INSTITUTIONAL ENVIRONMENT AND PLACE ATTACHMENT AS DETERMINANTS OF ELDERS' LIFE SATISFACTION

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ABSTRACT

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AS DETERMINANTS OF ELDERS' LIFE SATISFACTION

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The main purpose of the present study was to investigate the relationship among three important factors of the life of elderly who accommodates in an institution; institutional environment, older individuals' attachment to place, and theirs life satisfaction. This research aimed to examine how different aspects of institutional environment determine the level of elders' place attachment, and respectively to examine the significance of the place attachment in determining degree of older individuals' satisfaction with their life. Institutional environment was assessed under three headlines; design, social and institutional aspects. It was also aimed to analyze the way those three aspects are interacted with each other to conclude with place attachment.

The sample consisted of 120 older individuals who were from two different institutions; Seyranbağları Rest Home and Year of 75 Resting and Caring Home of Retired Organization. The data were gathered via applying the following measures; measures of design aspect, social aspect and institutional aspect; place attachment scale, life satisfaction scale and demographic information form. A set of exploratory and

confirmatory factor analyses were conducted on the data, to determine whether the items are reliable indicators of latent variables. In this study, structural equation modeling technique was used to analyze the data by using LISREL. Investigating structural relationships among same variables in the light of the related literature, two different models were specified.

The results of the study indicate that, the hypotheses of the first model, saying that; there is relationship between environmental variables of an institution and the life satisfaction of the elderly, and this relation is mediated by the place attachment, were supported except for the one assuming the direct relationship between design aspect and place attachment. The second model specifies the design aspect as the predictor of the social and institutional aspects of the institutional environment. The rest of the model specifies the same structural relationships with the first model. The second model was supported completely, and was confirmed all of the relationships specified by it. In the light of the related literature, the findings of the study were discussed. Additionally, limitations of the study and suggestions for further research were investigated.

Keywords: elderly, place attachment, institutional environment, life satisfaction

ÖZ

DİNLENME EVİNİN ÇEVRESEL ÖZELLİKLERİNİN ve MEKANA BAĞLANMANIN YAŞLININ HAYAT DOYUMU ÜZERİNDEKİ ETKİLERİ

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Bu araştırmanın temel amacı dinlenme evinde yaşayan yaşlıların yaşam doyumunu etkileyen iki önemli faktörü incelemektir; kurumun çevresel faktörleri ve mekana bağlanma. Bu çalışma dinlenme evindeki çevresel faktörlerin yaşlının mekana bağlanma derecesini nasıl etkilediğini, ve mekana bağlanma derecesinin yaşlının hayat doyumunu ne derecede belirlediğini araştırmayı amaçlamaktadır. Dinlenme evinin çevresel faktörleri üç başlık altında incelenmiştir; dizayn boyutu, sosyal boyut, ve kurumsal boyut. Aynı zamanda bu üç boyut arasındaki ilişkinin ve bu ilişkinin mekana bağlanmaya etkisinin de incelenmesi amaçlanmıştır.

Örneklem, Seyranbağları Dinlenme evinde ve Emekli Sandığı 75. Yıl Dinlenme ve Bakımevi'nde yaşayan 120 yaşlıdan oluşmaktadır. Veriler dizayn boyutu ölçeği, sosyal boyut ölçeği ve kurumsal boyut ölçeği, mekana bağlanma ölçeği, hayat doyumu ölçeği ve demografik bilgi formu uygulanarak elde edilmiştir. Veriler üzerinde, maddelerin örtük değişkenlerin güvenilir göstergeleri olup olmadığını belirlemek amacıyla, bir dizi açımlayıcı ve doğrulayıcı faktör analizleri yapılmıştır. Bu çalışmada, data analizi için yapısal eşitlik modeli uygulanmış ve bilgisayar programı olarak LISREL kullanılmıştır.

Değişkenler arasındaki ilişki ilgili literatür eşliğinde incelenmiş, ve değişkenler üzerinden iki farklı model tanımlanmıştır.

Araştırmadan elde edilen sonuçlara göre birinci modelin hipotezleri, sadece bir hipotez dışında doğrulanmıştır. Mekana bağlanma dinlenme evinin sosyal boyutu ve kurumsal boyutu ile, yaşlının hayat doyumu arasında aracı değişken olarak tanımlanmıştır. Bununla birlikte dizayn boyutunun mekana bağlanma üzerinde direk etkisi olduğuna dair hipotez doğrulanmamıştır. İkinci modelde dizayn boyutu; sosyal boyut ve kurumsal boyutunun belirleyicisi olarak alınmıştır. Modelin geri kalan kısmı birinci modelle aynı varsayımları içerir. İkinci model bütün olarak doğrulanmıştır. Araştırmanın sonuçları ilgili literatür eşliğinde tartışılmıştır. Bulguların yanı sıra araştırmanın sınırlılıkları ve gelecek araştırmalar için öneriler de tartışılmıştır.

Anahtar Kelimeler: yaşlı, mekana bağlanma, dinlenme evi, yaşam doyumu

Canım anneme ve babama

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TABLE OF CONTENTS

LIST OF TABLES

1. INTRODUCTION

The importance of environmental attributes as a factor affecting the behavior and satisfaction of people has been emphasized through research conducted in the field (Lawton, 1990; Nahemow & Lawton, 1973). Those theories have guided research on environment and aging, by examining how individual behavior and satisfaction is determined by the interaction between environmental characteristics and individual responses to them. What those theories emphasize is that there is a strong relationship between the older people and their environment, and by investigating this relationship, it is possible to improve the accommodation conditions of the elderly. One of the primary subjects of research on accommodating the elderly and also preliminary question of this thesis is designing institutions for care and rehabilitation of the elderly. The main concern of the current study is about the environmental quality of residential institutions and its effects on life satisfaction of elderly under the mediation of place attachment. Taking the design amenities of the building of the residential house as determinant of satisfaction from social climate and institutional climate, I have examined how those three aspects –social climate, institutional climate and design- shape place attachment and consequently, how this psychological bonding with place determines life satisfaction of the elderly.

1.1. Old Individuals and New Solutions

One of the most popular subjects of today is aging. In 2000's, under the effects of technological and social developments, the birth and death ratios have decreased and number of people over 75 has increased rapidly (Burdick, Rosenblatt, Samus, Steele, Baker, Harper, et al., 2005). Therefore, the proportion of elderly in the whole population has increased, pointing out that the population has been aging. It is obvious, hence, that the futuristic studies can not ignore or omit the elderly segment of the population.

Aging is generally represented by the decline of all physical systems of human beings. Indeed, it should be stated that some physical changes generate a common problem area as people age. With aging, performance capacities and functions diminish; vision is dimmed, hearing declines, taste, balance, sensitivity to touch diminishes; response to sensory stimuli slows down etc (Lawton, 1975). Moreover, it should also be remarked that stereotypic beliefs on the elderly have been negative; hence it is stereotypically thought that many psychological aspects of the elderly also decline along with old age. Since attitudes and expectations of people on the elderly stem from this system of stereotypic beliefs, society, by defining a negative stereotype of old age and perpetuating it, determines the social, psychological and physical circumstances of many elderly (Sijuwade, 1996). In fact, these beliefs do not reflect the reality most of the time; for example Sijuwade's research (1996) on old age has indicated that stereotypes about older people being depressive because of their illnesses and losses are far from reflecting the truth. Being similar to the people of all ages, the elderly goes through good and bad moods but not particularly feels powerless and defeated. On the contrary, the research showed that the subjective well-being of the elderly is higher than that of younger ones. For example, Lawton (2001) stated that while the old ages are seen as the ages of loss and decline, many research has concluded that life satisfaction among older people is higher than it is among younger people.

Not only the beliefs on aging and elderly, but also the representations and judgments on assisted living have been negative. Nevertheless, research reveals that as people become familiar with assisted living, they tend to view it more favorably (Imamoglu, 2002). This may imply that those negative stereotypes on institutions are fake. For many people the decision to take long term care in institutions is regarded as the last chapter of their biographies and as the sign of approaching death. Viewing the old age and institutional living under the shadow of those stereotypic beliefs, actually narrows the choices of the elderly down to a single one. It is clear, however, that the variation of individual differences among elderly exceeds the variation among younger age groups due to the accumulated wealth of life experiences of the elderly,

and due to their hopes, fears, and achievements that they lived through a lifetime (Schooler, 1976).

While some research focus on those psychological and physical aspects of aging, some others stress the effects of psychosocial environment of the elderly and the reversibility of the changes emerging with old age. Successful aging (Baltes, & Baltes, 1990), or healhty aging (Lutgendorf, Reimer, Harvey, Marks, Hong, Hillis, et al., 2001) for example, are two concepts derived from such a view. Lawton (1975) emphasizes the importance of distinguishing three characteristic of aging; the intrinsic characteristics of old age, the characteristics that are secondary to the older person's state of health and the characteristics, which are attributable to social and environmental factors. According to him the environment in which people aged is very important, and he concluded that relatively few traits of elderly are the inevitable consequences of chronological aging. Many organizations also, emphasize the importance of environmental conditions as a factor affecting the life satisfaction and quality of life among old people (Fernandez-Ballesteros, 2001), and when the subject is elderly, it is obvious that the environment is mostly limited to the caring and accommodation conditions as well as the sociophysical aspects of the environment in which the person ages.

There are basically three classic theories that guided research on environment and aging. According to competence-press model of Lawton-Nahemow (1973), the interaction between press, which is the demand character of environment, and competence, which refers to how individual responds to press, determines individual behavior and satisfaction. If these two are congruent, the outcome behavior can be said as adaptive and satisfaction of the individual as high. If these two are not in a balance, then the behavior is maladaptive and dissatisfaction is experienced (Nahemow, & Lawton, 1973). Another model related with behavior and environmental relationship is environmental docility hypothesis (Lawton, 1990), which suggests that when the personal competence on environment decreases, the environment's potential in determining behavior increases. Based on this premise, the mission of the environmental design should be to minimize the negative affects

of aging-related deficits, so that the ability of the elderly to adapt to changes in the environment increases. Another hypothesis of Lawton is environmental proactivity hypothesis, which proposes that if the elderly has increased competency, than her/his personal resources to deal with the environmental demands increases and she/he has a greater control over the environmental resources (Lawton, 1990). What these three theories commonly emphasize is that there is a dynamic and reciprocal relation between the elderly as an individual and the environment. Therefore, it can be said that environment to which the elderly interacts can be measured and improved by understanding its effects on the individual.

Living environment is not a pure entity; rather, it is a combination of different aspects, such as physical, social, organizational, cultural (Wahl, & Weisman, 2003). Although, the ranking of the elderly for those aspects, in terms of importance for them, may vary from culture to culture (Imamoglu, & Imamoglu, 1992a), living next door to their children and their family is something widely desired by the elderly, especially for the ones living in the Turkish culture (Imamoglu, Kuller, Imamoglu, & Kuller, 1993). In villages, towns and small cities the families of the elderly solve the problems of the older individuals about being cared for and about the provision of accommodation by living in the same house or living next door to them. Even in the case where older individuals do not have any children and any close relatives, the neighbors undertake the duty for them being taken care of. However, in big cities even if the elders are in the same city with their children and even if they want to live with them by detaching from their social lives and social environments, there still exists many problems. Since the houses are built as being max. 100 m² and having 2 or 3 rooms, a separate room can not be reserved for the elderly. As the social life is changing rapidly in cities, the older people, especially those who are used to live in the country, tend to experience disharmony with their families. On the other hand, some of the elders who live in the city, may not accept living together with their children like a dependent individual. In addition to these problems, because of the economic conditions and the changing working statues of women, there may not be anybody at home to provide care for the elderly. Thus, loneliness may also be a problem area since the children and grandchildren are mostly out of home during day

time (Türel, 2001). Thus, it has become obvious that traditional approaches can not solve the old-age care and accommodation problems in large cities and metropolitan areas. In line with these thoughts, it can be suggested that these problems may be explanation for the increased positive attitudes toward institutional living following urbanization (Imamoglu, & Imamoglu, 1992b).

The primary goal of age and environment research is to enable older people to live in their familiar housing environments. This necessitates the renovation of their houses or encouraging the production of small housing units, and the provision of some house related services for them. These maintenances, especially the last one, are very commonly applied solutions in European countries. The municipality organization units do some housework for the elderly, like shopping, cooking, cleaning as well, and provide psycho-social services to support elders' resilience towards life adversities; and in Turkey especially in Ankara and İstanbul municipalities have also started to provide similar services.

Another primary subject of research concerned with accommodation problems of the elderly is designing institutions for elderly care and rehabilitation. Still there may be some problems for the elderly preferring an institution, since their adaptibility to new conditions may have been hampered by aging as explained above. It can be thought that due to the globalization based on the developing communications technology, people are experiencing new relationships with places and developing a different kind of affinity with the environment. That is, they are able to develop identification with various places rather than developing affinities with some unique location. However, since mobility is mostly limited in Turkey and most people spend their lives close to the places in which they are raised, it is accustomed for people to live and die in the same place where they were born. This is especially true for old people’s life histories, in rural parts of Turkey. The old generations have tended to be less mobile than younger generations who have a history of increased mobility. The dwelling of elderly in a single setting or in the same environment is often longstanding. Thus, moving away from home may accelerate stress rather than improving their well-being. By relocating into an institution, an unfamiliar

environment which may be someplace they have not chosen through their own will, older persons may find themselves in a setting with improper physical and social properties to satisfy their needs and, as combined with the possible negative effects of a new place on older individuals, residential houses may have detrimental influence on elders' mental health.

Rowles (1993) stated that older people should "age in place", keeping their deep attachments they have with their homes. That is, it is better for aged people to stay in one location as they get older rather than to move to a specialized accommodation. However, for most of the elderly it may not be possible to continue their life in the same environment because of lack of physical ability, feelings of loneliness, economic difficulty emerging with retirement and like. In fact, the attitudes of elderly towards institutional living become more favorable, if the individual is lonelier, has fewer social contacts and negative feelings about her/his life (Imamoglu et al., 1993). Furthermore, Imamoglu and Imamoglu (1992a) stated that elderly prefers to be with people of the same age, and that institutional living provides them with same age friendships. On the other hand, as people age, and retire from formal neighborhood roles, collectively defined integration with the society may decrease. This eroding in role-based links may cause shifts of attachment behavior from collective to individual level. At that point relocating to an institution provides a new collective neighbor role. However, because of the negative value that is loaded to residential houses, elderly may reject to integrate with such institutional environments (Rubinstein, & Parmelee, 1992).

The interaction of the elderly with the environmental factors can only be understood by examining the institutional environment. In the following section the characteristics of the institutional environment were illustrated and they were investigated under three headlines; namely, social climate, design and institutional climate.

1.2. The Most Important Aspects of the Residential Houses as a Special Environment

A residential house can be considered both as a home, since people live there and as a medical care center because of regulations, rules, and resident-staff relations. Because of this bivalence, Rubinstein and Parmelee (1992) evaluate them as "nonplaces". This evaluation emerges because they are collectively, rather than personally defined spaces; that is, they are designed for collective activities rather than for individual use.

In many residential houses daily living is reduced to one or two rooms. This change in spatial routines results from physical limitations of the elderly. Actually this reduction in space decreases environmental demands on the aged individuals hence increases their independence. However, it also causes shrinkage of the space available for living and taking activates. This means at the same time that, the elderly have too much time and too limited social environment (Wahl, & Weisman, 2003). In literature, most of the time long-term care institutions are also defined as 'depersonalizing environments' because they separate individuals from their previous lives and from the outside world. Basically they make the elders a member of a 'collective mold', by isolating them from their personal identity. Accordingly, moving into a long-term care institution is considered as a sign of diminishing abilities, and departing from the world, and at the end, a sign of symbolic death. Long-term care institutions are seen as a modulation place between independency to dependency and between autonomy to nonexistence. (Rubinstein, & Parmelee, 1992).

Taking all those interpretations into consideration, it can be easily concluded that the characteristics of the institutional environment should be thought and defined carefully to minimize the negative affects of the institutional life. Kahana, Lovegreen, Kahana, and Kahana (2003) discusses characteristics of the neighbor environment each of which is likely to be a function of residents' expression of their own needs rather than reflecting objective environmental presses on individuals.

These are; some physical features, namely physical amenities or aesthetics, resource amenities, safety, and stimulation versus peacefulness; and some social climate of the environment; homogeneity or heterogeneity and interaction or solitude. Especially the preferences for aesthetic experiences should be taken into consideration although they differ from person to person.

As Binstock (2004) suggested, there has not been perfect solutions to conceptualize and to measure the context for "aging well" with regard to environmental conditions. However, according to the author, the main dimensions for the ecology of "aging well" can be summarized into three categories: physical, social, and the institutional. In a similar vein, Wahl and Weisman (2003) stated that the physical, social, organizational, and cultural environment are deeply interwoven practically.

This view is supported by further research conducted in this area. Fernandez-Ballesteros, Montorio, and Fernandez de Troconiz, (1998), have studied 32 residential centers, by using Sistema de Evaluacion de Residencias de Ancianos (SERA) which is based on Multiphasic Environmental Assessment Procedure (MEAP) developed by Moos and Lemke (Lin, 2003). They have explored the interaction between environmental and personal variables in elders' residential settings. They indicated that the relation between different personal variables mostly determined the reported health of the elderly, influencing both subjective levels like complaints about memory, functional abilities or general activity level, and residential satisfaction. They also concluded that physical and organizational environmental features like community accessibility, presence of social-recreational assistance and policy, predicted the residents' activity level. They found out that environmental stimuli, together with other personal variables could predict the memory complaints. In their study residential satisfaction was explained partially by personal characteristics and to a greater degree by social climate characteristics of environment, involving both psychosocial and physical factors. They also concluded that architectural and physical factors do not predict social climate dimensions, which is contrary to Moos and Igra (1980) who indicated that "architectural",

"policy", "resident" and "staff" factors of the institution influence the social environment of a particular institutional setting.

In his research concerning the influence of environmental conditions on health and satisfaction of the elderly, Fernandez-Ballesteros (2001) conclude that social relationship factors and physical comfort are the most important dimensions of the residential environment. He also found out that physical circumstances and social climate predict personal variables like level of activity or memory complaints.

Another study, by Bowie, Mountain and Clayden (1992), mention similar dimensions of the environment. The authors pointed out some aspects related with environmental quality of long-stay wards; the degree of institutionalization existing within the ward, the social activities available to patients, and the physical attractiveness of the ward. Degree of institutionalization involves policy inflexibility, limitations perceived by patients and working methods of staff; the social activities embrace number of facilities available to patients; physical attractiveness embrace degree of domestication of the ward, physical condition of the ward like décor, noise and odors, and space availability.

It is evident from the literature that the most important aspects of the environment for the elderly are physical, social, and institutional dimensions. In the next chapter, the physical characteristics of the institutions for the elderly are referred to as "design" aspect of the environment, and "social climate" and "institutional climate", are also analyzed. In order to give more concrete definitions of these constructs some empirical and theoretical indications will be summarized next.

1.2.1. Design as a Physical Aspect of the Residential Houses

Contrary to the historical stereotype of residential house, which assumes it as a replication of a hospital, today the designers and researchers focus on its characteristics for domesticity and normality. In all countries architects and planers try to design their best for institutional living by combining the concepts of being

homelike, informal and safe. They should think about increased number of design aspects of the institutions; from the bars along the walls of corridors to color of the spaces, from convenient dimensioning for the wheelchairs to ventilation without drafts (OECD). Mostly accepted principle of an institutional design is that it should have a limited number of residence rooms with auxiliary rooms and a graded plan of space from those private spaces to common ones like dining rooms and some common rooms with short corridors. Beyer and Nierstrasz (1967) have formulated the principles for institution design; the balance between private and common places and easy access to those common places and also service areas; human scale; and a good sever of daily life of the inhabitants from the activities of staff by designing service layout. Residence rooms should be a bed-sitting room, and they should be large enough to provide a sense of living independently as in a house or an apartment. They can be arranged and furnished suitable to create a totally personalized atmosphere. Ventilation, heating and safety requirements are also demands that have to be met in institutional homes (Beyer, & Nierstrasz, 1967).

According to Rantz, Zwygart-Stauffacher, Popejoy, Grando, Mehr, Hicks, (1999)**,** a nursing home should have some important architectural features that determine the quality of care; they should smell clean (not of urine or body odors), they should not be noisy, there should be enough windows for natural light, the furniture and equipment should be aesthethic, functional and coordinated. Especially sound isolation of the building has special importance since elderly with hearing deficiencies tend to listen to their radio and television by loud volume (Beyer, & Nierstrasz, 1967).

Kane (2001) emphasized, the importance of the physical environment in shaping competence. As far as the physical impairments of the elderly are concerned, the inadequacy to normalize physical environments as well as adopting them to enhance functional opportunities appear to have detrimental effects on the life of the elderly. According to Kane (2001), functional competence as a basic domain of quality of life, is extremely sensitive to the physical environment in which older people live and receive care.

Holmén and Furukawa (2002) mentioned some studies indicating that the physical characteristic of the environment is an important factor for loneliness felt by the elderly. A comfortable environment, for example, is one reason why an elderly person experience loneliness less often. Ohara (2004) similarly stated that the building aspects of the residential environments are important for eliminating the feeling of loneliness, in addition to creating the sense of being at home.

It is very important whether the institution is perceived as a home or not. According to Rantz et al., (1999) the residential house should be viewed as home, therefore the utmost effort should be spent to minimize its institutional image. Actually, the residents of nursing home do not only need delivery of care, but also they want to feel like at home. In a similar vein, the study of Imamoglu (2002) indicated that the respondents who evaluate the assisted living as favorable, associated it with the concept of homeness at the same time, and the researcher concluded that "a favorable assisted living schema tends to develop by associations with the home schema" (Imamoglu, 2002; p.181).

This can be achieved by building materials, furnishing, decorating, designing special in common places and organizing them as small units. The use of materials in the building is an important concern; materials which give the homely feeling to the elderly have been taken into consideration. Common places, semi-private places, private and personal places should be separated obviously from each other. This provides the equilibrium between common and private life. A residential house should also involve enough amounts of open spaces providing elders sitting, resting and TV watching possibilities. Areas should be spacious and there should be some areas to walk and to push wheelchairs outdoor (Pakdil, 2001).

The importance of the physical features of the residential environment for the feeling of being at home or sense of homelike was indicated by the research of Marsden (1999), too. The results of this study suggested that the physical features of the

buildings such as window trims, muntins, and lintels make a difference in creating a sense of homelike.

Similarly, Perez, Fernandez-Mayaralas, Rivera, Abuin, (2001) found that the residential satisfaction is related with the satisfaction with home-related attributes (comfort, size, distribution, degree of light, insulation), number and type of amenities in building, neighbor network, availability of space in the institution, and institutional comfort. Similarly, Ball, Perkins, Whittington, Connell, Hollingsworth, King, et al. (2004) stated that design elements directly influence "aging in place". The design elements, such as, entrances at grade, single-story constructions, or presence of elevators, handrails, walk-in showers, deal with disability of the elderly. According to the authors, these facilities by the design are especially related to the residential satisfaction and management of decline.

In a similar way, Kendig (2003) emphasized the value of better understanding the environmental features that facilitate or impede the activities or behaviors of older people. The author stated that few studies pay attention in examining the places in which older people live their daily lives, and it is important to study particular physical-environmental features for older people and the reasons underlying this importance.

1.2.2. Social Climate

Barker (2002), by using qualitative techniques, defined all relationships coming into being in residential setting as nonkin and identified four distinct types of relationships: "Casual", "bounded", "committed", and "incorporative". Casual relationships tended to be of shorter duration than the other styles, pleasant but emotionally distant in tone and rather fluid in content. Bounded relationships generally involve more extensive contacts between the parties than does casual ones, but these are still focused on impersonal, instrumental task performance. Committed style had the greatest degree of internal variation in form, ranging from strictly dyadic relationships, through a variety of benefit-related relationships. For this style

of partnership, duration of relationship usually exceed duration of benefit by several years. Incorporative relationships have greater emotional intimacy and involvement in the world of the care recipient.

The importance of the social relations in the residential settings is determined by Carpenter, Haitsima, Ruckdeschel, and Lawton's (2000) study which suggested that social contact, growth activities, leisure activities are important dimensions of residential satisfaction and to be taken into consideration for individualizing care for older persons. As one of the major preferences of the elders, social contact refers to the dimensions such as desire for visits with family members and preferred size of social groups, as well as specific social activities, such as celebrating holidays and birthdays.

Zaff and Devlin (1998) mentioned the "sense of community" as an important social factor of the environment of the elderly. The researchers define the sense of community as a unity of some features such as a complex network of friends, individuals' perception of the surrounding environment, social relations with those in this environment, and participation in neighborhood activities.

Imamoglu, & Imamoglu, (1992b) stated that there is direct relationship between social contacts and life satisfaction of the elderly living in Turkey. The same relationship is not found for those living in Sweden. They suggested that this cross-cultural difference might be due to the fact that Turkey is more a "culture-of-relatedness". Although it stays as an important question how the relationship between social contacts and life satisfaction differs with respect to culture, the research confirme the importance of these social factors for the perception of the residential environment. The research by Holmén and Furukawa (2002), for example, showed that the communication with friends in the residential environment has great importance for the elderly. The interviews with the elderly showed that they experience greater degree of loneliness when there is no one to talk to. Wu and Rudkin (2000) states that the social contacts serves also as a buffering function for the negative health effects associated with various life stressors. The results of the

study confirmed the stress-buffering hypothesis, meaning that the elderly who have supporting social contacts experience less physical and emotional difficulties.

By using structural equation modeling, Cutchin, Steven, and Chang (2003) confirmed the hypothesis that social factors in the residential settings such as close relationships, mutual respect, nonfamily social involvement have an impact on the residential satisfaction. Additionally, results of the study indicated the importance of the involvement in activities inside the residence as an important factor in shaping one's perception of place. These activities and interactions themselves, in turn, provide the fundamental basis for relationships and the meaning of place. Additionally, one of the results of Cutchin et al.'s research (2003) suggested that meaningful activities in place help to overcome disruptions in the person-place relationship; and involvement in activities of place is a significant predictor of the feeling of "homeness".

Kane (2001) stated that long term "care consumers" need to perceive that their lives are full of interesting and meaningful things to do and to see. Social relationships, for example, according to the author, make life worth living; these may be relationships of love, friendship, or even of enmity and rivalry. Reciprocal relationships with the help of which the nursing home resident is able to give as well as receive support, advice, and confidences, are best of all.

Similarly, Friedemann, Newman, Seff, and Dunlop (2004) stated that creating a supportive social network is one of the most important factors while providing long-term care for the elderly. It is detected from the research that the characteristic of social network determines the individual's perception of the place. Ng, Kam, and Pong's (2005) recent study showed that the social contact and the quality of neighbors affect the residents' sense of belonging to the place. The quality of neighbors are defined in their research as social-interactive characteristics such as the frequency of social interaction, perceived helpfulness, and satisfaction with the relationship with neighbors.

According to Rantz et al., (1999) another important characteristic of a residential house is the possibility of meeting both the socialization and privacy needs of the elderly. The residential environment should have such features to cover both excitation and serenity, and self-expression and activity. Privacy refers to be able to be alone when one wishes to be or to be together in private with others when one wishes to be (Ball et al., 2004; Kane, 2001). In their research, emphasizing the significant differences between the design preferences of residents, administrators and designers, Duffy, Bailey, Beck, and Barker, (1986) concluded that while both administrators and designers choose the designs that facilitate "social interaction"; nursing home residents choose designs that assist "privacy". Actually, most of the time social interaction is thought as having great importance for the well-being of residents and too much privacy is assumed to be as detrimental. However, it is obvious that the privacy has also great importance for the elderly. According to Duffy et al. (1986) social withdrawal is an unavoidable response to the environments that are overloaded by social interaction**,** but if the privacy is attainable, social interaction may also be welcomed. Actually the equilibrium between privacy and socialization is very important for a nursing home, since people want to satisfy both their strong dependency needs and their sense of personal power by controlling their own lives (Sijuwade, 1996).

Lawton (1975) emphasized the role of communal area on social behavior, by focusing the importance of easy accessibility of people. He counseled small on-floor social spaces to build social interaction. This can be an all-purpose room, or activity room, or just a community room or merely a lobby.

1.2.3. Institutional Climate

Institutional climate refers to the atmosphere created by the policy of the institution. The most important concept related to institutional climate is 'assisted living'. Chapin and Dobbs-Kepper (2001) states that the concept includes the quality of services concerning cleanliness, level of autonomy, and health services. Similarly, Steel, Melzer, Shekelle, Wenger, Forsyth, and McWilliams (2004) states that the

most important quality measures for the elderly includes the availability of facilities and staff, and health services.

Institutional climate becomes an important determinant when the elders' need of care is taken into account. As can be estimated, one of the most important aspects of the residential environment is staff, because they provide the assistance for the daily living. Although there is research (Moss, & Igra, 1980) founding very little relationship between staff-resident ratio and the social environmental dimensions; numerous research indicated the importance of this dimension for the elderly. Özgür, Karaaslan, Bayık, and Ergül (2003) found that elders living in a residential house give the most importance to how the staffs behave them and their guests. They want the staff to be respectful to them, to their relatives, and friends. According to Rantz et al. (1999) for example, the staff is the most important dimension of a nursing home; none of the care can be implemented without them. A nursing home should have enough and consistent, responsive and caring staff; and continued supervision of that staff. Staff should be sensitive to residents' needs.

There are other factors that are closely related to the institutional climate of the residential environment. According to Rantz et al. (1999) the food also should be good, healthy, and clean; and residents should be able to find what they want and like. Moreover, Kane (2001) stated, a good quality of life for the elderly requires a sense of "security" about oneself in one's world. A person needs to be able to trust that he or she is living in a benign environment where people are well intended.

As well as security, the feeling of independence is also a frequently cited factor for determining the quality of elderly life (Burdick et al., 2005; Friedeman et al., 2004; Hawes, Phillips, Rose, Holan, & Sherman, 2003; Kane, 2001; Steel et al., 2004; Phillips, Munoz, Sherman, Rose, Spector, & Hawes, 2003). Control is another important factor in an institutional climate (Imamoglu, 2002). People fear from the idea of losing the control over their own lives and they do not want anybody to tell them what to do. Thus, the older people who live in an institution want to be independent, which shelters the meanings of control and status (Heywood, Oldman,

& Means, 2002). However, according to Sheehan and Oakes (2003), without attending to the residents' preferences, services for elders may sometimes view them as passive clients who have not any other alternative than the institution. Satisfaction of feelings of personal control or autonomy is also an important factor predicting people's satisfaction from living environments (Imamoglu, & Imamoglu, 1996; Imamoglu, & Kılıç, 1999).

1.3. The Effect of Environmental Factors on Positive Mental Health of The Elderly

As a positive conceptualization, life satisfaction is considered as one of the most important dimension of mental health and quality of life (Diener, 1984; Diener, Sapyta, & Suh, 1998; Diener, Suh, Lucas, & Smith, 1999; Diener, Suh, & Oishi, 1997; Ryan, & Deci, 2001) and referred to as happiness. Life satisfaction is regarded as the cognitive dimension of the concept of subjective well-being and refers to the evaluation of one's whole life. Happiness, in this respect, can be regarded as an answer to the question "What is a good life?" (Smith, 2001).

Wahl and Weisman (2003) stated that the main strive for the environmental gerontology have been the supporting role of environment in creating the good life in old age. The review of Kahana et al., (2003) indicates that three important predictors of a good life for the elderly are the characteristics of the person, of the environment, and of the person-environment fit. Harmony between personal preferences and environmental features increases well-being. Most of the time people perceive environmental features according to their salience to their needs. That is, according to the authors, except for the problems rising from the characteristics of the environment, the maladjustment between environmental attributes and personal evaluation of them may also cause some psychological problems.

In the same way, Maddox (2003) stated that housing and evaluations about housing affect quality of life and these are closely related to well-being, health, and social integration. Similarly, Migita, Yanagi, and Tomura (2005), showed that a

considerable number of the residents in their research had psychiatric problems associated with their dissatisfaction with the architecture and/or the location of the housing.

The importance of the environment has been started to be emphasized in the environmental gerontology studies by the 70s (Wahl, & Weisman, 2003). Wahl and Weisman, in this regard, state that person-environment interchange processes have a major impact on the behavioral and emotional functioning of older people. According to the authors, the higher the level of fit, the higher is the ability to maintain a required level of competence. In their review, however, Bengtson and Schaie (1999) stated that it is disappointing that there is not any chapter reserved for the environment and its qualities in the influential "Handbook of Theories of Aging" still at the end of the millennium (1999).

In further determining the important needs of the elderly, relationship with other people have been found to be a very important dimension for life satisfaction (Kane, 2001). A recent research by Zimmerman, Sloane, Eckert, Gruber-Baldini, Morgan, Hebel, et al. (2005) clearly showed the importance of social withdrawal and social inactivity for determining the quality of life and general health of the elderly. The results of the study indicated that the social and recreational activities are closely related to the quality of life indicators positively and to the mortality negatively. Moreover, Ho, Matsubayashi, Wada, Kimura, Yano, Otsuka, Fujisawa, Kita and Saijoh (2003) showed that the relationship with friends, rather than family, is a relatively stronger factor in determining life satisfaction of the elderly.

According to the study of Fernandez-Ballesteros (2001), people who are satisfied with their environment report to be satisfied with their life, too. That means that the environmental quality assists life satisfaction. Imamoglu and Kılıç (1999), in the same way, reported that the elderly living in high quality institutions are satisfied more with their lives than the elderly living in low quality institutions. According to them the quality of an institution is an important factor in predicting the elders' satisfaction with their lives. They obtained positive intercorrelations between life

satisfaction and institutional satisfaction. According to their research, the facilities and services, physical surroundings and leisure-time activities are more important for the elders from high-quality institutions than for the ones from low-quality institutions. They interpreted the results as suggesting that the better are the provided opportunities, the more important these are to the inhabitants.

Holmén and Furukawa (2002) stated that ageing leads to a natural weakening of junctions, and forces the individual to rely more on support from his or her kin and the society. Consistent with this opinion, the results of their study showed that meaningful social contacts are important parts of well-being. According to the research, the high levels of satisfaction with friends and non-experienced loneliness, leads to acceptance of ageing and increased satisfaction with life among the elderly. Additionally, social and emotional loneliness have been found as an important factor even for dementia (Holmén, Ericcson, & Winblad, 2000). According to the researchers, the feelings of emotional and social loneliness are often reported among the severely demented subjects.

Although it has been concluded that the environmental features have important effects on positive mental health, the literature gives some findings indicating that the place attachment may be a variable that meditates this effect. In other words, the literature gives important clues pointing out that the environmental aspects determine the place attachment that, in turn, the place attachment brings out life satisfaction of the elderly.

1.4. The Importance of Place Attachment

1.4.1. The Concept of Place and Place Attachment

Physical space is called as “place” when personal, group, or cultural processes have been given meaning through it (Low, & Altman, 1992). Stokols and Shumaker (1981), define the “place” as “the geographical and architectural context of behavior” (p. 442).

If the social and physical resources within the residential environment are convenient to satisfy the salient needs of individual, then attachment takes place (Shumaker, & Taylor, 1983). According to Rubinstein and Parmelee (1992), the personal experience and social interaction are the fundamental dimensions that make the person to attach meaning to a space and that make it a place as part of one's identity. These researchers concentrated mostly on the personal experiences with the physical space as a real and personally meaningful place. The authors refer to an association between identity and sense of place, indicating the account of objective characteristics and subjective experiences of place. That is,

> place dependence is based on the extent to which objective environmental affordances are compatible with one's personal identity and patterns of independence. Insofar as the affordances of a given place are perceived as superior to those offered by other, alternative environments, one develops a sense of attachment to the current locale. Space thus becomes place, and takes on greater functional significance (Rubinstein, & Parmelee, 1992; p. 146).

People may construct bonds with other people and also with objects and places; with a flag, a dress, a mug or with a home, a religious shrine, and even a landscape. The main characteristic of attachment concept is the desire to be close to the target of attachment. In place attachment, the target of attachment bond is environmental settings. According to Low and Altman (1992), attachments may be set up both with real places and also with mythical, hypothetical and imagined places and those real places mentioned may vary in scale and specificity, from very small scales to the nations, to planets or to the universe.

In its most general definition, place attachment is defined as an affective bond between people and specific places. For example, according to Low and Altman (1992), 'attachment' emphasizes affect and 'place' emphasizes the environmental settings to which people are emotionally and culturally developed bonds. For

Hidalgo and Hernandez (2001), place attachment includes a positive affective bond between an individual and a specific place, and the main characteristic of this bond is that, the individual has a tendency to maintain closeness to this place. Rubinstein and Parmelee (1992), defined place attachment as a set of feelings about a geographic location. Those feelings emotionally bind person to a place and constitute a base for experience.

According to Brown and Douglas (1992), individuals experience a kind of behavioral, cognitive, and emotional merging with their sociophysical environments through the place attachment process. As Rowles (1993) stated, people have a propensity to develop a physical attachment to the place that they experience. He mentions three components of attachment; first one develops over the years, and we start to live without thinking about space around us and use a configuration of the place. One only notices this dimension of attachment if the place of attachment somehow might be changed. Eventually this causes one to become sensitive to even small changes. Second component emerges from shared habitation. Since the place has some social norms, which are known to its habitants, it becomes a slot of social identity and a social place. Third component is related with personal history, since the places one lives in influence the construction of own self-image.

Low and Altman (1992), suggested three functions of place attachment for individuals, groups and cultures. Place attachment can make people get relaxed and be free from formal roles, control the aspects of their lives and give them a chance to be creative, by providing them daily and continuous security feelings and stimulation required for such creativity. It is a bond, which binds people with others, like friends, children and family by reminding them old memories where places act as mementos. Further more, it also binds people with their culture, nation or history since the place bears symbols of beliefs, values. Research has revealed some differences between people with strong place attachment and the ones with weak attachment. People who feel strong attachment to place expect future stability, do not tend to seek change, and they have a more detailed knowledge of the history and geography of that place.

They invest a great deal of time and resources in that place, and get satisfied with it. (Shumaker, & Taylor, 1983)

Actually memories of the individuals are filled with important places that they had lived. Thus, they had significant experiences in where the places act as memento for one to remember those. One may often see people who have relocated, miss the mountains, seas, neighborhoods, smells and rooms of previous settlements even years after. As McAndrew (1998) stated that separation from the attached places, especially in an involuntary manner, may be threatening for self-identity, and also may cause more serious problems for those who have strong place attachment than the ones with weaker attachments. This feeling of loss is often described as 'homesickness'.

However, simply experiencing or remembering a place does not mean that place attachment has occurred. It is rather a complex and energized mechanism, which results through the interaction of concepts like significant life events and identification process with the environment. Place attachment function in a complex manner comprising of many components at both collective and individual levels. As mentioned before, people may experience place attachment also in a variety of spatial levels, from attachment formed to a special room of the house to communities or nations. The quality of place attachments may differ with respect to how important the place is for the individual. Its strength is affected by both the place characteristics and the characteristics of the person, like personality and needs. People's past and present experiences determine their interactions and interpretations of physical environments, and thus they become important variables for the development of affective bonds with places (Rubinstein, & Parmelee, 1992). It is clear, then, that the physical and social elements and the quality of experiencing these elements determine the level of place attachment. Hence, the environmental aspects mentioned above become most important determinants of the place attachment.

1.4.2. The Mediating Role of Place Attachment

Some research showed that the place attachment is determined by the environmental conditions. According to Stokols and Shumaker (1981), for example, the physical and social elements of the environment determine the strength of place attachment. Repeated association of social elements with specific patterns of activity, causes individuals to become attached to a place and causes the place to have a residual meaning. In a similar vein, Shumaker and Taylor (1983), evaluated the place attachment as a multilevel person-place bond. According to them this bond originates from characteristics of both people and places and has some effects on the attitudes and behaviors of the individuals toward their sociophysical environments. The authors refer some factors as strengthening the attachment bond that a person develops with a certain place. First of all, they mention the physical and social amenities of the environment and that the environment providing resources for meeting the needs of the resident strengthen the attachment. Additionally, local social networks affect the attachment, since the people who have positive social relations within their residential settings, also develop stronger attachment bonds.

The same factors are pointed out by the research of Ng et al. (2005). Their research findings showed that the physical and social characteristics of the environment are important for place attachment. Social characteristics are defined by the neighbors' quality and physical characteristics are defined by the quality of dwelling such as ventilation, hygienic conditions, toilet, and kitchen facilities.

Hidalgo and Hernandez (2001), in a similar manner, have shown that people developed physical attachment with the places besides social ones. Actually, according to the findings of their research, these two attachment levels work together and create a general affective feeling toward the place, and it is hard to distinguish one's effect from the other. An important finding of the research was that the social attachment is always stronger than the physical attachment for all spatial levels.

The findings of research by Sugihara and Evans (2000), confirmed the importance of the physical factors, and show that the development of a positive perception of the physical environment is an important condition of success in transition to a nursing home. They show that some design characteristics affect the place attachment.

As defined before space is called place when social environment has given meaning through it, and deriving from this notion, place attachment can be thought as the existence of social relationships. Low and Altman (1992), in this regard, showed that places constitute a base for the interpersonal, community, and cultural relationships and people are attached not to the place itself but to those relationships. Therefore they conclude that social relations might be equal or even more important than the place qua place for the attachment process.

According to Rubinstein and Parmelee (1992), sense of place is assisted by identity shaped by life experiences, specific circumstances and personal interpretations. By taking a person-centered view of environmental process into account, they underscore the importance of the person as a meaning maker and of the personal meaning of the place.

Therefore, in this view the association of personal identity with a specific environment forms attachments to place. When the context is the elderly and their residential environment, the physical, social, and institutional characteristics becomes the most important determinants of place attachment.

As a variable that determined by the sociophysical factors, place attachment, in turn, becomes one of the most important determinants of the mental health for the elderly. As people age and the world changes, increased place attachment may become an important phenomenon in terms of getting a sense of identity. Research shows that changing the places that is habitual may be related with increased mortality rate while stronger place attachment has been associated with better adjustment, positive affect and finally residential satisfaction (Sugihara, & Evans, 2000). Brown and Douglas (1992), emphasized that loosing a secure place attachment causes a stressful

period to start, and the postdisruption period is shaped by coping with lost attachment and developing a new one. According to Rubinstein and Parmelee (1992), such a disruption may be more stressful for the elderly, since older people tend to attach most strongly to their home places. They interpret attachment behavior as a life course phenomenon, rather than something arising from early life experiences. Rubinstein and Parmelee, (1992) stated that especially for the elderly place attachment, experience of the life course and themes of self-identity are related. According to their view, place attachment can be experienced either currently, or it also can be lived as a part of remembrance. They evaluate the place attachment as having extra importance for older people; since attachment mechanism might have provided their past to be full of life, and a current attachment strengthens the self as being a sign of independence and further it shows that the competence continues.

A review by Shumaker and Taylor (1983) indicated that both social and aesthetic qualities of the environment enhance satisfaction and there is a strong positive relationship between satisfaction and attachment. They explain that the strength of an individual's attachment played an important role on his or her physical and mental health, and community commitment.

It is evident, thus, that the place attachment can easily be regarded as a mediator variable between environmental factors and satisfaction with life. This mediational effect, actually, is evident in the research. The degree of attachment to residential environment is evaluated as a strong predictor of satisfaction with life. Physical dimension is examined corresponding to design and equipment; social dimension is studied corresponding to social networks established both in shared areas of the building and in the neighborhood, and institutional climate is studied corresponding to services and policy.

In a similar manner, research by Evans, Kantrowitz and Eshelman (2002) showed the effect of housing quality and place attachment on elders' psychological well-being. The housing quality observation measure includes scales of infrastructure, amenities, support for mobility impairment and spatial requirements. These in fact refer to the design aspects in present thesis. Their hypothesize was that housing quality affects

psychological well-being and this relation was mediated by place attachment. They indicate that housing quality is significantly related to positive affect, and place attachment is also significantly related with positive affect. They also concluded that place attachment fully mediated the relation between housing quality and positive affect. However, the housing quality is only one aspect of the environment when the context is the residential homes for the elderly.

All the literature mentioned above indicates a model concerning the relationships between institutional environment, place attachment, and life satisfaction. In such a model, the environmental functions of the residential institution, namely design, social climate, and institutional climate, define life satisfaction, through the mediational role of place attachment. The conceptual representation of such a model is presented in Figure 1.

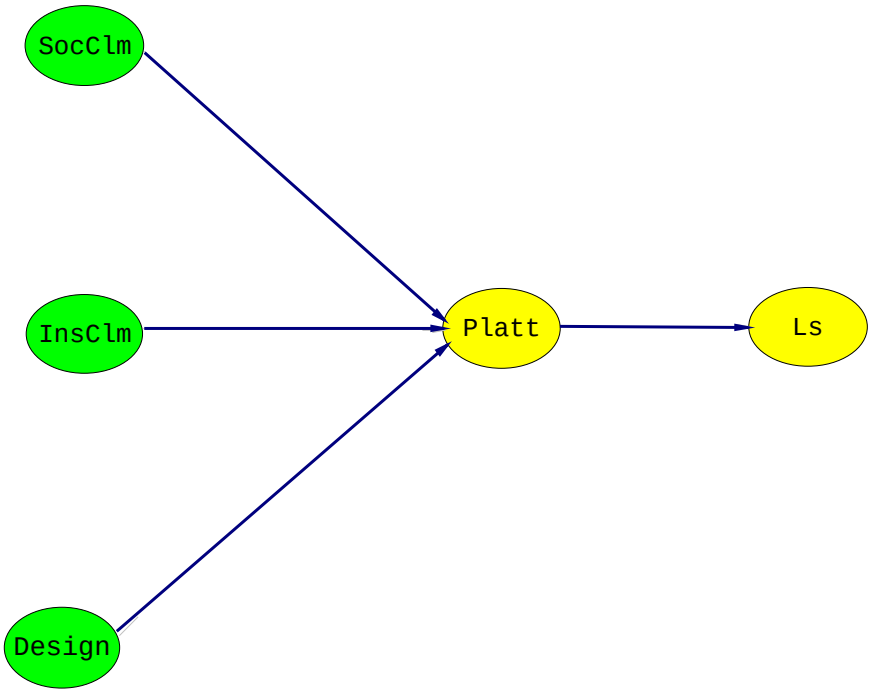

Figure 1.1. Conceptual Diagram of Model 1.

1.5. Can Design Be Regarded As the Most Basic Factor of The Environment?

In spite of the above-mentioned literature regarding the physical features of the environment as an accommodating aspect of the social and institutional environment, Kendig (2003) suggested that the design aspect precedes and determines the social and institutional climate. Kendig (2003) asserted that the spatial dimensions are essential for understanding aging individuals and microenvironments as well as changing populations and macroenvironments. Mazumdar, Mazumdar, Docuyanan, and McLoughlin (2000), in this regard, proposed that though buildings and artifacts communicate identity, it is people's interaction created by these places that give meaning to the setting. The results of their research, indeed, indicated that the built architectural environment and the subjects' social and ritual activities interact and intersect to create a sense of place. Moreover, the results of this study also showed that space becomes an instrument or an agent of communication. In brief, housing should not be evaluated as an independent unit, rather, its interaction with other social and physical aspects should be the point of departure in the lives of the elderly (Imamoglu, & Imamoglu, 1992a).

One of the most important concepts concerning residential environment has been 'space'. Space refers to the functional aspects of person-environment relations. Research on aging, focuses on space most of the time. According to Rubinstein and Parmelee (1992), this is the case because old age, especially extreme old age, limits much physical and sensorial ability of elderly. The characteristics of the physical environment have special importance for the life of elderly; because, as the personal competence decreases the influence of environment on behavior increases. When one's capacity to act upon environment declines, the environment, not the person, becomes who controls the activity, and the characteristics of activity changes from wishes to abilities (Rubinstein, & Parmelee, 1992). Then, people may choose to change the environment rather than live with those constraints. They should decide whether they prefer benefits of residential stability or more supportive environments despite the stress coming with relocation (Rowles, 1993). However, the meaning of supportive environment may change from individual to individual. Emphasizing the

significance of having control of one's own life, Imamoglu and Imamoglu (1992a) underscore the importance of providing different housing alternatives to elderly. Therefore, the elders can choose the type of housing that covers their needs properly.

Regnier's (2002) book on physical aspects is considered having special value in recognizing the importance of design of the constitutions for the elderly (Steinfeld, 2003). According to Steinfeld, Regnier clearly and influentially showed us that the physical characteristics of the residential environment have a great impact on the whole character of the institution. According to the author, as an architect and gerontologist, Regnier, intended to create the idea that the design of an institution can easily change the character of this environment. For example, the book gives important architectural insights for designing the corridors as rooms, giving them a special character and increasing the probability of social contact. Thus, building aspects of an institution may define the facilities, which, in turn, affect the elders' perception of the institutional climate with regard to privacy, independence, social climate, services given, and a sense of attractiveness.

Sugihara and Evans (2000) examined the relationships among design characteristics, place attachment, and social support. The findings of their research is a good example of the impact of the physical environment on place attachment by the mediating role of the social milieu, which reflects the basic pathways in the present section. They show that the three physical features of nursing home, walking distance from the residence to main activity center, probability of unplanned social encounters and accessibility of nearby gardening areas, increase social interaction, develop sense of community and in this manner contribute place attachment. Zaff and Devlin (1998), similarly, showed that the physical characteristics of the environment have an effect on the sense of community felt by the elderly. Accordingly, the physical order of the institution is an important factor for the privacy needs of the elderly. According to Kane (2001), these privacy needs are important to older people and their environments should be designed to realize such privacy.

Moss and Igra (1980), developed a conceptual framework about four factors influencing environmental conditions of sheltered care. This framework includes physical and architectural, policy and program, resident, and staff as factors that have influence on social environment of sheltered care settings. Their main hyphothesis is that the social environment of a particular institutional setting is influenced by architectural, policy and, resident and staff factors of the institution. These factors affect the residents' behaviors in part through the mediating effects of the social environment. Their findings support the general idea that those factors are important characteristics of a sheltered care influencing the social environment. Nevertheless, being parallel with the related literature, which asserts that the spatial dimensions have special meaning for understanding aging individuals (Kane, 2001; Kendig, 2003; Rubinstein, & Parmelee, 1992; Steinfeld, 2003), in the thesis presented here design characteristics of the environment are taken as the determinant of the social and institutional climate of the residential environment. Because, as mentioned before, the declines in physical and sensorial ability, causes the influence of environment on behavior increase, so the characteristics of the physical environment have special importance for the life of elderly (Rubinstein, & Parmelee, 1992).

The research by Kane (2001) also indicated that the details of the physical design of the residential institutions are closely related to the quality-of-life outcomes. Quality of life domains in the research are determined as factors such as security, comfort, meaningful activity, social relationships, functional competence, enjoyment, dignity, privacy, and individuality. It should be noted that some of these factors have been considered as the concept of environment that is classified into social and institutional climate in the present research. Lawton and Nahemow (1979), similarly, showed that building characteristics, and the design specifics of the building and dwelling unit are related to activity participation, morale, and friendship.

What the physical features of a good residential house are, has been the most important topic of the research on elderly accommodation. The literature, thus, indicates that it is highly probable to propose that the physical characteristics of an institution has an impact on the social and institutional climate of the residential

environment. This insight from the literature proposes that the design characteristics of the environment affect the social and institutional climate of the environment and these environmental aspects define one's level of life satisfaction, under the mediational effect of place attachment. The conceptual representation of this model is shown in Figure 2.

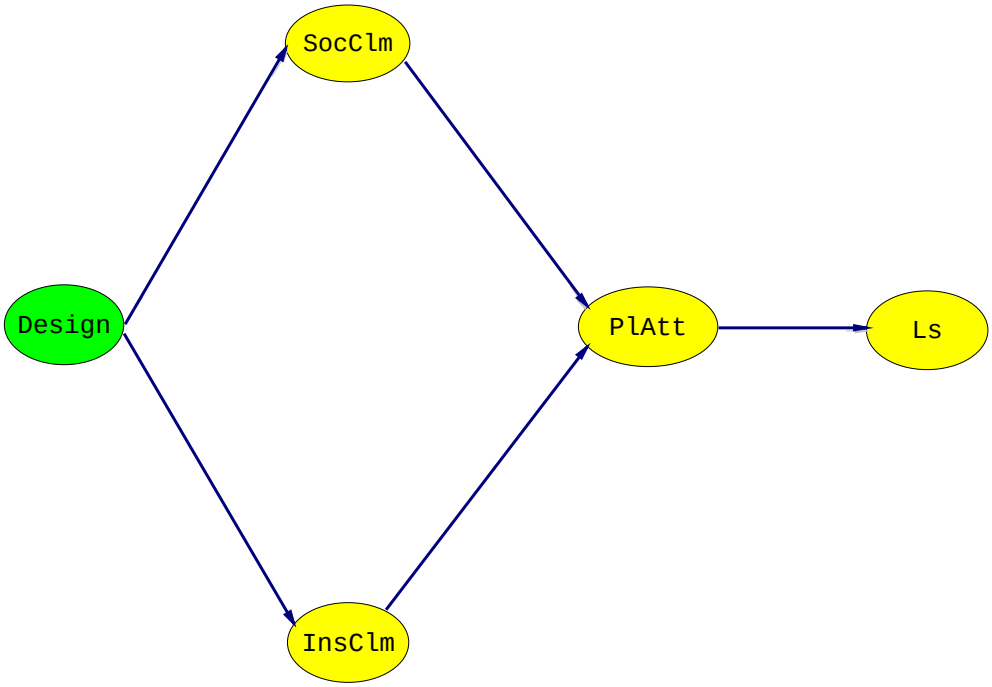

Figure 1.2. Conceptual Diagram of Model 2.

1.6. Aims of the study

Wahl and Weisman (2003) stated that physical characteristics of the residential institutions have not been given the deserved importance in empirical stance. Moreover, the physical characteristics have been identified with regard to the other social and institutional climate characteristics of the environment. With the research presented here, however, it is indicated that the social and institutional climates can be determined in terms of the design aspect, and the role of place attachment between these three aspects of residential environment and life satisfaction of the elderly is emphasized.

1.7. Hyphothesis of the study

Hypotheses based on Model 1:

To examine the structural relations among institutional climate, social climate, design, life satisfaction, and place attachment, a structural equation modeling approach was adopted. Model 1 is a full-mediation model indicating that the relationship between social, institutional climates, and design and life satisfaction is mediated by place attachment. The conceptual diagram of Model 1 has been presented in Figure 1.1. The following relationships are hypothesized based on this model:

1. Direct effect of social climate on place attachment

   Elderly subjects who reported higher degree of social involvement would have higher levels of place attachment.

2. Direct effect of institutional climate on place attachment

   Elderly subjects who reported better satisfaction from institutional climate would have higher levels of place attachment.

3. Direct effect of design on place attachment

   Elderly subjects who reported high level of satisfaction from design quality would have higher levels of place attachment.

4. Direct effect of place attachment on life satisfaction

   Elderly subjects who reported higher level of place attachment would have higher levels of life satisfaction.

5. Indirect effect of social climate on life satisfaction

   The relationship between social climate and life satisfaction is mediated by place attachment.

6. Indirect effect of institutional climate on life satisfaction

   The relationship between institutional climate and life satisfaction is mediated by place attachment.

7. Indirect effect of design on life satisfaction

   The relationship between design and life satisfaction is mediated by place attachment.

Hypotheses based on Model 2:

Model 2 denotes different structural relations among the variables included in Model 1, indicating mediator role of place attachment again. In this model, place attachment is a mediator between social and institutional climates, and life satisfaction. The only different between the first and the second model is that, in the second model, design of an institution is regarded as base for social and institutional climate of the residential house. In other words, social and institutional climate factors are mediational factors between design and place attachment. The conceptual diagram of this model has been shown in Figure 1.2. The following relationships are hypothesized based on this model:

1. Direct effect of design on social climate:

   Elderly subjects who reported higher degree of design satisfaction would have higher degree of relationship satisfaction.

2. Direct effect of design on institutional climate:

   Elderly subjects who reported higher degree of design satisfaction would have higher degree of satisfaction from institutional climate.

3. Direct effect of social climate on place attachment:

   Elderly subjects who reported higher degree of relationship satisfaction would have higher degree of place attachment

4. Direct effect of institutional climate on place attachment:

   Elderly subjects who reported higher degree of institutional quality would have higher degree of place attachment.

5. Direct effect of place attachment on life satisfaction:

   Elderly subjects who reported higher degree of place attachment would have higher degree of life satisfaction.

5. Indirect effect of social climate on life satisfaction

   The relationship between social climate and life satisfaction is mediated by place attachment.

6. Indirect effect of institutional climate on life satisfaction

   The relationship between institutional climate and life satisfaction is mediated by place attachment.

7. Indirect effect of design on place attachment.

The relationship between design and place attachment is mediated by social climate and institutional climate.

2. METHOD

2.1 Participants

A total of 120 participants aged between 60 and 93 were studied. They were selected from residents of two different rest homes, in Ankara and all respondents were in good physical and mental health. The sample was divided according to the number of roommates. Each individual had roommates ranged from 0 to 3, and from this division, random assignment is pursued. 60 were from Seyranbağları Rest Home which is constructed by Social Services and Child Protection Agency (SHÇEK/ Sosyal Hizmetler ve Çocuk Esirgeme Kurumu), and the other 60 were from Year of 75 Resting and Caring Home of Retired Organization (Emekli Sandığı Ankara 75. Yıl Dinlenme ve Bakımevi Tesisi) which is constructed by Retired Organization (Emekli Sandığı).

Table 2.1. Sample characteristics

	N	%	min.	max.	mean
institution					
s.bagları	60	50			
e.sandıgı	60	50			
sex					
female	58	48.3			
male	62	51.7			
education					
university grad.	18	15			
high school grad.	17	14.1			
primary school grad.	59	49.2			
uneducated	26	21.7			
age			60	93	76
duration (year)			0.10	20	3.6
income			70	4500	680

2.2 Instrument and data collection

2.2.1. Measures

The questionnaire consisted of demographic questions and five measures to be checked. In this study, the five measures were used in order to test the models identified by the researcher. Three of the measures, namely design, social climate, and institutional climate, were constructed by the researcher based on the literature of the residential environment, in order to operationalize the latent variables in the models. Since there were no measures appropriate for the operational definitions of these environmental aspects, these latent variables were created by writing the items reflecting the semantic contents of the constructs mentioned in the literature. The measures were thought to be independent factors influencing the perception of the environment by the elderly. In writing of items, the measures used in foreign languages were taken into consideration.

2.2.1.1. Measures of design, social climate and institutional climate:

These three measures, having 17 items in total, were prepared for the objectives of the current research to measure various aspects of residential environment following the related literature. Existing measures like MEAP (Multiphasic Environmental Assessment Procedure by Lemke, & Moos, 1987), SERA (Sistema de Evaluacion de Residencias de Ancianos by Fernandez-Ballesteros, 2001), PRQI (Perceived Residential Quality Index, by Amerigo, & Aragones, 1997) were taken into consideration and it also was concluded from the research (Binstock, 2004; Bowie et al., 1992; Evans et al., 2002; Rantz et. al., 1999; Wahl, & Weisman 2003) that residential environment can be examined under three headlines; physical aspects, social climate and institutional aids. The MEAP as a very broad measure used in determining the environmental characteristics of residential settings for the elderly was constructed by Lemke and Moos (1987). Their measurement instrument have four domains; physical and architectural characteristics, policy and program features, suprapersonal conditions, and social climate characteristics.

Those measures included all attributes of a residential environment under three headlines mentioned before. They were to collect very detailed information about physical, social and institutional aspects. In the context of the present reseach, the aim was to construct these dimensions in order to treat them as latent variables with a less number of items. Consequently, a short version questionnaire was developed for the present research.

Physical aspects were defined as building amenities including physical conditions of construction in terms of noise, odors, size, aesthetic, quality of furnishing and degree of domestication. Social climate refers to the possibilities for social interaction including availability of communal areas, social facilities and degree of socialization. Institutional aids was defined as policy and service regimes of the institution, that is amount of social distance from staff, the amount of safety and independence maintained from management, and the quality of the service given by institution.

2.2.1.2. Place Attachment Scale:

The questionnaire was prepared for the objectives of the current research to measure the extent to which elderly develops place attachment with residential environment by examining the related literature (Jorgensen, & Stedman, 2005; Kyle, Absher, & Graefe, 2003; Kyle, Mowen, & Tarrant, 2004; Nanzer, 2004; Stedman, 2003; Vaske, & Kobrin, 2001). The scale was developed to represent major dimensions of place attachment (i.e., belongingness, identity, dependence, and stability). The scale consists of five items such as “I feel like the residential house is a part of me”. First two items were derived from the research of Kyle et al., (2004), and integrated into the scale used in the current study. Other three items were from Nanzer (2004).

2.2.1.3. Life Satisfaction Scale:

Life satisfaction was measured by Diener, Emmons, Larsen and Griffin's (1985) Satisfaction with Life Scale (SWLS) which was developed to determine the individuals’ amount of satisfaction with life in general. Research on SWLS indicated that the scale had good convergent and divergent validity. Factor analysis revealed a single factor accounting for 66% of the total variance. The internal consistency of the scale was .87. Aydın (1999) translated the scale into Turkish and reported

satisfactory internal consistency (α = .86). The scale consisted of five items such as “In most ways my life is close to my ideal”. As a validity study, Köker (1990) found that the individuals having neurotic semptoms and complaining from psychological problems had lower scores on life satisfaction than those do not have such symptoms and problems.

2.2.2. Procedure

The selection of participants was pursued randomly through the list taken from the institutions. All of them were able to complete all the questionnaires, so there was no drop-out in this study. The questionnaire, in Appendix A was applied to each participant by the author. The study was conducted only during the week days due to the fact that elders were visited by their relatives on weekends. In order to select participants, the following criteria were taken into account; age equal to or over 60 years, living in a residential house for more than six months, the ability to fill out and answer questionnaires, having good cognitive functions (normal or slightly damaged), and a willingness to join the research project. Each application of questionnaire lasted about one hour. Although the questionnaire was prepared to be filled out by the participants themselves it was applied by the author, due to the fact that some of them had problems with their eyes, some others could not read and write and like. Some statements, like "I think that the building of residential house is aesthetic and well-designed", were explained to make the meaning clear. These explanations were made by using same instances to explain the context of the item more fully.

2.3. Statistical Analysis: Structural Equation Modeling

In this study, structural equation modeling technique was used to analyze the data using Lisrel, version 8.30 (Jöreskog, & Sörbom, 1993). Such techniques provide analytic strategies for use on empirical research with nonexperimental data. Structural equation models (SEM) refer to complex models that analyze causal relationships among theoretical constructs (referred to as unobserved or latent

variables). In other words, SEM is a statistical technique by means of which the researcher can handle systems of linear equations that describe a network of relations among variables. It combines the advantages of factor analysis, multiple regression, and path analysis.

In SEM, there are three kinds of studies that can be taken into consideration (Jöreskog, & Sörbom, 1993). Model developing strategy, competing models strategy, model, and model confirmation strategy. As can be predicted from the names, in model developing strategy, the main concern for the researcher is to develop a structural model accounting for the relationships among a set of variables. In competing models strategy, the aim is to investigate structural relationships among the same variables into different models specified by the literature because there may be, in fact, always, different explanations accounting for the relationships among the same set of variables. In model confirmation strategy, the researcher tries to confirm a model by the data.

In this research, the main concern is to identify competing models accounting for the relationship among the environmental variables and mental health of the elderly. Before examining the relationships among the latent variables, however, these constructs must be proved to exist as a result of a set of indicator variables. Thus, it can be said that the structural equation modeling comes into existence as a result of two steps: measurement model and structural model.

Measurement Model: One of the most important advantages of SEM is the use of latent variables. When there are original theory-based constructs and/ or when there are no device available as a measure of them, SEM gives a unique opportunity to the researcher for creating the constructs by a set of items. Measurement model, at this point, specifies the relationships among the observed or indicator variables. By using confirmatory factor analysis technique, the researcher tries to confirm that there are multiple reliable indicators (items in the questionnaire) for each latent construct. In order for a latent variable to be constructed, at least three indicators should be used. In this study, before confirmatory factor analysis, exploratory factor analysis was

implemented in order to see the factor structure of the questionnaires. As Jöreskog and Sörbom (1993) stated it is highly desirable that confirmatory techniques should be used after exploratory procedures has been implemented. In exploratory factor analysis procedure, the items having factor loading less than .40 was eliminated in order to reach a more reliable factor structure and higher internal consistency.

2.3.1. Structural Model:

Structural model refers to the relationships between constructs/latent variables in the models. After confirmatory factor analysis, the associations between the constructs are investigated by the models explaining the pattern of relationships, which are identified by the researcher based on the relevant literature. As Ullman (2001, p.657) stated, the main aim of this phase of SEM is to answer the question "Does the model produce an estimated population covariance matrix that is consistent with the sample (observed) covariance matrix?"

After a model estimated by a statistical program, the first thing to be done is to look at the path coefficients specifying the relationships between the constructs in the model. In order for a model to be valid, all of the paths specified in the model should be significant. A set of guidelines in interpreting the effect sizes of the path coefficients is stated by Kline (1998). According to Kline, standardized path coefficients with absolute values less than .10 may indicate a small effect; values around .30 is a medium one; and large effects may be suggested by coefficients with absolute values of .50 or more.

Although all paths are significant, a model may not be valid. Structural equation modeling provides goodness of criteria in order to evaluate how well the proposed model fits with the data. A covariance matrix, which is implied by the model is calculated and compared to the actual covariance matrix of the observed variables. The discrepancy between the implied and actual covariance matrices provides the basis for a number of goodness of fit criteria. χ^2 calculates the degree of independence between the theoretically expected values and the empirical data. The larger the discrepancy (independence), the sooner χ^2 becomes significant. Thus, the

p-value for χ^2 should be larger than .05 to decide that the theoretical model fits the data. The other way of defining fit is to calculate the proportion of χ^2 to degree of freedom. The value of less than 5 is considered as the rough rule of thumb for this index (Klem, 2000). The χ^2 however, is known as sensitive to sample size and suggested to be interpreted with caution especially with larger samples (Klem, 2000; Pedhazur & Pedhazur-Schmelkin, 1991). Other most used fit indices are those of goodness of fit index and the adjusted goodness of fit index. The goodness of fit index (GFI) and the adjusted goodness of fit index (AGFI) devised by Jöreskog and Sörbom (1993), and are based on the discrepancy between the actual and implied covariance matrices, which is like the chi-square (χ^2). There are some other fit indices such as the root mean square error of approximation (RMSEA), and comparative fit index (CFI). The values of greater than .90 are considered as sufficient when GFI, AGFI, and CFI are taken into consideration. The other values of fit, SRMR and RMSEA, are supposed to be less than .05 or, at least, maximum .08 (McDonald & Moon-Ho, 2002; Schermelleh-Engel, Moosbrugger, & Müller, 2003; Thompson, 2000).

2.4. Measurement Models of Latent Variables:

In order to understand whether the latent variables can be constructed by the items of the scales, a set of exploratory and confirmatory factor analyses were conducted on the data.

2.4.1. Institutional Climate:

A set of six items was considered as observed variables of the latent variable of 'institutional climate'. In order to understand whether these items can be regarded as indicators of one component (latent variable), an exploratory factor analysis was computed on these six items. The results revealed two factors with eigenvalues of 2.06 and 1. The variance explained by these factors was 34.34 % for the first, and 16.77 % for the second. Because the scree plot indicated that a one-factor solution was suitable, a second factor analysis was implemented by extracting factor number to 1. The results of this factor analysis are shown in Table 2.2. The variance

explained by this factor was 34.34 %. The internal consistency of the factor was found to be .59.

Table 2.2. The results of the exploratory factor analysis on the scores of Institutional Climate

Items*	Factor	Com.	r	α
16. Cleanliness	.75	.55	.52	.46
14. Feeling of safety	.61	.38	.34	.54
13. Relation with staff	.58	.34	.32	.54
17. Health service	.58	.34	.32	.54
18. Quality of meals	.53	.29	.30	.57
15. Feeling of independency	.41	.17	.22	.58

Note: Com = Communality; r = corrected item-total correlations; α = α if item deleted
* Original descriptions of the items are represented in Appendix A.

Consistent with these findings, a model of a single latent variable with six items was tested by a first-order confirmatory factor analysis. The results of the analysis showed that all parameters were significant (Table 2.3).

Table 2.3. Standardized Lambda Values, t-values, and Squared Multiple Correlations for Institutional Climate

Items	Λ	T	SE	R^2
13. Relation with staff	.36	4.04*	.08	.19
14. Feeling of safety	.39	5.03*	.07	.29
15. Feeling of independency	.25	3.18*	.08	.12
16. Cleanliness	.54	6.29*	.09	.46
17. Health service	.42	4.59*	.09	.24
18. Quality of meals	.37	3.77*	.09	.17

* $p<.05$

Although the explained variance in some items is low, e.g. 1., 3., 6., the goodness of fit statistics suggested an acceptable fit to the data: $\chi^2 = 14.22$, df = 9; χ^2 / df = 1.58; GFI = .96; AGFI = .91; RMSEA = .070; SRMR = .056; CFI = .93.

Research indicate that the institutional aspects of the residences have been found to be correalated with life satisfaction (Othaganont & Chownpis, 2002; Barkay & Tabak, 2002) and other positive mental health indicators such as quality of life (Challiner et al., 1996; Tseng et al. 2001; West et al., 2003). In order to get the support for the validity of this construct, the correlation coefficient between the total

scores on institutional climate and the most representative item of the life satisfaction scale (I am satisfied with my life) having .82 factor loading was calculated. The results indicated that they were correlated moderately: r = .36 (p<.001), which is a support for the validity of the construct when this item was regarded as a criterion referring directly to the life conditions of the elderly.

2.4.2. Social Climate:

As a latent variable, social climate was constructed by five items written by the researcher. An exploratory factor analysis was conducted on these five items in order to understand whether there were one or more factors on the data. The results of this analysis showed that there were two factors accounting for 60 % of the variance. Eigenvalues of these factors were 1.95 and 1, respectively. Again a one-factor solution was computed on this data, which was indicated by the scree-plot. One item ("I have opportunity to stay alone whenever I wish") which had lower factor loading (.34) was eliminated from the scale and the analysis was repeated. As a result, this factor explained 46 % of the variance, having eigenvalue of 1.88. The results of the analysis are presented in Table 2.4. The internal consistency of this factor was α = .60.

Table 2.4. The results of the exploratory factor analysis on the scores of Social Climate

Items*	Factor	Com.	r	α
9. Satisfaction from relations with friends	.83	.70	.53	.42
8. Spending the spare time with friends	.79	.63	.53	.45
10. Leisure time activities	.55	.31	.31	.59
11. Common places to socialize	.50	.25	.26	.59

Note: Com = Communality; r = corrected item-total correlations; α = α if item deleted
* Original descriptions of the items are represented in Appendix A.

A first-order confirmatory factor analysis was conducted on the scale to obtain evidence that these four items indicate a latent variable. As can be understand from Table 2.5, the results of this analysis showed that all parameters were significant.

Table 2.5. Standardized Lambda Values, t-values, and Squared Multiple Correlations for Social Climate

Items	Λ	T	SE	R^2
8. Spending the spare time with friends	.60	5.67*	.11	.47
10. Leisure time activities	.27	3.08*	.08	.10
9. Satisfaction from relations with friends	.80	6.40*	.12	.74
11. Common places to socialize	.22	2.64*	.64	.07

* $p<.05$

Although the explained variance in item 4 is very low, the goodness of fit statistics indicated nearly perfect fit to the data: $\chi^2 = 1.25$, df = 2; χ^2 / df = 0.63; GFI = .99; AGFI = .97; RMSEA = .00; SRMR = .027; CFI = 1.

The support for the validity of the construct, a correlation coefficient was calculated with the question "I am glad to live with my roommate", r = .19 ($p<.05$).

2.4.3. Design:

Design climate as latent variable was defined by six indicators/items. A principal components analysis was used in order to define the factor structure of this measure. Only one factor was extracted, having eigenvalue of 1.98 and accounting for the 33% of the variance. However, one item ("I feel like at home, while living in this residential house") having less than .40 factor loading (.32) was eliminated from the scale and the analysis was repeated. The results of this analysis indicated that this factor with five items explained 39% of the variance. Cronbach's alpha was found as .59. The factor loadings, communalities, and other statistics are shown in Table 2.6.

Table 2.6. The results of the exploratory factor analysis on the scores of Design

Items*	Factor	Com.	r	α
19. Size of the room	.70	.50	.42	.49
23. Quality of air	.70	.48	.43	.48
22. Acquiring silence	.58	.33	.32	.56
20. Furnishings are aestheticly appearing and good repaired	.56	.31	.30	.56
21. The building is aestheticly pleasing and well-designed	.55	.30	.29	.56

Note: Com = Communality; r = corrected item-total correlations; α = α if item deleted
* Original descriptions of the items are represented in Appendix A.

Consistent with these results, confirmatory factor analysis using maximum likelihood indicated that this measurement model fitted to the data well. The results are shown in Table 2.7.

Table 2.7. Standardized Lambda Values, t-values, and Squared Multiple Correlations for Design

Items	Λ	T	SE	R^2
19. Size of the room	.55	4.70*	.09	.30
23. Quality of air	.40	3.44*	.09	.16
22. Acquiring silence	.43	3.74*	.10	.19
20. Furnishings are aestheticly appearing and good repaired	.44	3.80*	.10	.19
21. The building is aestheticly pleasing and well-designed	.57	4.85*	.09	.33

* $p<.05$

As can be seen from the table, all parameters were significant, confirming that the five items can be regarded as reliable indicators of design latent variable. Indeed, the goodness of fit statistics suggested that the model was admissible: $\chi^2 = 9.26$, df = 5; χ^2 / df = 1.85; GFI = .97; AGFI = .91; RMSEA = .09; SRMR = .06; CFI = .91.

In order for the construct validity check, total scores of the two institutions were compared on the scores of design aspect. The results revealed that difference between the scores of two institutions were significantly different ($t = 3.98$, $p<.001$), indicating that the elders of Emekli Sandığı as a more qualified in physical conditions had higher scores than those of Seyranbağları institution.

2.4.5. Place Attachment:

Place attachment latent variable was measured by the five items as indicators. In order to see whether these five items could be considered as observed variables of one component, an exploratory factor analysis was conducted on the data. The results showed that only one factor was extracted by this analysis and accounted for 61% of the variance. The internal consistency of this component was high: $\alpha = .85$. The results of this analysis are shown in Table 2.8.

Table 2.8. The results of the exploratory factor analysis on the scores of Place Attachment

Items*	Factor	Com.	r	α
28. Wishing to live in institution for a long time	.84	.70	.73	.78
26. Attaching to the institution	.81	.65	.67	.79
25. Feeling the institution like a part	.79	.63	.65	.80
27. Happiness from living in institution	.78	.60	.63	.80
29. Thinking that there are better places than the institution**	.72	.51	.56	.84

Note: Com = Communality; r = corrected item-total correlations; α = α if item deleted
* Original descriptions of the items are represented in Appendix A.
** Reversed item

These five items' factor loadings were high ranging from .72 to .84, indicating very high factor stability. The communality values, consistent with the high factor lodings, were also high, which designates that the variances in these items by the factor range from .51 to .70.

The confirmatory factor analysis, however, showed that the model did not fit the data well: χ^2 = 75.93 df = 5; χ^2 / df = 15.18; GFI = .77; AGFI = .31; RMSEA = .38; SRMR = .11; CFI = .76. The modification indices suggested error covariance between item 1 and item 2, indicating a unique variable interaction in the measurement model. Chi-square difference test result (86.13: 1; p< .001) showed that the modification contributed to the effectiveness of the measurement model. Indeed, after adding the path, the model fitted the data quite well: χ^2 = 3.48, df = 4; χ^2 / df = 0.87; GFI = .99; AGFI = .96; RMSEA = .00; SRMR = .02; CFI = 1. The results of this analysis are shown in Table 2.9.

Table 2.9. Standardized Lambda Values, t-values, and Squared Multiple Correlations for Place Attachment.

Items	Λ	t	SE	R^2
25. Feeling the institution like a part	.49	6.00*	.08	.29
26. Attaching to the institution	.53	6.62*	.07	.35
27. Happiness from living in institution	.69	9.08*	.06	.57
28. Wishing to live in institution for a long time	.82	11.63*	.05	.83
29. Thinking that there are better places than the institution**	.64	8.15*	.07	.48

* p<.05
** Reversed item

As can be seen from the table, the explained variance in the observed variables by place attachment latent variable ranged from .29 to .83 as a result of high path coefficients ranging from .49 to .82.

As a construct validity check, total scores of the two institutions were compared on the scores of place attachment. The results revealed that difference between the scores of two institutions were significantly different ($t = 2.37$, $p<.05$), indicating that the elders of Emekli Sandığı, living in a more qualified physical environment, had higher scores than those of Seyranbağları institution.

2.4.6. Life Satisfaction:

Life satisfaction was measured by five items as indicators. Before confirmatory factor analysis, an exploratory factor analysis was run on the data. The results showed that these five items extracted two components with eigenvalues of 2.75 and 1.10 and accounted for the 77% of the variance. The scree plot, however, suggested that these five items can be indicators of a one component. After repeating the analysis by forcing the factor number to one, the results indicated that this component accounted for 55% of the variance. The internal consistency of this component was high: $\alpha = .80$. The results of this analysis are reported in Table 2.10.

Table 2.10. The results of the exploratory factor analysis on the scores of Life Satisfaction

Items*	Factor	Com.	r	α
32. Satisfaction with life	.82	.67	.64	.73
30. Life's closeness to ideal	.79	.62	.62	.74
31. Excellence of life conditions	.73	.53	.54	.77
34. Changing almost nothing	.69	.47	.55	.76
33. Having important things in life	.68	.46	.53	.76

Note: Com = Communality; r = corrected item-total correlations; α = α if item deleted
* Original descriptions of the items are represented in Appendix A.

Factor loadings and, consequently, communalities for this measure were very high. A confirmatory factor analysis was then computed on the data in order to see the factor structure of the measure in a more strict sense. Goodness of fit statistics showed that there is a problem with this model due to error covariances: $\chi^2 = 62.35$; $df = 5$; χ^2 / df

= 12.47; GFI = .84; AGFI = .52; RMSEA = .29; SRMR = .12; CFI = .75. Adding a path making error variances between item 4 and item 5 correlated improved the fit of the model: χ^2 = 13.16, df = 4; χ^2 / df = 3.29; GFI = .96; AGFI = .84; RMSEA = .14; SRMR = .052; CFI = .96. As can be seen from Table 2.11., all parameters were significant, confirming that the five items can be regarded as reliable indicators of design latent variable.

Table 2.11. Standardized Lambda Values, t-values, and Squared Multiple Correlations for Life Satisfaction.

Items	Λ	t	SE	R^2
32. Satisfaction with life	.69	8.66*	.08	.50
30. Life's closeness to ideal	.67	8.00*	.07	.50
31. Excellence of life conditions	.85	10.38*	.07	.82
34. Changing almost nothing	.40	5.29*	.10	.18
33. Having important things in life	.39	5.35*	.10	.17

* $p<.05$

As a sum, the results of the confirmatory factor analyses concerning the measurement models showed that they could be regarded as latent components for using in the models. The common problem in these measurement models resulted due to correlation between measurement errors, indicating the existence of unique variables in the models. There was no modification indicating identification problem with the latent variables.

2.5. The Summary of the Measurement Model

In order for ensuring that the items or scales used in the study were reliable indicators of the respected latent variables, a set of exploratory and confirmatory factor analyses were conducted on the data. All confirmatory factor analysis reached sufficient fit statistics, confirming that the latent variables were unidimensional structures. Although coefficient alpha values for design, social, and institutional climate measures seem to be low, item total correlations ranged from low to moderate. There were few items in the scales and, hence, coefficients seem to be relatively sufficient.

The validity statistics of these constructs indicated that the measures were correlated with the criterion variables for the respected scales.

3. RESULTS

In this section, the results of the two model depicted by the researcher will be presented after the descriptive statistics concerning the variables are introduced. The models including the same latent variables have different exogenous and endogenous variables and different paths. The variable tried to be explained is the same in these two models: life satisfaction. One another similarity in the models is the importance of place attachment as a mediator among different variables in the models.

3.1. Descriptive Statistics of the Variables in the Models

Before examining the models in SEM, the correlation matrix of observed variables in the models should be presented for the researchers interesting in the variables in the models. As McDonald and Moon-Ho (2002) stated, different models can be identified from the same set of variables. Thus, this correlation matrix will give a general opinion for future possible models. The indicator or observed variables in the two models are items used for measuring the latent variables. The correlation matrix concerning both items of latent variables and the total scores on these dimensions is shown in Table 3.1. As can be seen from the table, the significant correlations among the variables range from low to high. The highest correlation coefficient was between place attachment and life satisfaction that are the last two variables in the structural model. The correlation coefficients ranged from .22 to .68 and only one correlation coefficient was nonsignificant. The lowest correlations, on the other hand, were between design and place attachment: only one from 25 correlation coefficients was significant. When it comes to the correlations among total scores of the measures, only one correlation coefficient between design and place attachment was not significant. The other correlations among the variables seem to be consistent with the models proposed by the researcher.

3.2. The Results of the First Identified Model

The first model proposed by the researcher supposed the relationship between social, institutional climates and design and life satisfaction was mediated by place attachment. In other words, the levels of social climate, design and institutional climate determined the level of place attachment, and, in turn, place attachment determined the level of life satisfaction. The model, consequently, represented a full mediational model of place attachment. This model was tested using Maximum Likelihood estimation method. The results of this analysis indicated that the path coefficient from design to place attachment, consistent with the correlational results, was not significant.

The model trimming, deletion of this nonsignificant path from the model, was resulted in a simpler model. This model was tested using Maximum Likelihood estimation method again. The goodness of fit statistics suggested that the model was not acceptable: $\chi^2 = 334.18$; df = 166; χ^2 / df = 2.01; GFI = .78; AGFI = .72; RMSEA = .093; SRMR = .091; CFI = .78. The modifications produced by the Lisrel program were made to the model in order to achieve a more acceptable fit.

The results of the ML procedure revealed four unspecified correlated measurement errors, meaning that there are a number of relations among the observed variables of the same or different latent variables in the model. These four error covariances (between variable 4 and 9, between 16 and 17, variable 19 and 20, and variable 24 and 25) were added to the model, yielding the following values for the fit indexes: $\chi^2 = 200.71$; df = 162; χ^2 / df = 1.24; GFI = .85; AGFI = .81; RMSEA = .045; SRMR = .058; CFI = .95.

Although there was not any structural identification problem in the model, the correlated errors suggested that the variances that could not be explained by the variables, called as unique variables, were the result of identification problems in the measurement models. For example, the correlated error variances between variable/item 11, (V4) (“There are enough and well-organized common places that

help us socialize in nursing home") and variable/item 17, (V9) ("There are enough health services in nursing home") might be the result of a variable making these unique variables correlated, which was not identified in the model. This variable could be called as 'service' when the meanings of the items were taken into consideration. The other correlated errors between the items of the same latent variables might be the result of a specific wording, indicating again association between unique variables. For example, the correlated error variances between variable/item 28, (V19) ("I would like to live in this nursing home for a long time") and variable/item 29, (V20) (As far as I am concerned there are better places than nursing home") seem to be the reverse of a same dimension that could be called as 'settlement'.

The goodness of fit statistics indicated an acceptable fit to the data except for the slightly lower level of GFI and AGFI. The significant change in χ^2 between the hypothesized and revised model indicated by χ^2 difference test (200.71: 4; $p<.001$), however, suggested that the modifications contributed to the effectiveness of the hypothesized model. The coefficients in t-values (Figure 3.1) indicated that all parameters in the model were significant.

This model, thus, was shown to be sound, indicating that the structural relations among the latent variables suggested by the model after the model trimming were supported. The coefficients in standardized values are presented in Figure 3.2. These structural relations showed that: the social climate (.28) and institutional climate (.41) directly and significantly predicted place attachment and place attachment directly and significantly predicted life satisfaction latent variable (.92). Stated more clearly, the predictive validities of the social and institutional climates against place attachment were medium whereas the predictive validity of place attachment against life satisfaction was quite strong. The extremely high correlation value between place attachment and life satisfaction may be considered as a result of the statistical procedure of SEM. As stated, the correlation coefficients between a pair of variables can be exceed the total score correlations because SEM take measurement error into consideration (Hair, Tatham, Andersen and Black, 1998). One another possibility

may be a characteristic found in life satisfaction judgments by the earlier research. Schwarz and Strack (1991) clearly showed that the life satisfaction measures were affected by the context provided by the researcher. In this study, Satisfaction with Life Scale were administered to the subjects after place attachment scale, the order influenced the elders' judgments on life satisfaction according to the place in which they reside.

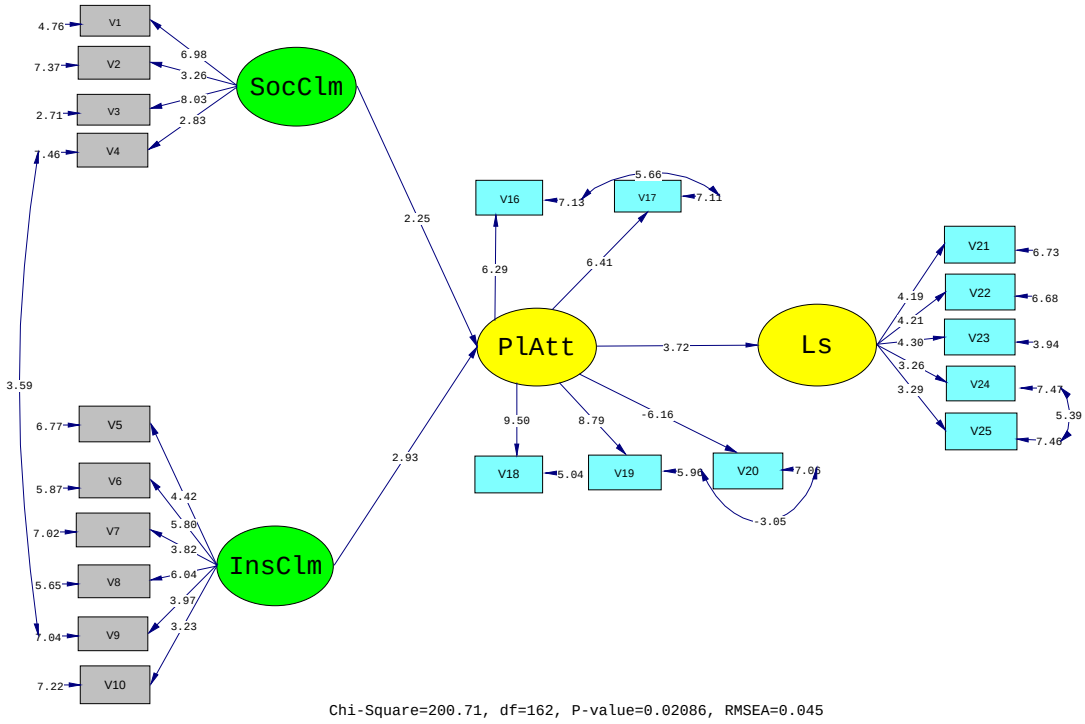

Figure 3.1. Coefficients in t-values for the Model 1 after Modifications.

These results meant, however, that the model as a whole was not acceptable, meaning that all of the hypotheses concerning the relationships among the variables were not supported by the data. That is, only the third hypothesis, direct effect of design on place attachment, was rejected.

The variance explained by the model in place attachment was appeared to be relatively high (.35) whereas in life satisfaction was quite high (.85).

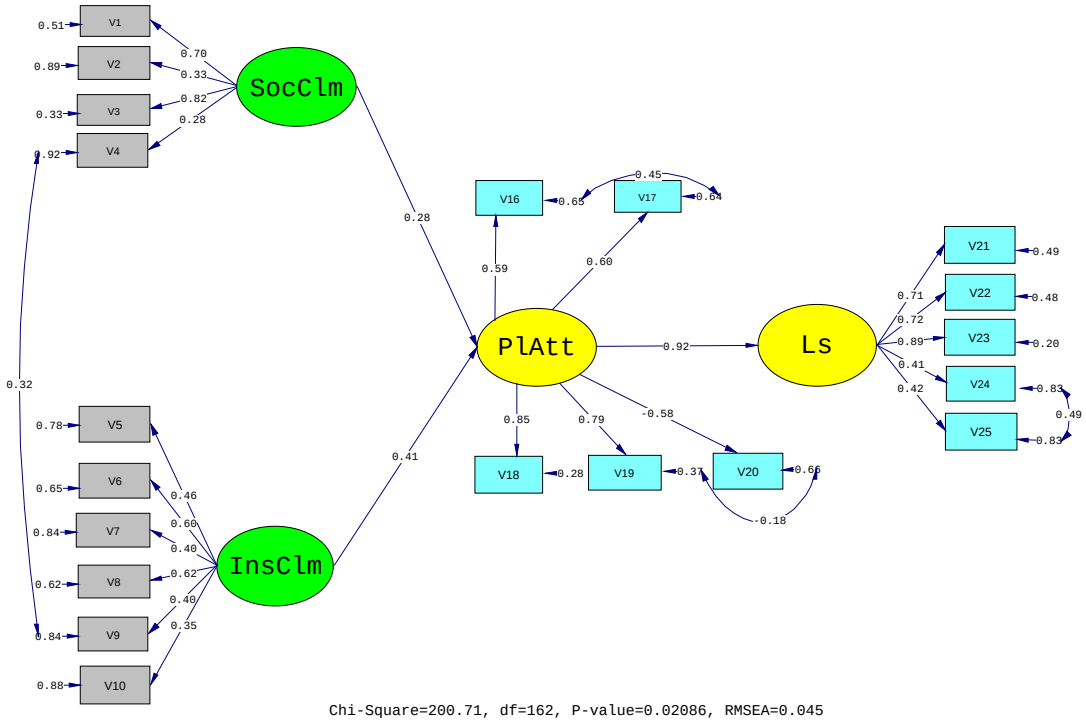

Figure 3.2. Coefficients in Standardized Values for the Model 1 after Modifications.

3.3. The Results of the Second Identified Model

As an alternative to the Model 1, the second model specifying the structural relations among the variables supposed that the latent variable design preceding the social and institutional climates directly determine them. The social and institutional climates, in turn, determine life satisfaction through the mediator variable of place attachment. The most important difference between the second and the first model, as can be seen, is the role of design aspect: the first model specified it as one of the most important aspects of environment whereas the second model highlighted the importance of design aspect as a base for social and institutional climates.

This model was tested by using ML procedure. As a preliminary evaluation of the model, coefficients in t-values indicated that all parameters are significant and there was no need to model trimming. The goodness of fit statistics however suggested that the model could not be accepted: $\chi^2 = 334.18$; df = 166; χ^2 / df = 2.01; GFI = .78; AGFI = .72; RMSEA = .093; SRMR = .091; CFI = .78.

Post hoc model modifications suggested by the Lisrel program were performed in an attempt to develop a better fitting, more parsimonious model while still retaining the basic integrity of the model. Only five unspecified correlated measurement errors were revealed, the four of which were the same as in the Model 1. Adding the fifth measurement error covariance between variables 21 and 25 to the model, in addition to the other four, yielded a better fit to the data: $\chi^2 = 319.45$; df = 265; χ^2 / df = 1.20; GFI = .82; AGFI = .78; RMSEA = .042; SRMR = .065; CFI = .93. As can be seen from Figure 3.3, all paths in the model were significant.

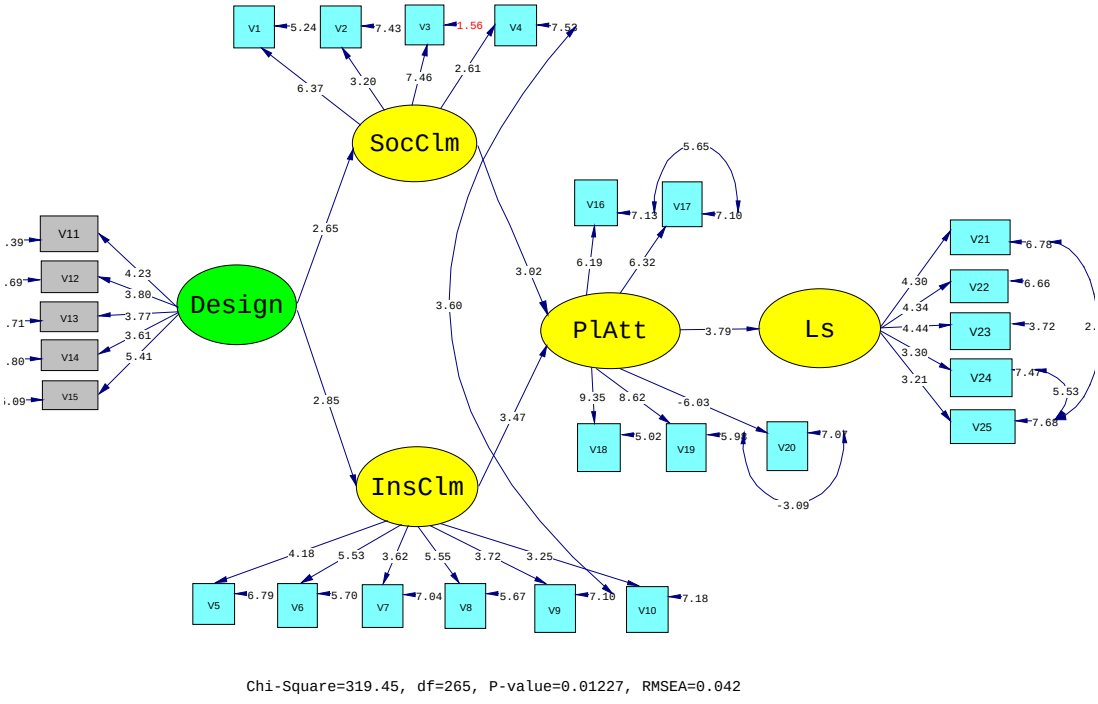

Figure 3.3. Coefficients in t-values for the Model 2 after Modifications.

The results, thus, suggested that the structural relations among the latent variables suggested by the second model after the modifications were supported. The coefficients in standardized values are presented in Figure 3.4.

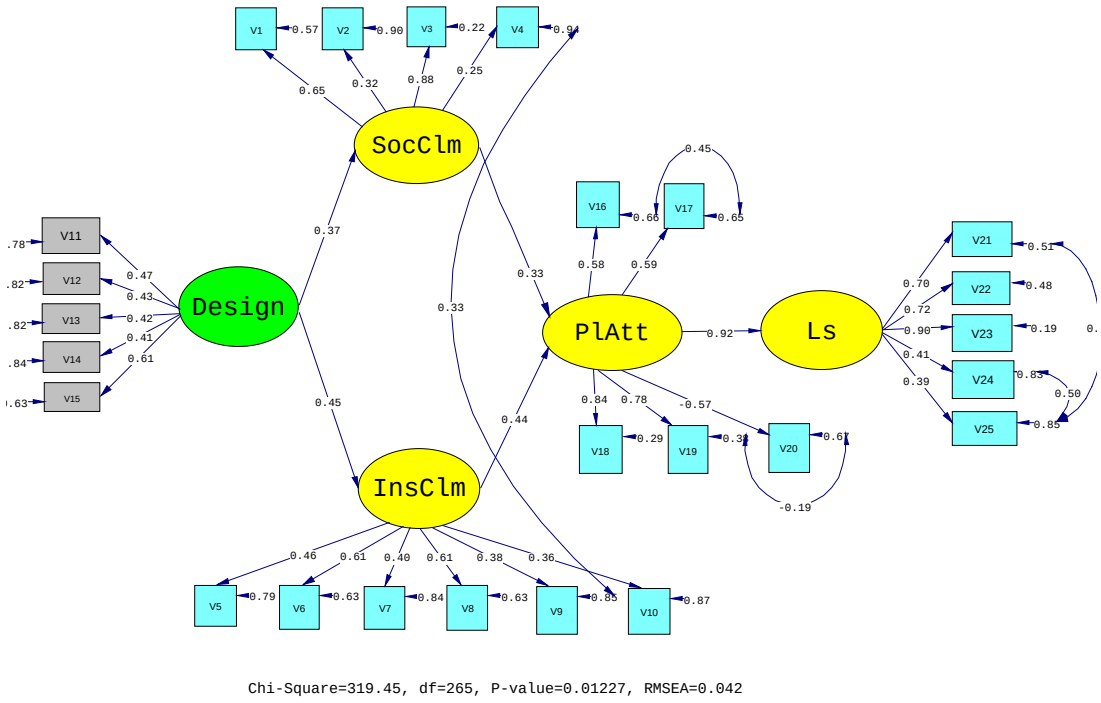

Figure 3.4. Coefficients in Standardized Values for the Model 2 after Modifications.

These structural relations showed that: the design significantly and directly predicted both social climate (.37) and institutional climate (.45). Place attachment was directly and significantly predicted both by social climate (.33) and institutional climate (.44). Finally, place attachment directly and significantly predicted life satisfaction latent variable (.92). When it comes to the effect sizes of the path coefficients in the model, the predictive validity design against social and institutional climates was medium; the predictive validity of social and institutional climates against place attachment were medium, too, whereas the place attachment against life satisfaction was quite strong as in the first model.

As results showed, the second model as a whole was confirmed by the data, meaning that all of the hypotheses in the second model were supported by the data. The variances explained by the model in place attachment and life satisfaction were exactly the same as in the first model, .35 and .85, respectively.

4. DISCUSSION

Two alternative models were specified when the environment and mental health relationship were taken into consideration;

The First Identified Model: Place Attachment as the Mediator Between Environmental Aspects and Life Satisfaction:

Before discussing the results of the SEM (Structural Equational Modeling), the correlational results concerning the three aspects of environment should be taken into consideration. The correlational results concerning environmental dimensions, namely the design, institutional climate, and social climate, and life satisfaction suggested that the relationships are meaningful and medium in size. These results are consistent with the literature indicating the importance of environmental conditions for mental health of the elderly (Ho et al., 2003; Kahana et. al., 2003; Kane, 2001; Maddox, 2003; Migita et al., 2005; Zimmerman et al., 2005).

As the main concern for the present study, in the first model, the relationship between environmental variables of physical aspect, institutional climate, and social climate, and life satisfaction was investigated with the mediational role of place attachment. The hypotheses of the first model were supported except for the one assuming the relationship between design aspect and place attachment. Thus, the model was not supported as a whole.

Firstly, the support was provided for the relationships between social climate and institutional climate and place attachment, confirming the first and the second hypotheses of the present research. Levels of social climate in the institution were found to determine the level of place attachment of the elderly. This result was consistent with the literature concerning the effect of social climate of the environment on place attachment. Stokols and Shumaker (1981), for example, states that one of the main dimensions in determining the importance of a certain place to

people is their perception concerning the needs met by a particular place. As the environment met the needs of the elderly, consequently, the place gain importance for them and the attachment to the place increases. When elderly is the subject matter, it is well known that one of the main threat for them is the loneliness and social withdrawal (Holmén et al., 2000). The institution is the main source for the socialization needs of the elderly because of the restrictions caused by old age. A host of research, indeed, confirmed that the social environment of the institutions become a crucial factor in attachment to the places for the elderly. Ng et al. (2005) clearly showed that the neighborhood quality and the meaningful social interactions resulted in strong attachment to the places in which elderly live. This research, moreover, underline the importance of the social climate of the environment for the place attachment in a larger scale, indicating the effect of the social environment on the attachment to the city. Thus, the social environment of the institutions has an effect on not only the attachment to a specific institution but also to the city in which the institution is located. Research findings from the study by Hidalgo and Hernandez (2001) differentiated the importance of social environment for the attachment to institutions and to cities. Their research showed that the social environment was found to be the most important factor in all cases than the physical.

Similarly, the effect of institutional climate on place attachment was evident from the results. The literature suggests that, as mentioned above, the place attachment increased as the environment provided sources for the needs of the occupants of the institutions. The most important aspects of the institutions for the elderly has been defined as the assisted living services such as cleanliness and health services (Chapin, & Dobbs-Kepper, 2001; Moss, & Igra, 1980; Rantz et al., 1999; Steel et al., 2005), staff (Moss, & Igra, 1980; Özgür et al., 2003; Steel et al., 2005), independence and safety provided by the institution (Burdick et al., 2005; Friedeman et al., 2004; Hawes et al., 2003; Kane, 2001; Melzer et al., 2005; Phillips et al., 2003). Consequently, the quality of the institution and the services provided, in that respect, became important characteristics that made elders attached to the institution. All the dimensions of the institutions mentioned were conceptualized as the institutional climate in the present research. The elders who were satisfied with the

institutional climate were attached to the institution because of the needs that could be met by the services provided by the institution.

The support was not found for the prediction of place attachment level by design aspect of the institution. This result was not consistent with the literature indicating the impact of physical environment on place attachment (Hidalgo, & Hernandez, 2001; Ng et al., 2005; Shumaker, & Tylor, 1983; Stokols, & Shumaker, 1981). The research by Hidalgo and Hernandez (2001), however, gave important clues for this incoherent finding with regards to the effect of physical environment on place attachment. Their research differentiated the place attachment with regard to spatial levels such as the neighborhood, house, city, and region. The findings of their research showed that physical attachment to the place was more important to the larger sizes in spatial levels such as city whereas social factors were more important to the smaller sizes such as home. The authors made a caution: that was, the city was the strongest spatial size as regards to physical attachment, while the house was stronger in terms of social attachment. When taken this caution into consideration, the result concerning the relationship in the present research indicated that the physical characteristics of the institutions might not contribute to the attachment to the place. In other words, the physical environment of the institution in which the elderly reside may not become a factor that affect the level of attachment to the institution as a place.

When considered as a whole, the first model clearly showed that the place attachment was a mediator of the relationship between social and institutional climates and life satisfaction. The high effect size of the relationship between place attachment and life satisfaction underscored the importance of place attachment for mental health of the elderly. A host of research findings indicated the importance of place attachment for the elderly (Amerigo, & Aragones, 1997; Rubinstein, & Parmelee, 1992; Sugihara, & Evans, 2000). These results were especially important, for the detrimental effect of place attachment on the life satisfaction of the elderly. When life satisfaction was considered as an indicator of happiness or "good life" (Smith, 2001), the results of the first model indicated that place attachment could be

considered as the main predictor of happiness for the elderly. Moreover, since life satisfaction referred to the evaluation of life and life conditions (Diener, 1984) and the residential environment set a limit for the life of the elderly, this finding indicated that these may be overlapping constructs when the context is the elderly. Consistent with this finding, Rubinstein and Parmelee (1992) stated that the place attachment became one of the most important aspects as people age.

The Second Identified Model: Physical Environment as the Base:

The second model, on the contrary to the first, was supported as a whole, confirming all of the relationships specified by it. The only difference between the first and the second model was the location of design as an indicator of the physical environment in the structural relations. The rest of the model specifies the same structural relationships between the constructs. When the result concerning the predictive role of design for the other two constructs of social and institutional climates were taken into consideration, the results of the second model became more important into the context of the present research. Although the literature (Ng et al., 2005; Shumaker, & Tylor, 1983; Stokols, & Shumaker, 1981) indicated that the physical environment was important for place attachment, the first model did not provide any support for such an assertion. By putting design aspect into different location in the structural relations, the second model suggested that the space might be a base for the prediction of the social and institutional climates of the residential environment. In other words, the physical characteristics of the environment determined the level of satisfaction with social and institutional climates, which in turn, determined the level of place attachment.

Indeed, the literature suggested that the social and institutional climates of the environment may be determined by the physical characteristics (Kendig, 2003; Lawton, & Nahemow, 1979; Sugihara, & Evans, 2000). When the context was the elderly, one reason for such an assertion is relevant to the association between the needs of the elderly and the ability of the physical characteristics in providing sources for these needs resulted from aging. In order for the elderly to feel a sense of

place, the space in which they resided should have the basic needs of them. Only when these needs were met, the elders could develop a sense of affiliation to the institution in which they resided. That is, the normalization of the environment for the elderly has been an important issue in order to adopt the elderly to the institutions (Kane, 2001). However, it was obvious from the research that the physical characteristics of the environment was not sufficient for the elderly to attach to the institution without the quality of the experiences with regard to institutional and social dimensions. Because attachment to a place was a function of the experiences lived in the place, the physical characteristics of the institution could contribute to the place attachment by the mediating effect of the social and institutional characteristics. Although there is some research suggesting that the physical characteristics of the environment had a direct link to the feeling of place attachment (Hidalgo, & Hernandez, 2001), there were research findings suggesting that the place attachment was resulted from mostly social characteristics of the environment (Lawton, & Nahemow, 1979; Rowles, 1993). Lawton and Nahemow (1979) clearly showed that the higher portions of variance in friendship behavior, activity participation, and housing satisfaction were accounted for by physical area characteristics than by personal background factors. As Zaff and Devlin (1998) stated, physical environment influenced the sense of community and satisfaction in housing by setting the stage for interpersonal relationships.

The rest of the second model was the same as in the first model, specifying the relationship between place attachment and life satisfaction for the elderly. The result, as could be predicted, was found to be the same, indicating a higher prediction of life satisfaction by the place attachment the elderly felt.

Overall, the second model indicated that the physical characteristics of an institution were to be taken into consideration as a base in developing a sense of social connectedness to the institution with regard to social and institutional climates. The elderly, consequently, perceived the institution as a suitable environment in which basic needs of them could be supplied. The elderly, then, developed a sense of affiliation or social connectedness to the institution with regard to social and

institutional climates, which were, in turn, resulted in attachment to the institution and finally life satisfaction.

Nonetheless, in their research on living environments of the Turkish elderly, Imamoglu and Imamoglu (1992a) pointed out that, contrary to some other cultures, ranking architecture as more important than relation with other people, the respondents in the Turkish sample have estimated the architecture as the least important aspect of the neighborhood while they evaluated the personal and inter-personal aspects as most important. This result intersects with the finding of current research, which states that design is not one of the aspects predicting the place attachment directly. Nevertheless, the result of second model emphasizes the importance of design properties of an institution, by showing their effect on social and institutional climates, and place attachment and life satisfaction respectively.

5. CONCLUSIONS AND IMPLICATIONS OF THE STUDY

The main concern for this thesis was to understand the relationship between environmental characteristics of the residential institutions and life satisfaction with the mediating role of place attachment. The first model introduced a structural modal specifying that the three main characteristics of the institution, namely design, social, and institutional climates, defined the level of attachment to the institution, and the level of attachment consequently defined the level of life satisfaction of the elderly. The logic behind this model emerged from the literature suggesting that the environmental factors for the elderly can be summed in three factors of social, institutional, and physical/design factors. Accordingly, these three factors determined the level to which elders feel a sense of attachment to the institution. The results of this model showed that the physical aspect of the environment did not predict the level of attachment to the place. Although the other relationships among the constructs were confirmed, the model was found not to be sound as a whole. The relationships that were found statistically significant showed that the association between social climate and institutional climate, and life satisfaction was mediated by the level of attachment to the place in which the elderly reside. The variance was quite high, indicating that nearly all variance in life satisfaction can be accounted for by the model.

The second model specified a different pattern of relationships among the variables identified by the first model. In this model, the only difference concerning the relationship pattern among the constructs was the location of the design aspect. According to this specification of the model, design aspect mentioned in the literature as preceding the institutional and social climates determined the level of elders' satisfaction with institutional and social milieu. The rest of the model identified the same relationship between place attachment and life satisfaction.

As the physical dimension of the institutions, the design significantly predicted the level of the scores on the social and institutional climates of the elderly. Moreover, the level of attachment to the institution was predicted by the levels of social and institutional climates that, at the same time, predicted the level of life satisfaction of the elderly.

The overall results of this research, thus, gave important clues concerning the relationship between environmental features of the residential institutions and attachment to these places, which was a pattern of relationships that accounted for the life satisfaction level of the elderly. According to the results of these two models, social and institutional climates as the environmental features of the institutions were linked to the life satisfaction via the attachment to place as mediator. Design as the physical feauture of the institution was found not to be linked with the place attachment directly. The physical aspect, according to the results, was linked with place attachment through the other environmental factors of social and institutional climates. The institution, thus, as a physical space, became a place to which the elderly was attached only by the mediational role of the social and institutional features.

The results of the first model implied that the mediational role of place attachment should be taken into consideration when examining the effects of environmental conditions on life satisfaction or mental health of the elderly. The focus should be on how environmental features trigger place attachment while assessing the institutional environment.

As can be predicted, the most important implication of this research came from the findings indicating that the physical aspects of the residential environment were linked to place attachment by the mediational effect of the social and institutional climates. As Imamoglu and Kılıç (1999), suggested, it is important to increase the quality of living environments for the elderly since elderly in high-quality institutions reported higher institutional satisfaction and life satisfaction. However, improving the quality of the physical environment may not directly lead to a high level of place

attachment unless the other mediating factors, namely institutional and social milieu have been taken into consideration.

The most remarkable implication of this study was that design of an institution determined the other important aspects of the environment. Although the elders' living in Turkish culture estimated the architecture as the least important aspect of the neighborhood (Imamoglu, & Imamoglu, 1992a), architectural features of an institution deserved a great effort, since they affect the social and the institutional climate of environment.

5.1. Limitations of the study

The first limitation of this study was the difficulties due to studying on the elderly since the subjects have problems resulted from old age like dimmed vision and low hearing capacity. As the subjects were not able to fill out the questionnaires by themselves, the questions were applied by the author and extra explanations were made for some subjects who had difficulty in understanding the content of the item. These difficulties were resulted in another limitation of the research. Because it took approximately one hour to apply one questionnaire and they were applied by one researcher, only 120 interviews could be made. Moreover, only two residential houses were used in this research.

5.2. Suggestions for Further Research

Although the items used for measuring the environmental aspects of the residential institutions were concluded as reliable indicators of the respected constructs by means of the confirmatory factor analyses, the modest internal consistencies indicated that the future research should focus on developing more comprehensive measures for these constructs. This suggestion was especially important for the desing aspect. Since this research had indicated that the design as a physical dimension of the institutional residence established a base for the other aspects of the environment, this construct should be investigated in detail.

Life satisfaction is regarded as the cognitive dimension of the concept of subjective well-being and refers to the evaluation of one's whole life, and it is considered as one of the most important dimension of quality of life and as an indicator of the mental health of the elderly. Although the results showed that place attachment was accounted for nearly all variance in life satisfaction, the next research should test the importance of place attachment for other mental health indicators of the elderly such as depression, anxiety, optimism. Moreover, this high correlation coefficient between place attachment and life satisfaction may be present only for the elderly because of the possibility that these constructs are conceptually overlapping. This link, therefore, should be studied in other age groups whose lives were not limited to or dependent upon a specific place. Additionally, since satisfaction with life scale was applied after place attachment scale, and since life satisfaction measures were affected by the context provided by the researcher (Schwarz & Strack, 1991) the elders' judgments on life satisfaction may be influenced from their ideas about place in which they reside. Therefore, the further research should test whether the correlation between life satisfaction and place attachment changes in case the satisfaction with life scale is applied before place attachment scale.

This thesis was executed with only two institutions in Ankara, nevertheless it should be studied with institutions in villages and small towns, since the elders living in villages and smaller towns were found to be more satisfied with their lives than the elders living in larger cities (Imamoglu, & Imamoglu, 1992b), examining the reasons of this increase may result in different interpretations of the models presented in current thesis.

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APPENDICES

APPENDIX A. INTERVIEW FORM

Bu araştırma insanların yaşadıkları çevreyle kurdukları psikolojik bağlar ve bu bağların onların yaşam doyumları üzerindeki rolünü incelemek amacıyla yürütülmektedir. Görüşlerinizi gerçek duygu ve düşüncelerinizi yansıtacak şekilde belirtmeniz bu araştırma için çok önemlidir. Bu nedenle lütfen sorulara dürüstçe ve titizce yanıtlar veriniz. Kimlikle ilgili hiçbir bilgi istenmemektedir ve bu araştırmadan elde edilen veriler sadece bilimsel amaçlı araştırmalarda kullanılacaktır.

Araştırmaya katılımlarınızla destek verdiğiniz için çok teşekkür ederiz.

1. Cinsiyetiniz ( ) Kadın ( ) Erkek
2. Yaşınız _____
3. Aylık geliriniz _____
4. Eğitim düzeyiniz _____
5. Ne kadar zamandır bu huzurevinde kalıyorsunuz? _____

6. Huzurevindeki odanızı birisiyle paylaşıyor musunuz?

7. Oda arkadaşınızla yaşıyor olmaktan memnun musunuz?

Aşağıdaki sorularda huzurevinin sosyal ve fiziksel özellikleriyle ilgili ne düşündüğünüze dair sorular yer almaktadır. Bu konulardaki fikirlerinizi gözönünde bulundurarak her ifadeye ne kadar katıldığınızı belirtiniz.

1	**2**	**3**	**4**	**5**
Hiç Katılmıyorum	**Oldukça Katılmıyorum**	**Ne Katılıyorum Ne Katılmıyorum**	**Oldukça Katılıyorum**	**Çok Katılıyorum**

8. Huzurevinde boş vakitlerimi buradaki arkadaşlarımla geçiriyorum (V1).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

9. Huzurevindeki diğer insanlarla kurduğum ilişkilerimden memnunum (V2).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

10. Huzurevinde diğer insanlarla iletişim kurmamızı sağlayacak kalite ve çeşitlilikte boş zaman faaliyetleri olduğunu düşünüyorum (V3).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

11. Huzurevinde insanlarla iletişim kurmamızı sağlayacak yeterli sayıda ve kalitede ortak mekana sahibiz (V4).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

12. Huzurevinde istediğim zaman yalnız kalma fırsatı bulabiliyorum.

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

13. Huzurevindeki çalışanlarla olan ilişkilerimden memnunum (V5).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

14. Huzurevinde kendimi güvende hissediyorum (V6).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

15. Huzurevinde kendimi özgür ve bağımsız hissediyorum (V7).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

16. Huzurevinin yeterli derecede temiz tutulduğunu düşünüyorum (V8).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

17. Huzurevinde yeterli sağlık hizmeti olduğunu düşünüyorum (V9).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

18. Huzurevindeki yemeklerden memnunum (V10).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

19. Huzurevindeki odamın ihtiyaçlarımı karşılayacak büyüklükte olduğunu düşünüyorum (V11).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

20. Odamdaki eşya ve mobilyaların, estetik ve kullanışlı olduğunu düşünüyorum (V12).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

21. Huzurevinin estetik ve iyi tasarlanmış bir binasının olduğunu düşünüyorum (V13).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

22. Huzurevinde istediğim zaman sessiz ortam bulabiliyorum (V14).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

23. Huzurevindeki havanın temiz ve kötü kokulardan arınmış olduğunu düşünüyorum (V15).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

24. Huzurevinde kendimi evimde hissediyorum.

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

Aşağıdaki sorularda huzurevinde yaşamakla ilgili ne düşündüğünüze dair sorular yer almaktadır. Bu konulardaki fikirlerinizi gözönünde bulundurarak her ifadeye ne kadar katıldığınızı belirtiniz.

25. Huzurevinin benim bir parçam gibi olduğunu hissediyorum (V16).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

26. Bu huzurevine bağlandığımı hissediyorum (V17).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

27. Burada yaşıyor olmaktan çok mutluyum (V18).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

28. Bu huzurevinde uzun bir süre yaşamak istediğimi düşünüyorum (V19).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

29. Bazen yaşamak için buradan daha iyi yerler olduğunu düşünüyorum (V20).

1	2	3	4	5
Hiç Katılmıyorum	Oldukça Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Oldukça Katılıyorum	Çok Katılıyorum

Aşağıdaki sorularda hayat doyumuna dair sorular yer almaktadır. Bu konulardaki fikirlerinizi göz önünde bulundurarak her ifadeye ne kadar katıldığınızı belirtiniz.

30. Yaşamım idealime büyük ölçüde yaklaşıyor (V21).

1	2	3	4	5	6	7
Kesinlikle Katılmıyorum	Katılmıyorum	Kısmen Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Kısmen Katılıyorum	Katılıyorum	Kesinlikle Katılıyorum

31. Yaşam koşullarım mükemmel (V22).

1	2	3	4	5	6	7
Kesinlikle Katılmıyorum	Katılmıyorum	Kısmen Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Kısmen Katılıyorum	Katılıyorum	Kesinlikle Katılıyorum

32. Yaşamımdan memnunum (V23).

1	2	3	4	5	6	7
Kesinlikle Katılmıyorum	Katılmıyorum	Kısmen Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Kısmen Katılıyorum	Katılıyorum	Kesinlikle Katılıyorum

33. Yaşamda şu ana kadar istediğim önemli şeylere sahip oldum (V24).

1	2	3	4	5	6	7
Kesinlikle Katılmıyorum	Katılmıyorum	Kısmen Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Kısmen Katılıyorum	Katılıyorum	Kesinlikle Katılıyorum

34. Yaşamımı bir daha yaşasaydım hiçbir şeyi değiştirmek istemezdim (V25).

1	2	3	4	5	6	7
Kesinlikle Katılmıyorum	Katılmıyorum	Kısmen Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Kısmen Katılıyorum	Katılıyorum	Kesinlikle Katılıyorum

APPENDIX B. CORRELATION MATRIX OF THE OBSERVED VARIABLES

Table 3.1.
Correlation matrix of the observed variables used in the models.

	Social				Institution						**Design**					Place Attachment					**Life Satisfaction**				
Order*	**1**	**2**	**3**	**4**	1	2	3	4	5	6	**1**	**2**	**3**	**4**	**5**	1	2	3	4	5	**1**	**2**	**3**	**4**	**5**
1	1																								
2	.18	1																							
3	.60	.28	1																						
4	.19	.21	.21	1																					
1	.16	.09	.19	-.02	1																				
2	.19	.05	.12	.04	.33	1																			
3	.14	-.09	.10	.08	.09	.22	1																		
4	.30	.09	.25	.33	.26	.30	.14	1																	
5	.27	.15	.17	.43	.20	.17	.11	.36	1																
6	.18	.05	.06	.17	.14	.09	.12	.37	.16	1															
1	-.15	.06	.09	.06	.02	.05	-.10	.05	-.05	.09	1														
2	.19	.08	.15	.10	.13	.06	.22	.09	.19	.14	.28	1													
3	.09	.15	.15	.12	-.12	-.02	-.08	.17	.20	.04	.20	.26	1												
4	.05	-.06	.13	.03	.03	.00	.04	.01	.09	-.09	.24	.13	.10	1											
5	.14	-.04	.13	.31	.18	.16	-.02	.31	.13	.19	.34	.13	.22	.32	1										
1	.28	.18	.30	.21	.25	.24	.17	.21	.24	.13	-.06	.15	-.04	.06	.09	1									
2	.22	.17	.28	.21	.27	.29	.18	.17	.26	.14	.00	.17	-.03	.00	.12	.81	1								
3	.18	.19	.32	.21	.11	.22	.23	.25	.03	.09	.14	.15	.03	.06	.10	.46	.44	1							
4	.17	.28	.31	.15	.14	.23	.22	.13	.10	.00	.01	.17	.11	.04	.08	.48	.52	.67	1						
5	.08	.16	.21	.01	.05	.17	.09	.00	.05	-.07	.15	.08	-.01	.24	.05	.36	.39	.49	.62	1					
1	.12	.20	.23	.04	.22	.24	.26	.07	-.02	.00	.07	.11	-.04	.08	.22	.30	.28	.53	.57	.44	1				
2	.27	.21	.31	.12	.37	.31	.31	.34	.20	.16	.14	.16	.00	.10	.22	.48	.43	.56	.47	.28	.49	1			
3	.23	.12	.26	.08	.27	.37	.37	.23	.04	.10	.20	.21	-.05	.11	.14	.54	.50	.68	.59	.47	.60	.68	1		
4	.11	.10	.09	.17	.06	.33	.31	.16	.07	.11	.10	.19	.06	.05	.21	.23	.27	.28	.26	.22	.32	.27	.37	1	
5	.14	.09	.18	.13	.17	.23	.20	.17	.13	.04	.10	.16	.04	.19	.24	.19	.17	.29	.33	.33	.46	.22	.31	.64	1
Social					.38						.23					.39					.32				
Institu											.19					.30					.38				
Design																.15					.26				
Platt																					.65				

* The order of the items is the same as in the Appendix A.
Note: If r > .18, P< .05
If r > .23, p< .01