depending on the content of the video. It can be suggested that emotion-regulation is an important part of the child's socialization process considering that children are commaonly advised and encouraged to restrain expressing their anger or distress in Turkish culture. In other words, they might have practiced these types of emotional control durig their early socialization period.

Considering that Turkish culture is more likely a collectivist culture (Kağıtcıbaşı, 2007), motivation for maintain social harmony might be more important in Turkish culture than in Western. Therefore, especially mothers who use psychological control in child rearing may prompt the introjected motivation by using strategies, such as guilt induction, instilling anxiety or love withdrawal when their child showed anger or distressing. Therefore, suppressing negative emotional reactions become an ordinary and frequently practiced act for children suggesting that such conditions may not be demanding for children's self-control capacity. In contrast, for pleasant feelings stemming from a funny video may not demand such a practise, and asking participants trying not to express these emotions might be indeed more depleting. Future studies should explore these plausible explanation and possible cultural differences.

4.5 Limitations of the Current Study and Suggestions for Future Research

4.5.1 Limitations of the Study 1

One of the limitations that should be considered when interpreting the results was the representativeness of the sample in the present study. The sample was consisted of university students only and women were overrepresented, and the size of the sample was relatively small. In addition, the parents of the participants usually had high level of education and socioeconomic status. These parents are less likely to use psychological control in their parenting behaviours. These caveats may potentially limit the generalization of the findings to the Turkish population. Thus, further studies should employ more representative samples which have balanced gender, level of education, and SES distributions.

Second, the participants' perceptions of parental controlling strategies were asked retrospectively. Therefore, participants might have exaggerated or inhibited their actual experiences with their parents early in life. Although it was shown that self-reported perceived parental control was relatively accurate (Soenens & Vansteenkiste, 2005), the results should be supported by further studies that use parental self-reports as well as children's reports.

Third, previous studies demonstrated that factors such as mood, stress level, health status, or academic density can influence the level of self-control capacity (see, Twenge et al., 2004). However, in this study it was assumed that the main factors that would affect the level of state self-control capacity were the perceived parental control and self-regulation type. Besides, such factors that might be associated with self-control capacity should be controlled in further studies.

Fourth, the results of the present study indicated that there is no significant relationship between parental behavioural control and motivation of self-regulation type. The theoretical and empirical distinctions and similarities between parental psychological control, behavioural control and parental autonomy-support and their effects on internalization process should be investigated in detail to clarify the effects of potential factors specific to Turkish culture.

4.5.2 Limitations of Study 2

There were also limitations in the experimental part of the study. First, the possible effects of mood and trait self-control were not controlled. Future studies testing the SCSM should consider the possible moderator effects of mood and trait self-control especially in the manipulation check. An assessment of facial expressivity of the participants should be rated by more than one independent judge to enhance the reliability of results.

Second, previous studies examined the possible moderated role of motivation type on ego-depletion, generally prompted autonomous or controlled motivation by experimentally just before the ego-depletion manipulation (i.e., Moller et al., 2006). However, in the current study, participants' levels of autonomous and controlled motivations were measured about a month from the experiment as an individual difference. Thus, assessment of this general self-regulation type might let the practice effect of suppressing negative emotions be more salient. To clarify the distinction between self-reported and experimentally manipulated controlled motivation, additional studies are needed.

Finally, since there is no single gold standard to measure of ego-depletion (Vohs et al., 2008), further studies will examine the roles of parenting control and

self-regulation on ego-depletion should conduct a series of experimental studies in which the effect of psychological control on emotion-control domain is examined in detail.

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APPENDIX A. Permission Letters

Appendix A1 Consent Form for Study 1

Gönüllü Katılım Formu

Sayın Katılımcı;

Bu çalışma ODTÜ Sosyal Psikoloji Yüksek Lisans Programı öğrencisi ve araştırma görevlisi olan Elif Helvacı tarafından Prof. Dr. Nebi Sümer danışmanlığında, çocukluk ve ergenlikte anne ve babadan algılanan kontrolün duygu düzenleme ve akademik alandaki motivasyona ve bağlanmaya etkisinin incelenmesi amacıyla, yüksek lisans tezi kapsamında yürütülmektedir.

Bu anket paketi, anne ve babadan algılan psikolojik kontrolün (Annem ve Ben -1, Babam ve Ben -1) ve anne ve babadan algılanan davranışsal kontrolün (Annem ve Ben - 2, Babam ve Ben – 2) değerlendirildiği ölçekler ile Algılanan Koşullu İlgi Ölçeği, Öğrenme Nedenleri Anketi, İçten Gelen Zorlamanın Ölçülmesi ile ilgili sorular ve Demografik Bilgileri içermektedir. Her bölümdeki ölçeğin nasıl cevaplanacağı konusunda, ilgili bölümün başında bilgi verilmiştir. Anketin cevaplanması yaklaşık 30 dakika sürmekte olup herhangi bir süre kısıtlaması bulunmamaktadır.

Bu çalışma kapsamında vereceğiniz tüm bilgiler tamamen gizli kalacaktır. Çalışmanın hiçbir bölümünde isminiz ve kimliğinizi ortaya çıkaran herhangi bir soru sorulmamaktadır. Çalışmanın objektif olması ve elde edilecek sonuçların güvenirliği bakımından anket uygulamalarında içtenlikle duygu ve düşüncelerinizi yansıtacak şekilde yanıtlat vermeniz önemlidir. Çalışmaya katılım tamamiyle gönüllülük esasına dayanmaktadır. Anket genel olarak, kişisel rahatsızlık verecek sorular içermemektedir. Ancak, katılım sırasında herhangi bir nedenden ötürü kendinizi rahatsız hissederseniz, cevaplama işini istediğiniz anda bırakmakta serbestsiniz. Verdiğiniz bilgiler gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir; elde edilecek bilgiler bilimsel yayınlarda kullanılacaktır. Katılımınız için şimdiden teşekkür ederiz.

Çalışma hakkında daha fazla bilgi almak için ODTÜ Psikoloji Bölümü Araştırma Görevlisi Elif Helvacı (Tel: 0535 5186846; E-posta: ekorpe@metu.edu.tr) veya Prof. Dr. Nebi Sümer (E-posta: nsumer@metu.edu.tr) ile iletişim kurabilirsiniz.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum. (Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

İsim Soyad	Tarih	İmza
_____	----/----/-----	

Appendix A2 Consent Form for Study 2

Gönüllü Katılım Formu

Sayın Katılımcı;

Bu çalışma ODTÜ Sosyal Psikoloji Yüksek Lisans Programı öğrencisi ve araştırma görevlisi olan Elif Helvacı tarafından Prof. Dr. Nebi Sümer danışmanlığında, duygusal tepki göstermenin ya da göstermemenin hafıza üzerindeki etkisinin incelenmesi amacıyla, yüksek lisans tezi kapsamında yürütülmektedir.

Bu çalışmaya katılımınız 12.5 dakikalık bir video klip seyretmeyi, sonraki kodlamalar için karşınıza yerleştirilen kamerayla yüz ifadenizin kaydedilmesini ve anket sorularını yanıtlamayı gerektirmektedir. Bu çalışma kapsamında vereceğiniz tüm bilgiler tamamen gizli kalacaktır. Çalışmanın hiçbir bölümünde isminiz ve kimliğinizi ortaya çıkaran herhangi bir soru sorulmamaktadır. Çalışmanın objektif olması ve elde edilecek sonuçların güvenirliği bakımından anket uygulamalarında içtenlikle duygu ve düşüncelerinizi yansıtacak şekilde yanıtlar vermeniz, deney uygulamalarında en iyi performansınızı sergilemeye çabalamanız önemlidir. Çalışmaya katılımınız tamamiyle gönüllülük esasına dayanmaktadır. Verdiğiniz bilgiler ve video görüntüleriniz gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir; elde edilecek bilgiler bilimsel yayınlarda kullanılacaktır.

İzleyeceğiniz filmin içeriğinden, sonrasında sorulan sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz katılımınızı sonlandırmakta serbestsiniz. Böyle bir durumda, deney yürütücüsüne katılımınızı sonlandırmak istediğinizi söylemeniz yeterli olacaktır. Katılımınız için şimdiden teşekkür ederiz.

Çalışma hakkında daha fazla bilgi almak için ODTÜ Psikoloji Bölümü Araştırma Görevlisi Elif Helvacı (Tel: 0535 5186846; E-posta: ekorpe@metu.edu.tr) veya Prof. Dr. Nebi Sümer (E-posta: nsumer@metu.edu.tr) ile iletişim kurabilirsiniz.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum. (Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

İsim Soyad	Tarih	İmza
_____	----/----/-----	_____

APPENDIX B. Questionnaire Package

Appendix B1. Demographic Questions

Demografik Bilgi Formu

Bu araştırma, çocukluk ve ergenlikte anne ve babadan algılanan kontrolün duygu düzenleme ve akademik alandaki motivasyona, bağlanma tarzına ve benlik kontrolüne etkisinin incelenmesi amacıyla yapılmaktadır. Soruların doğru ya da yanlış cevabı yoktur. Çalışmanın objektif olması ve elde dilecek sonuçların güvenirliği bakımından yanıtlarınızın gerçek duygu ve düşüncelerinizi yansıtması ve hiçbir maddeyi boş bırakmamanız önem taşımaktadır. Katkılarınız için şimdiden çok teşekkür ederim.

Araş. Gör. Elif HELVACI

1) **Rumuz:**

2) Cinsiyet: □ K □ E

3) Doğum tarihi:_____

4) Bölüm / Sınıf:_____ / _____

5) Nerede yaşıyorsunuz?
□ □ Aile yanı □ □ Akraba yanı □ □ Arkadaşlarla evde
□ □ Tek başına evde □ □ Yurt
□ Diğer (belirtiniz) _____

6) Annenizin en son mezun olduğu okul:
□ Okur-yazar değil □ Sadece okur-yazar □□ İlkokul □
□ Ortaokul □ Lise □ Üniversite
□ Lisansüstü □ □ Diğer belirtiniz_____

7) Babanızın en son mezun olduğu okul:
□ Okur-yazar değil □ Sadece okur-yazar □□ İlkokul □
□ Ortaokul □ Lise □ Üniversite
□ Lisansüstü □ □ Diğer belirtiniz_____

8) Hayatınızda en uzun süre yaşadığınız yer:
□ Köy □ Kasaba □ İlçe □ Şehir □ Büyükşehir □ Metropol

9) Ailenizin gelir düzeyi nedir?

□ □ 0-600TL	□ □ 1501-1800TL	□ □ 2701- 3000TL
□ 601-900TL	□ 1801-2100TL	□ □ 3201-3500TL
□ □ 901-1200TL	□ 2101-2400TL	□ □ 3501-3800
□ 1201-1500 TL	□ □ 2401-2700TL	□ □ 3800 ve üstü

Appendix B2. Psychological Control Scale (Mother Form)

Annem ve Ben - 1

Aşağıda, çocukluğunuzda ve ergenliğinizde annenizle olan ilişkileriniz hakkında cümleler verilmiştir. Her bir cümlede anlatılan durumu çocukluğunuzda ve ergenliğinizde ne sıklıkla yaşadığınızı 6 aralıklı ölçek üzerinde, ilgili rakam üzerine çarpı işareti (X) koyarak gösteriniz. Hiçbir maddenin doğru ya da yanlış cevabı yoktur. Önemli olan her cümle ile ilgili olarak kendi durumunuzu doğru bir şekilde yansıtmanızdır. Lütfen hiçbir soruyu boş bırakmayınız. Annenizi kaybetmişseniz O'nun yerine koyduğunuz kişiyle olan ilişkinizi göz önüne alarak soruları cevaplayınız.

1----------2----------3----------4----------5----------6
Hiçbir zaman Nadiren Bazen Ara sıra Sık sık Her zaman

Ben çocukken ve ergenken,....

1. Annem, ben birşey söylerken konuyu değiştirirdi.	1	2	3	4	5	6
2. Annem, ben konuşurken bitirmemi beklemeden cümlemi tamamlardı.	1	2	3	4	5	6
3. Annem, ben konuşurken sözümü keserdi.	1	2	3	4	5	6
4. Annem ne hissettiğimi ya da düşündüğümü biliyormuş gibi davranırdı.	1	2	3	4	5	6
5. Annem çoğu konuda ne düşüneceğimi, nasıl hissetmem gerektiğini söylemekten hoşlanırdı.	1	2	3	4	5	6
6. Annem bazı konulardaki hislerimi ve düşüncelerimi değiştirmeye çalışırdı.	1	2	3	4	5	6
7. Annem ailedeki diğer kişilerin sorunları için beni suçlardı.	1	2	3	4	5	6
8. Annem beni eleştirirken geçmişte yaptığım hataları hatırlatıp dururdu.	1	2	3	4	5	6
9. Annem ailenin diğer üyeleri kadar iyi veya vefalı olmadığımı söyleyip dururdu.	1	2	3	4	5	6
10. Annem yaptığı herşeyi benim için yaptığını hatırlatıp dururdu.	1	2	3	4	5	6
11. Annem "benim ne hissettiğime önem verseydi beni üzecek bu şeyleri yapmazdın" vb. derdi.	1	2	3	4	5	6
12. Annem aynı fikirde olmadığımda bana karşı soğuk ve daha az samimi davranırdı.	1	2	3	4	5	6

13. Annem, O'nu hayal kırıklığına uğrattığımda beni görmezden gelmeye çalışırdı.	1	2	3	4	5	6
14. O'nu üzdüğümde annem, O'nu memnun edene kadar benimle konuşmazdı.	1	2	3	4	5	6
15. Annem benimle birlikteyken huysuzlaşır, ruh hali değişirdi.	1	2	3	4	5	6
16. Annem bana karşı bazen sıcak davranırken bazen de şikayet edip dururdu.	1	2	3	4	5	6
17. Annem, diğer çocuklar kadar iyi olmadığımı söyler dururdu.	1	2	3	4	5	6
18. Annem, beklentilerini yerine getirmediğimde kendisini utandırdığımı söylerdi.	1	2	3	4	5	6
19. Annem, kötü davranışlarımdan, yaramazlıklarımdan utanmam gerektiğini söyler dururdu.	1	2	3	4	5	6

Appendix B3. Psychological Control Scale (Father Form)

Babam ve Ben – 1

Aşağıda, çocukluğunuzda ve ergenliğinizde babanızla olan ilişkileriniz hakkında cümleler verilmiştir. Her bir cümlede anlatılan durumu çocukluğunuzda ve ergenliğinizde ne sıklıkla yaşadığınızı 6 aralıklı ölçek üzerinde, ilgili rakam üzerine çarpı (X) koyarak gösteriniz. Hiçbir maddenin doğru ya da yanlış cevabı yoktur. Önemli olan her cümle ile ilgili olarak kendi durumunuzu doğru bir şekilde yansıtmanızdır. Lütfen hiçbir soruyu boş bırakmayınız. Babanızı kaybetmişseniz O'nun yerine koyduğunuz kişiyle ilişkinizi göz önüne alarak soruları cevaplayınız.

1----------2----------3----------4----------5----------6
Hiçbir zaman Nadiren Bazen Ara sıra Sık sık Her zaman

Ben çocukken ve ergenken,....

1. Babam, ben birşey söylerken konuyu değiştirirdi.	1	2	3	4	5	6
2. Babam, ben konuşurken bitirmemi beklemeden cümlemi tamamlardı.	1	2	3	4	5	6
3. Babam, ben konuşurken sözümü keserdi.	1	2	3	4	5	6
4. Babam ne hissettiğimi ya da düşündüğümü biliyormuş gibi davranırdı.	1	2	3	4	5	6
5. Babam çoğu konuda ne düşüneceğimi, nasıl hissetmem gerektiğini söylemekten hoşlanırdı.	1	2	3	4	5	6
6. Babam bazı konulardaki hislerimi ve düşüncelerimi değiştirmeye çalışırdı.	1	2	3	4	5	6
7. Babam ailedeki diğer kişilerin sorunları için beni suçlardı.	1	2	3	4	5	6
8. Babam beni eleştirirken geçmişte yaptığım hataları hatırlatıp dururdu.	1	2	3	4	5	6
9. Babam ailenin diğer üyeleri kadar iyi veya vefalı olmadığımı söyleyip dururdu.	1	2	3	4	5	6
10. Babam yaptığı herşeyi benim için yaptığını hatırlatıp dururdu.	1	2	3	4	5	6
11. Babam "benim ne hissettiğime önem verseydin beni üzecek bu şeyleri yapmazdın" vb. derdi.	1	2	3	4	5	6
12. Babam aynı fikirde olmadığımda bana karşı soğuk ve daha az samimi davranırdı.	1	2	3	4	5	6

13. Babam, O'nu hayal kırıklığına uğrattığımda beni görmezden gelmeye çalışırdı.	1	2	3	4	5	6
14. O'nu üzdüğümde babam, O'nu memnun edene kadar benimle konuşmazdı.	1	2	3	4	5	6
15. Babam benimle birlikteyken huysuzlaşır, ruh hali değişirdi.	1	2	3	4	5	6
16. Babam bana karşı bazen sıcak davranırken bazen de şikayet edip dururdu.	1	2	3	4	5	6
17. Babam, diğer çocuklar kadar iyi olmadığımı söyler dururdu.	1	2	3	4	5	6
18. Babam, beklentilerini yerine getirmediğimde kendisini utandırdığımı söylerdi.	1	2	3	4	5	6
19. Babam, kötü davranışlarımdan, yaramazlıklarımdan utanmam gerektiğini söyler dururdu.	1	2	3	4	5	6

Appendix B4. Behavioural Control Scale (Mother Form)

Annem ve Ben - 2

Aşağıda çocukluğunuzda ve ergenliğinizde annenizin sizin hakkınızda ne kadar bilgi sahibi olduğuna ilişkin sorular bulunmaktadır. Sizden annenizi düşünerek bu ifadelerin sizin için ne derece geçerli olduğunu cevaplandırmanız istenmektedir. Her bir cümlede anlatılan durumu çocukluğunuzda ve ergenliğinizde ne sıklıkla yaşadığınızı 6 aralıklı ölçek üzerinde, ilgili rakam üzerine çarpı (X) koyarak gösteriniz. Hiçbir maddenin doğru ya da yanlış cevabı yoktur. Önemli olan her cümle ile ilgili olarak kendi durumunuzu doğru bir şekilde yansıtmanızdır. Lütfen hiçbir soruyu boş bırakmayınız. Annenizi kaybetmişseniz O'nun yerine koyduğunuz kişiyle ilişkinizi göz önüne alarak soruları cevaplayınız.

1----------2----------3----------4----------5----------6
Hiçbir zaman Nadiren Bazen Ara sıra Sık sık Her zaman

Ben çocukken ve ergenken,....

1. Annem kiminle zaman geçirdiğimi bilirdi.	1	2	3	4	5	6
2. Annem boş zamanlarımı nasıl geçirdiğimi bilirdi.	1	2	3	4	5	6
3. Annem paramı nelere, nasıl harcadığımı bilirdi.	1	2	3	4	5	6
4. Annem okuldan sonra nereye gittiğimi bilirdi.	1	2	3	4	5	6
5. Annem haftasonu ve tatillerde ne yaptığımı bilirdi.	1	2	3	4	5	6
6. Annem okulda yaşadığım sorunları bilirdi.	1	2	3	4	5	6
7. Bir yere gitmek için ayrıldığımda anneme nereye gittiğimi söylerdim.	1	2	3	4	5	6
8. Arkadaşlarımla dışarıya çıktığımda anneme kaçta evde olacağımı söylerdim.	1	2	3	4	5	6
9. Annem evde olmadığında ve evden çıkmam gerektiğinde nereye gittiğimi söylemek için ona not bırakır ya da telefon ederdim.	1	2	3	4	5	6
10. Annem evde olmadığında ona nasıl ulaşacağımı bilirdim.	1	2	3	4	5	6
11. Annem hangi derslerden ödevim olduğunu bilirdi	1	2	3	4	5	6
12. Annem derslerim hakkında öğretmenlerim ile görüşürdü.	1	2	3	4	5	6
13. Annem sınav sonuçlarımı, önemli ödevlerimi bilirdi.	1	2	3	4	5	6

14. Annem farklı derslerdeki durumumu ve başarımı bilirdi.	1	2	3	4	5	6
15. Anneme okulda derslerimin nasıl gittiğini söylerdim.	1	2	3	4	5	6
16. Anneme okulda günümün nasıl geçtiğini anlatırdım (örneğin, sınavlarımın nasıl geçtiği, öğretmenlerimle aramın nasıl olduğu vb.).	1	2	3	4	5	6
17. Annemle, boş zamanlarımda yaptıklarım hakkında konuşurdum.	1	2	3	4	5	6
18. Arkadaşlarımla oynayıp eve geldiğimde neler yaptığımı anneme anlatırdım.	1	2	3	4	5	6
19. Annemle arkadaşlarım hakkında konuşurdum.	1	2	3	4	5	6
20. Arkadaşlarım bize geldiğinde annem onlarla konuşurdu.	1	2	3	4	5	6

Appendix B5. Behavioural Control Scale (Father Form)

Babam ve Ben - 2

Aşağıda çocukluğunuzda ve ergenliğinizde babanızın sizin hakkınızda ne kadar bilgi sahibi olduğuna ilişkin sorular bulunmaktadır. Sizden annenizi düşünerek bu ifadelerin sizin için ne derece geçerli olduğunu cevaplandırmanız istenmektedir. Her bir cümlede anlatılan durumu çocukluğunuzda ve ergenliğinizde ne sıklıkla yaşadığınızı 6 aralıklı ölçek üzerinde, ilgili rakam üzerine çarpı (X) koyarak gösteriniz. Hiçbir maddenin doğru ya da yanlış cevabı yoktur. Önemli olan her cümle ile ilgili olarak kendi durumunuzu doğru bir şekilde yansıtmanızdır. Lütfen hiçbir soruyu boş bırakmayınız. Annenizi kaybetmişseniz O'nun yerine koyduğunuz kişiyle ilişkinizi göz önüne alarak soruları cevaplayınız.

1----------2----------3----------4----------5----------6
Hiçbir zaman Nadiren Bazen Ara sıra Sık sık Her zaman

Ben çocukken ve ergenken,....

1. Babam kiminle zaman geçirdiğini bilirdi.	1	2	3	4	5	6
2. Babam boş zamanlarımı nasıl geçirdiğimi bilirdi.	1	2	3	4	5	6
3. Babam paramı nelere, nasıl harcadığımı bilirdi.	1	2	3	4	5	6
4. Babam okuldan sonra nereye gittiğimi bilirdi.	1	2	3	4	5	6
5. Babam haftasonu ve tatillerde ne yaptığımı bilirdi.	1	2	3	4	5	6
6. Babam okulda yaşadığım sorunları bilirdi.	1	2	3	4	5	6
7. Bir yere gitmek için ayrıldığımda babama nereye gittiğimi söylerdim.	1	2	3	4	5	6
8. Arkadaşlarımla dışarıya çıktığımda babama kaçta evde olacağımı söylerdim.	1	2	3	4	5	6
9. Babam evde olmadığında ve evden çıkmam gerektiğinde nereye gittiğimi söylemek için ona not bırakır ya da telefon ederdim.	1	2	3	4	5	6
10. Babam evde olmadığında ona nasıl ulaşacağımı bilirdim.	1	2	3	4	5	6
11. Babam hangi derslerden ödevim olduğunu bilirdi	1	2	3	4	5	6
12. Babam derslerim hakkında öğretmenlerim ile görüşürdü.	1	2	3	4	5	6

13. Babam sınav sonuçlarımı, önemli ödevlerimi bilirdi.	1	2	3	4	5	6
14. Babam farklı derslerdeki durumumu ve başarımı bilirdi.	1	2	3	4	5	6
15. Babama okulda derslerimin nasıl gittiğini söylerdim.	1	2	3	4	5	6
16. Babama okulda günümün nasıl geçtiğini anlatırdım (örneğin, sınavlarımın nasıl geçtiği, öğretmenlerimle aramın nasıl olduğu vb.).	1	2	3	4	5	6
17. Babamla, boş zamanlarımda yaptıklarım hakkında konuşurdum.	1	2	3	4	5	6
18. Arkadaşlarımla oynayıp eve geldiğimde neler yaptığımı babama anlatırdım.	1	2	3	4	5	6
19. Babamla arkadaşlarım hakkında konuşurdum.	1	2	3	4	5	6
20. Arkadaşlarım bize geldiğinde babam onlarla konuşurdu.	1	2	3	4	5	6

Appendix B6. Domain-Specific Perceptions of Parental Conditional Regard Scale: Academics and Emotion-control

Aşağıda, çocukluğunuzda ve ergenliğinizde annenizle ve babanızla olan ilişkileriniz hakkında cümleler verilmiştir. Her bir cümlede anlatılan durumu çocukluğunuzda ve ergenliğinizde ne sıklıkla yaşadığınızı 6 aralıklı ölçek üzerinde, ilgili rakam üzerine çarpı (X) koyarak gösteriniz. Hiçbir maddenin doğru ya da yanlış cevabı yoktur. Önemli olan her cümle ile ilgili olarak kendi durumunuzu doğru bir şekilde yansıtmanızdır. Lütfen hiçbir soruyu boş bırakmayınız. Annenizi veya babanızı kaybetmişseniz O'nun yerine koyduğunuz kişiyle ilişkinizi göz önüne alarak soruları cevaplayınız.

1----------2----------3----------4----------5----------6
Hiçbir zaman Nadiren Bazen Ara sıra Sık sık Her zaman

Ben çocukken ve ergenken,.....

1. Annemin sevgisinin, korktuğumu ya da ağladığımı belli etmememe bağlı olduğunu hissederdim.	1	2	3	4	5	6
2. Korktuğumu ya da ağladığımı belli edersem, annemin sevgisini kaybedeceğimi düşünürdüm.	1	2	3	4	5	6
3. Annemin sevgisinin, öfkemi belli etmememe bağlı olduğunu hissederdim.	1	2	3	4	5	6
4. Okul için yeteri kadar çalışmazsam, annemin bana olan sevgisini kaybedeceğimi hissederdim.	1	2	3	4	5	6
5. Okulda başarısız olursam, annemin sevgisinin çoğunu kaybedeceğimi hissederdim.	1	2	3	4	5	6
6. Annemim bana karşı sevgisinin okuldaki başarıma bağlı olduğunu hissederdim.	1	2	3	4	5	6
7. Babamın sevgisinin, korktuğumu ya da ağladığımı belli etmememe bağlı olduğunu hissederdim.	1	2	3	4	5	6
8. Korktuğumu ya da ağladığımı belli edersem, babamın sevgisini kaybedeceğimi düşünürdüm.	1	2	3	4	5	6
9. Babamın sevgisinin, öfkemi belli etmememe bağlı olduğunu hissederdim.	1	2	3	4	5	6
10. Okul için yeteri kadar çalışmazsam, babamın bana olan sevgisini kaybedeceğimi hissederdim.	1	2	3	4	5	6
11. Okulda başarısız olursam babamın sevgisinin çoğunu kaybedeceğimi hissederdim.	1	2	3	4	5	6
12. Babamın bana karşı sevgisinin okuldaki başarıma bağlı olduğunu hissederdim.	1	2	3	4	5	6

Appendix B7. Introjected Regulation (Controlled Motivation) Questionnaire

Aşağıda **olumsuz duyguların (öfke, kızgınlık, hayalkırıklığı, üzüntü, kırgınlık gibi)** başkaları tarafından farkedilmemesi ve akademik alanda başarılı olmak için kişinin hissettiği içten gelen kendini kontrol duygusu ile ilgili cümleler verilmiştir. Her bir cümlede anlatılan durumun size ne kadar uygun olduğunu 7 aralıklı ölçek üzerinde, ilgili rakamı yuvarlak içine alarak gösteriniz. Hiçbir maddenin doğru ya da yanlış cevabı yoktur. Önemli olan her cümle ile ilgili olarak kendi durumunuzu doğru bir şekilde yansıtmanızdır. Lütfen hiçbir soruyu boş bırakmayınız.

1----------2----------3----------4----------5----------6----------7
Hiç katılmıyorum — Kararsızım/ fikrim yok — Tamamen katılıyorum

1. Hissettiğim olumsuz duygularımı bastırmam ve açığa vurmamam gerektiği yönünde içimde birşeylerin beni zorladığını hissederim.	1	2	3	4	5	6	7
2. Hissettiğim olumsuz duygularımı kontrol etmem gerektiği yönünde, çoğu zaman gereksiz de olsa, güçlü bir içsel baskı hissederim.	1	2	3	4	5	6	7
3. Ne kadar kontrol etmeye çalışsam da, hissettiğim olumsuz duyguların başkaları tarafından farkedileceğinden endişelenirim.	1	2	3	4	5	6	7
4. Bazen çok çalışmam gerektiği hissi beni kontrol altına alır ve gerçekten yapmak istediğim şeylerden beni alıkoyar.	1	2	3	4	5	6	7
5. Bazen ne kadar çalışırsam çalışayım asla yeterli olmayacağını hissederim.	1	2	3	4	5	6	7
6. Bazen derslerimdeki ulaşmam *gerektiğini* düşündüğüm hedeflerin çoğu zaman *istediğimden* daha yüksek olduğunu hissederim.	1	2	3	4	5	6	7

Appendix B8. Learning Self-Regulation Questionnaire

Öğrenme Nedenleri Anketi

Aşağıda derslere aktif olarak devam etmenin nedenlerine ilişkin sorular yer almaktadır. Lütfen bu soruları en çok devam ettiğiniz bir dersi düşünerek yanıtlayınız. Öğrencilerin genellikle derslere katılma nedenleri farklıdır. Bu araştırmada aşağıda verilmiş olan her bir nedenin sizin için ne kadar doğru olduğunu öğrenmek istiyoruz. Lütfen her bir nedenin sizin için doğruluğunu göstermek için aşağıdakş değerlendirme ölçeğini kullanınız.

1----------2----------3----------4----------5----------6----------7
Hiç doğru değil Biraz doğru Tamamen doğru

A. Derslerime aktif olarak devam ediyorum, çünkü:	**Hiç doğru değil**			**Biraz doğru**			**Tama-men doğru**
1. Derse ilişkin bilgimi arttırmak için bunun iyi bir yol olduğunu düşünüyorum.	1	2	3	4	5	6	7
2. Eğer devam etmezsem başkaları benim hakkımda kötü şeyler düşünebilirler.	1	2	3	4	5	6	7
3. Eğer başarılı olursam kendimle gurur duyarım.	1	2	3	4	5	6	7
4. Derste verilen bilgileri sağlam bir şekilde öğrenmek entellektüel gelişimim için önemlidir.	1	2	3	4	5	6	7
B. Derslerime çalışırken, dersi veren öğretim üyesinin tavsiyelerini genellikle yerine getiririm, çünkü:	**Hiç doğru değil**			**Biraz doğru**			**Tama-men doğru**
5. Eğer dersi veren öğretim üyesinin tavsiyelerini yerine getirmezsem düşük not alırım.	1	2	3	4	5	6	7

6. Derste iyi bir performans gösteremeyeceğimden endişe ederim.	1	2	3	4	5	6	7
7. Onun tavsiyelerini yerine getirmek, kendi çalışma stratejilerimi oluşturmaktan daha kolay.	1	2	3	4	5	6	7
8. Hocanın dersin nasıl en iyi şekilde öğrenileceğine dair bilgi ve deneyimi var gibi görünüyor.	1	2	3	4	5	6	7
C. Derslerime ilişkin bilgimi arttırmak için çalışmamın nedeni:	**Hiç doğru değil**			**Biraz doğru**			**Tama-men doğru**
9. Dersin kapsadığı konuyla ilgili daha fazla şey öğrenmenin ilgi çekici olması.	1	2	3	4	5	6	7
10. Bu dersteki bazı problemleri çözmek, konuları anlamak benim için heyecan verici bir mücadeledir.	1	2	3	4	5	6	7
11. Transkriptimde derslerden iyi not almış olmam çok iyi olacak.	1	2	3	4	5	6	7
12. Başkalarına zeki biri olduğumu göstermek istemem.	1	2	3	4	5	6	7

Appendix B9. State Self-Control Capacity Scale

Lütfen aşağıdaki cümleleri dikkatlice okuyunuz ve **tam şu anda** nasıl hissettiğinizi en iyi tanımlayacak şekilde yanıt veriniz. Bu araştırmada, genellikle nasıl hissettiğinizle değil, şu anda nasıl hissettiğinizle ilgileniyoruz. Her bir cümlenin altındaki sayılardan sizi en iyi tanımlayan birini (tek bir sayıyı) daire içine alınız.

1----------2----------3----------4----------5----------6----------7
hiç doğru değil | pek doğru değil | biraz doğru değil | ne doğru ne yanlış | biraz doğru | doğru sayılır | tamamen doğru

Tam şu anda, ...

1. Zihinsel açıdan kendimi bitkin hissediyorum.	1	2	3	4	5	6	7
2. Şu anda birşeye konsantre olabilmem için çok çaba sarfetmem gerekir.	1	2	3	4	5	6	7
3. Kendimi iyi hissettirecek hoş bir şeye ihtiyacım var.	1	2	3	4	5	6	7
4. Kendimi motive hissediyorum.	1	2	3	4	5	6	7
5. Eğer şu anda zor bir görevle uğraşıyor olsaydım, kolaylıkla pes ederdim.	1	2	3	4	5	6	7
6. Kendimi tükenmiş hissediyorum.	1	2	3	4	5	6	7
7. Enerji doluyum.	1	2	3	4	5	6	7
8. Kendimi yıpranmış ve yorgun hissediyorum.	1	2	3	4	5	6	7
9. Eğer şu anda çok cezbedici birşeyle karşılaşsaydım, ona karşı koymam çok zor olurdu.	1	2	3	4	5	6	7
10. Verilen herhangi zor bir görevi bırakmak isterdim.	1	2	3	4	5	6	7
11. Sakin ve mantıklı olduğumu hissediyorum.	1	2	3	4	5	6	7
12. Daha fazla bilgi alacak halim yok.	1	2	3	4	5	6	7
13. Kendimi tembel hissediyorum.	1	2	3	4	5	6	7
14. Şu anda ileriye dönük plan yapmak zor olurdu.	1	2	3	4	5	6	7
15. Zeki ve dikkatli olduğumu hissediyorum.	1	2	3	4	5	6	7

16. Bırakmak istiyorum.	1	2	3	4	5	6	7
17. Şu an benim için önemli bir karar vermek için doğru bir zaman olabilir.	1	2	3	4	5	6	7
18. İrade gücümü kaybetmiş gibi hissediyorum.	1	2	3	4	5	6	7
19. Şu anda aklımı toparlayamıyorum.	1	2	3	4	5	6	7
20. Konsantre olmaya hazır hissediyorum.	1	2	3	4	5	6	7
21. Zihinsel enerjim bitmek üzere.	1	2	3	4	5	6	7
22. Yeni bir mücadeleye girişmek için şu an doğru bir zaman gibi gözüküyor.	1	2	3	4	5	6	7
23. Keşke bir süre rahatlayabilseydim.	1	2	3	4	5	6	7
24. Dürtülerimi kontrol etmek için zor bir zaman geçiriyorum.	1	2	3	4	5	6	7
25. Hevesi kırılmış hissediyorum.	1	2	3	4	5	6	7

APPENDIX C. Results of Factor Analyses

Appendix C1.Results of Factor Analyses on Parental Psychological Control Scale

ITEMS	Perceived Mother	Perceived Father
17. Annem bana karşı bazen sıcak davranırken bazen de şikayet edip dururdu.	**.82**	**.70**
18. Annem, beklentilerini yerine getirmediğimde kendisini utandırdığımı söylerdi.	**.77**	**.73**
15. Annem benimle birlikteyken huysuzlaşır, ruh hali değişirdi.	**.75**	**.69**
7. Annem ailedeki diğer kişilerin sorunları için beni suçlardı	**.71**	**.67**
8. Annem beni eleştirirken geçmişte yaptığım hataları hatırlatıp dururdu.	**.69**	**.73**
16. Annem bana karşı bazen sıcak davranırken bazen de şikayet edip dururdu.	**.67**	**.77**
19. Annem, kötü davranışlarımdan, yaramazlıklarımdan utanmam gerektiğini söyler dururdu.	**.67**	**.72**
3. Annem, ben konuşurken sözümü keserdi.	**.67**	**.78**
10. Annem yaptığı herşeyi benim için yaptığını hatırlatıp dururdu.	**.63**	**.69**
9. Annem ailenin diğer üyeleri kadar iyi veya vefalı olmadığımı söyleyip dururdu.	**.61**	**.63**
6. Annem bazı konulardaki hislerimi ve düşüncelerimi değiştirmeye çalışırdı	**.61**	**.70**
1. Annem, ben birşey söylerken konuyu değiştirirdi.	**.59**	**.79**
2. Annem, ben konuşurken bitirmemi beklemeden cümlemi tamamlardı.	**.41**	**.73**
5. Annem çoğu konuda ne düşüneceğimi, nasıl hissetmem gerektiğini söylemekten hoşlanırdı.	**.41**	**.54**
4. Annem ne hissettiğimi ya da düşündüğümü biliyormuş gibi davranırdı	.08	.30
Eigenvalues	5.96	7.01
Explained variance (%)	42.53	50.07
Cronbach's α	.88	.91

Appendix C2. Results of Factor Analyses on Parental Behavioural Control Scale

ITEMS	Perceived Mother	Perceived Father
18. Arkadaşlarımla oynayıp eve geldiğimde neler yaptığımı anneme anlatırdım.	**.85**	**.81**
17. Annemle, boş zamanlarımda yaptıklarım hakkında konuşurdum.	**.82**	**.79**
16. Anneme okulda günümün nasıl geçtiğini anlatırdım (örneğin, sınavlarımın nasıl geçtiği, öğretmenlerimle aramın nasıl olduğu vb.).	**.82**	**.83**
6. Annem okulda yaşadığım sorunları bilirdi.	**.80**	**.83**
4. Annem okuldan sonra nereye gittiğimi bilirdi.	**.78**	**.83**
19. Annemle arkadaşlarım hakkında konuşurdum.	**.78**	**.76**
15. Anneme okulda derslerimin nasıl gittiğini söylerdim.	**.78**	**.77**
1. Annem kiminle zaman geçirdiğimi bilirdi.	**.77**	**.83**
14. Annem farklı derslerdeki durumumu ve başarımı bilirdi.	**.76**	**.74**
2. Annem boş zamanlarımı nasıl geçirdiğimi bilirdi.	**.76**	**.88**
5. Annem haftasonu ve tatillerde ne yaptığımı bilirdi.	**.74**	**.78**
9. Annem evde olmadığında ve evden çıkmam gerektiğinde nereye gittiğimi söylemek için ona not bırakır ya da telefon ederdim.	**.73**	**.69**
13. Annem sınav sonuçlarımı, önemli ödevlerimi bilirdi.	**.73**	**.75**
7. Bir yere gitmek için ayrıldığımda anneme nereye gittiğimi söylerdim.	**.67**	**.72**
3. Annem paramı nelere, nasıl harcadığımı bilirdi.	**.66**	**.71**
11. Annem hangi derslerden ödevim olduğunu bilirdi.	**.63**	**.77**
10. Annem evde olmadığında ona nasıl ulaşacağımı bilirdim.	**.62**	**.60**
20. Arkadaşlarım bize geldiğinde annem onlarla konuşurdu.	**.56**	**.61**
12. Annem derslerim hakkında öğretmenlerim ile görüşürdü.	**.53**	**.69**
8. Arkadaşlarımla dışarıya çıktığımda anneme kaçta evde olacağımı söylerdim.	**.53**	**.70**
Eigenvalues	10.39	11.49
Explained variance (%)	51.97	57.46
Cronbach's α	.95	.96

Appendix C3. Results of Factor Analyses on Domain-Specific Perceptions of Parental Conditional Regard Scale

	Perceived Mother		Perceived Father	
ITEMS	Academic domain	Emotion-control domain	Academic domain	Emotion-control domain
5. Okulda başarısız olursam annemin sevgisinin çoğunu kaybedeceğimi hisserdim.	**.96**		**.98**	
4. Okul için yeteri kadar çalışmazsam, annemin bana olan sevgisini kaybedeceğimi hissederdim.	**.95**		**.96**	
6. Annemim bana karşı sevgisinin okuldaki başarıma bağlı olduğunu hissederdim.	**.92**		**.94**	
1. Annemin sevgisinin korktuğumu ya da ağladığımı belli etmememe bağlı olduğunu hissederdim		**.91**		**.95**
2. Korktuğumu ya da ağladığımı belli edersem annemin sevgisini kaybedeceğimi düşünürdüm.		**.86**		**.94**
3. Annemin sevgisinin öfkemi belli etmememe bağlı olduğunu hissederdim.		**.74**		**.88**
Eigenvalues	2.66	2.12	2.76	2.56
Explained variance (%)	88.71	70.58	92.04	85.46
Cronbach's α	.94	.76	.96	.90

Appendix C4. Results of Factor Analyses on Introjected Regulation (Controlled Motivation)

ITEMS	Emotion-control domain	Academic domain
1. Hissettiğim olumsuz duygularımı bastırmam ve açığa vurmamam gerektiği yönünde içimde birşeylerin beni zorladığını hissederim.	**.94**	
2. Hissettiğim olumsuz duygularımı kontrol etmem gerektiği yönünde, çoğu zaman gereksiz de olsa, güçlü bir içsel baskı hissederim.	**.93**	
3. Ne kadar kontrol etmeye çalışsam da, hissettiğim olumsuz duyguların diğerleri tarafından farkedileceğinden endişelenirim.	**.62**	.43
6. Bazen derslerimdeki ulaşmam *gerektiğini* düşündüğüm hedeflerin çoğu zaman *istediğimden* daha yüksek olduğunu hissederim.		**.80**
5. Bazen ne kadar çalışırsam çalışayım asla yeterli olmayacağını hissederim.		**.80**
4. Bazen çok çalışmam gerektiği hissi beni kontrol altına alır ve gerçekten yapmak istediğim şeylerden beni alıkoyar.		**.73**
Eigenvalue	2.81	1.38
Explained variance (%)	46.82	22.93
Cronbach's α	.82	.70

Appendix C5. Results of Factor Analysis on Learning Self-Regulation Questionnaire

ITEMS	Autonomous	Controlled
9. Dersin kapsadığı konuyla ilgili daha fazla şey öğrenmenin ilgi çekici olması.	**.82**	
4. Derste verilen bilgileri sağlam bir şekilde öğrenmek entellektüel gelişimim için önemlidir.	**.76**	
10. Bu dersteki bazı problemleri çözmek, konuları anlamak benim için heyecan verici bir mücadeledir.	**.76**	
1. Derlerime aktif olarak devam ediyorum çünkü derse ilişkin bilgimi arttırmak için bunun iyi bir yol olduğunu düşünüyorum.	**.70**	
3. Eğer başarılı olursam kendimle gurur duyarım.	**.50**	.41
7. Dersin hocasının tavsiyeleriniyerine getirmek, kendi çalışma stratejilerimi oluşturmaktan daha kolay.		**.68**
6. Derste iyi bir performans gösteremeyeceğimden endişe ederim.	.31	**.66**
8. Hocanın dersin nasıl en iyi şekilde öğrenileceğine dair bilgi ve deneyimi var gibi görünüyor.		**.63**
5. Eğer dersi veren öğretim üyesinin tavsiyelerini yerine getirmezsem düşük not alırım.		**.60**
12. Başkalarına zeki biri olduğunu göstermek istemem.		**.46**
11. Transkriptimde derslerden iyi not almış olmam çok iyi olacak.	.33	**.36**
2. Eğer derslerime devam etmezsem başkaları benim hakkımda kötü şeyler düşünebilirler		**.34**
Eigenvalues	3.34	1.86
Explained variance (%)	27.82	15.51
Cronbach's α	.78	.64

Appendix C6. Results of Factor Analysis on The State Self-Control Capacity Scale

ITEMS	Factor 1
*21. Zihinsel enerjim bitmek üzere.	**.84**
20. Konsantre olmaya hazır hissediyorum.	**.82**
*2. Şu anda birşeye konsantre olabilmem için çok çaba sarfetmem gerekir.	**.82**
*6. Kendimi tükenmiş hissediyorum.	**.79**
*1. Zihinsel açıdan kendimi bitkin hissediyorum.	**.79**
*19. Şu anda aklımı toparlayamıyorum.	**.79**
*8. Kendimi yıpranmış ve yorgun hissediyorum	**.76**
4. Kendimi motive hissediyorum.	**.76**
*12. Daha fazla bilgi alacak halim yok.	**.74**
*23. Keşke bir süre rahatlayabilseydim.	**.73**
7. Enerji doluyum	**.73**
*24. Dürtülerimi kontrol etmek için zor bir zaman geçiriyorum.	**.72**
*14. Şu anda ileriye dönük plan yapmak zor olurdu.	**.72**
*25. Hevesi kırılmış hissediyorum.	**.71**
*13. Kendimi tambel hissediyorum.	**.71**
22. Yeni bir mücadeleye girişmek için şu an doğru bir zaman gibi gözüküyor.	**.70**
*16. Bırakmak istiyorum.	**.70**
*18. Bütün irademin tükendiğini hissediyorum.	**.69**
*10. Verilen herhangi zor bir görevi bırakmak isterdim.	**.68**
*3. Kendimi iyi hissettirecek hoş bir şeye ihtiyacım var.	**.67**
*5. Eğer şu anda zor bir görevle uğraşıyor olsaydım, kolaylıkla pes ederdim.	**.66**
11. Sakin ve mantıklı olduğumu hissediyorum.	**.62**
15. Zeki ve dikkatli olduğumu hissediyorum.	**.62**
17. Şu an benim için önemli bir karar vermek için doğru bir zaman olabilir.	**.57**
*9. Eğer şu anda çok cezbedici birşeyle karşılaşsaydım, ona karşı koymam çok zor olurdu.	.23
Eigenvalues	12.77
Explained variance (%)	51.06
Cronbach's α	.96