THE CHILDREN WHO START LIFE WITH SEPARATION AND THE VOLUNTEERS WHO DO NOT PLAY THE THREE MONKEYS: THE EFFECTS OF THE VOLUNTEER PROGRAM OF KOÇ UNIVERSITY ON THE DEVELOPMENT OF INSTITUTIONALIZED CHILDREN

by

Suzi Levi

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This is to certify that I have examined this copy of a master's thesis by

Suzi Levi

and have found that it is complete and satisfactory in all respects,
and that any and all revisions required by the final
examining committee have been made.

Committee Members:

_____

Cigdem Kagitcibasi, Ph. D. (Advisor)

_____

Bilge Yagmurlu , Ph. D.

_____

Sibel Kazak Berument, Ph. D.

_____

Institute of Social Sciences, Director

Date: _____

STATEMENT OF AUTHORSHIP

This thesis contains no material which has been accepted for any award or any other degree or diploma in any university or other institution. It is affirmed by the candidate that, to the best of her knowledge, the thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

Signed Suzi Levi

ABSTRACT

Although institutions are one of the most common ways to look after needy children, the children in institutions often experience socio-emotional deprivation and even material deprivation in some institutions (MacLean, 2003; Smyke et al., 2007). Early deprivation that the children in institution experience may have effects on five different areas of development which are social development, language development and communication, emotional development, fine-motor coordination, and cognitive development (Giese & Dawes, 1999).

The goal of the present study is to assess the trajectory of change of the social, emotional, motor and language development of the institutionalized children visited weekly by the volunteers of Koç University Minik Yürekler Project (KUMYUP).

The sample of the present study consists of 16 children between 12 and 36 months old currently residing in the Bahçelievler Child Protection Center. The control group consists of 12 children in the same age group currently residing in institutions in Kocaeli and Bursa.

In order to analyze children's development, Ankara Developmental Screening Inventory was administered two times as a pre and post test. Also systematic observation for three months in each institution was made by the researcher.

The results indicate that children who were weekly visited by the volunteers scored significantly higher in general development and social development areas of Ankara Developmental Screening Inventory. There were not statistically significant differences between the pre and post test scores for language development, fine motor development and gross motor development.

Based on the findings of the study, some policy recommendations about institutionalization are made.

Keywords: Institutionalized children, child development, early deprivation, orphanages

ÖZET

Korunmaya muhtaç çocukların bakımı en yaygın biçimde sosyal kurumlarda gerçekleşse de, bazı kurumlardaki çocuklar sosyal ve duygusal yoksunluk deneyimlemektedirler (MacLean, 2003; Smyke ve digerleri, 2007). Kurumlarda erken dönemde yoksunluk yaşayan çocuklarin gelişimlerinin beş alanının olumsuz bir biçimde etkilediği gözlemlenmiştir. Bu alanlar; sosyal gelişim, dil gelişimi, duygusal gelişim, ince ve kaba motor koordinasyonu ve bilişsel gelişimdir.

Bu çalışmanın amacı, Koç Üniversitesindeki Minik Yürekler Projesinde çalışan gönüllülerin haftalık ziyaretlerinin kurumlarda kalan korunmaya muhtaç çocukların sosyal, duygusal, motor ve dil gelişimine olan etkisinin değerlendirilmesidir.

Çalışmanın örneklemi Bahçelievler Çocuk Yuvası'nda yaşları 12 ile 36 aylık olan 16 çocuğu kapsamaktadır. Kontrol grubu ise aynı yaş grubundaki Kocaeli ve Bursa'daki kurumlarda ikamet eden 12 çocuğu kapsamaktadır.

Çocukların gelişimlerini inceleme nedeniyle Ankara Gelişimsel Tarama Envanteri önce ve sonra sınanmak üzere 2 kez verildi. Araştırmacı tarafından her kurumda 3 aylık süre içinde sistematik inceleme yapıldı.

Veriler, iki grubu (kurumda ikamet eden ve gönüllüleri olanlarla, kurumda olan ama gönüllüleri olmayan çocuklar) kıyaslanarak ve her çocuğun kendi gelişiminin önceki ve sonraki testlerinin sonuçlarını kıyaslıyarak incelendi. Araştırmacının sistematik gözlemleri temel alınarak kantitatif sonuçlar da incelendi.

Araştırmanın sonuçları, her hafta gönüllüleri tarafından ziyaret edilen çocukların Ankara Gelişimsel Tarama Envanterinde genel gelişimleri ile sosyal gelişim alanlarının anlamlı biçimde yükseldigini göstemektedir. Önce ve sonraki yapılan testlerde dil gelişimi, ince motor gelişim, kaba motor gelişim alanlarında belirli fark görülmemiştir.

Anahtar Sözcükler: Korunmaya muhtaç çocuklar, çocuk gelişimi, erken yoksunluk, yetimhaneler

DEDICATION

To my family

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a child is like a delicate bird

who wants a home, food

and to be kissed and cuddled

Cahit Kulebi

Chapter 1

INTRODUCTION

1.1 General Overview

One of the common ways of caring for the children in need of protection is to look after them in institutions (MacLean, 2003; Smyke et al., 2007). Although institutions are the most common way to look after needy children, the children in institutions often experience socio-emotional deprivation and even material deprivation in some institutions. The results of different studies reveal that children in institutions often have delays in physical growth, cognitive development and language development (Ellis, Fisher & Zaharie, 2004; Giese & Dawes, 1999; MacLean; 2003; Rutter & the English and Romanian Adoptees (ERA) Study Team, 1998). Other researchers pointed out that, children in institutions also have problems in their socio-emotional development (MacLean, 2003; O'Connor, Marvin, Rutter, Britner & the English and Romanian Adoptees Study Team, 2003; Vorria et al., 2003; Zeanah, Smyke, Koga & Carlson, 2005).

MacLean (2003) suggested that interventions that are based on educating the caregivers or both educating the caregivers and changing the structure of the institutions (i.e. availability of the toys, ratio of child to caregiver etc.) may have high economical costs, therefore interventions that are less expensive and may be used widely in more institutions should be implemented and evaluated. It should be assessed whether interventions that may have partial solutions by creating an opportunity of human interaction with the children in institutions may have positive effects on children's development (MacLean, 2003).

The goal of the present study is to assess the trajectory of change of the social, emotional, motor and language development of the institutionalized children visited weekly by the volunteers of Koç University Minik Yürekler Project (KUMYUP). One of the main research questions of the study was whether there would be a trajectory of change in the development of the institutionalized children who experience relations with volunteers of Koç University for a whole project term (3 months). Another research question of the study is whether the duration of institutionalization has effects on the trajectory of development. The institution that these children live in is the main environment that has direct effects on their development. The volunteers visiting the institution once a week for a project term may have effects on institutionalized children's development by creating a change in their immediate environment.

KUMYUP project is an ongoing project founded in 2004 but the effects of the program on children have not been evaluated yet. The evaluation of the project is important because of two reasons. First, if the program has positive effects on the development of institutionalized children, then the continuity of the program should be ensured. Also, the program could be used as a model for other institutions. Second, if KUMYUP program is not found to be effective on the development of institutionalized children, then the program should be revised and improved.

Another important issue is about volunteers' motivation about the project. If the volunteers feel positively about the project, they would be more motivated to work. This may have positive effects on the quality of their work. Thus, the effectiveness of the project would be increased.

1.2 Theoretical Background

After briefly explaining the aim and the expected practical contributions of the study, the theoretical background of the study will be discussed.

1.2.1 The role of context in early child development

Kagitcibasi (2007, pp.1-23) emphasized the importance of having a contextual-developmental-functional approach to study human development. Kagitcibasi proposed that studies of development should involve context.

The child's environment is crucially important for development. A seminal theoretical framework for examining the context of development was proposed by Bronfenbrenner. Bronfenbrenner defined the ecology of human development as the dynamic interactions between active, developing and complex bio-psychological organisms and the changing settings the person lives in. These settings are surrounded by larger contexts (Bronfenbrenner, 1979).

The developing child is at the center of an interrelated set of contexts. Some of these contexts have effects on the developing child directly, and some contexts have effects on the child indirectly (Tudge, Gray & Hogan, 1997). The various systems that influence the child are microsystem, mesosytem, exosystem, and macrosystem (Bronfenbrenner, 1979).

Microsystem is a setting in which the developing individual is situated (Bronfenbrenner, 1979). Some examples of different microsystems are school, home, institution that the child lives in, or peer groups (Thomas, 1996). The microsystem has

direct effects on the child's interpersonal relations, activities that the child engages in, or activities that the child observes, and roles that the child takes in these activities (Tudge, Gray & Hogan, 1997).

Mesosystem is the linkage between two or more settings that contain the developing person (Bronfenbrenner, 1979). Exosystem can be defined as the linkage between two or more settings, this time at least one of the settings does not include the developing person. The setting which does not include the developing person involves events that have indirect effects on the person (Bronfenbrenner, 1979). Macrosystem has indirect effects on the developing person. The effects of macrosystem are at the cultural level which includes social class, ethnicity, and race (Bronfenbrenner, 1979).

KUMYUP project intervenes in the microsystem of the children by creating an opportunity to have stable interpersonal relationships and increasing the stimulation in the environment that these children reside in. In Bahcelievler Institution, there are very few toys around and children cannot even play with most of these toys since the toys were put to places that children cannot reach. There are no pictures on the walls. There are no crayons, books that children can use. Every week, toys that are appropriate for the age group were brought by the volunteers of KUMYUP. In order to make children form a special bond, every volunteer is paired with a child. Also, the children were taken outside to the play ground. By all of these, KUMYUP project tried to increase the

stimulation around the environment. (Further information about KUMYUP will be provided later).

According to Bronfenbrenner's Ecological Theory, direct effects of social and physical environment, which are labeled proximal processes, are important for children's development (Tudge, Gray & Hogan, 1997). There are two broad processes that are crucial for enhancing the development of children. One of these processes is children's interaction with people in their environment and the other is the activities in which children engage (Thomas, 1996). The volunteers of KUMYUP project try to intervene in these two processes by changing the environment and introducing novel activities.

Keogh and Weisner (1993) pointed out that the proximal environment that the child lives in may be a risk factor for development. Protective factors may decrease the negative consequences of risk factors on development. Volunteers of Koc University may be a protective factor for institutionalized children's development.

In the present study, the institutions that the children in need of protection reside are the primary context of the children. The children's development is studied by using a contextual-interactionist approach.

1.2.2 The effects of early deprivation on early development

Animal studies, studies based on socio-economical situation, and some of the neurobiological studies analyze the relationship between early deprivation and human development.

Besides the role of context on early development, another important theoretical framework for explaining early development is socio-economic situation which have effects on experiences and early stimulation. Mustard (2003) stated that early child development; health including brain development and well-being, and learning are all affected by socioeconomic conditions. Furthermore, early child development affects physical and mental health in adulthood (Mustard, 2003). Thus, early development may have effects in the whole life span of an individual.

In the early years of life, interpersonal experiences interact with genetically programmed development of the nervous system and with this process, brain's structure and function are formed (Siegel, 1999 pp.1-22). According to Mustard's (2003) model, experiences in the early years of life have effects on brain development and on the formation of neurological pathways. In turn, the neurological pathways play a role in individual's health, learning, and behavior (Mustard, 2003). Other researchers also emphasized the importance of early experiences on brain development in early years

(Nachmias, Gunnar, Mangelsdorf, Parritz & Buss, 1996). The researchers pointed out that cortisol level of preschool children increases due to low quality of care by an increase in stress. The studies conducted on animals showed that cortisol level affects brain development. An increase in cortisol level may have negative effects on the development of central nervous system. Also, the increase in cortisol level may have effects on different brain areas and in turn problems in self-regulation, attention regulation and self-control may occur (Nachmias et al. 1996).

Nachmias et al. (1996) pointed out that there is also an association between secure attachment and cortisol level. If the child is securely attached to the primary caregiver, during a stressful or strange event the child's cortisol level does not increase. On the other hand, if the child is abused or neglected, or has a disorganized attachment pattern, the cortisol level increases due to stress. This shows that sensitive and responsive care-giving is associated with cortisol levels, which may affect brain development.

Connection between the synapses, and wiring and sculpting (non-used pathways disappear in time) of the neurons are also influenced by early experience. Sensing, language and cognitive pathways are all affected by experience in early development. Sensing pathway is the first pathway to be formed. Any abnormalities in the development of sensing pathway result in deficiencies in language and cognitive pathways. For this reason, early stimulation, which is crucial for the development of

sensing pathways, has both direct and indirect effects on language and cognitive pathways (Mustard, 2003).

Similar to Bronfenbrenner's Ecological Theory, Elder (1998) pointed out that social structure and culture are crucial for human development. Social trajectories, consisting of family, education, and work, are affected by historical forces. These social trajectories of changes in live have effects on the development. Elder (1998) made research on development of children and how development was affected by the Great Depression. During the project term, KUMYUP volunteers tried to change the social structure for the institutionalized children. Elder (1998) emphasized the importance of the timing of life transitions. It was proposed that life transitions during the early phases of life have crucial long-term consequences on development. Thus, it could be stated that the effects of early deprivation may have long lasting effects on human development.

1.2.3 The effects of early intervention on early child development

After briefly explaining the effects of early deprivation on children's development, the effects of early intervention programs should be discussed. Early intervention programs are crucial for optimizing early development.

The aim of early intervention programs is to enhance the development of children at risk in a positive manner by increasing the stimulation in the environment and introducing stable, secure, and sensitive care-giving (Currie, 2000; Love et al., 2005; Ramey & Ramey, 1998). Currie (2000) indicated that the underlying aim of early intervention is to guarantee that children become adults that attain school more, earn more, have welfare and have lower crime rates.

Ramey and Ramey (1998) pointed out that there are some different processes that needed to be present for normal development including supporting children to explore, guiding the children to support their cognitive and social skills, making children aware of their new skills, working together on their new skills, enhancing symbolic communication and language skills, and preventing improper punishment. Different theoretical models are used to establish different early intervention programs. Some early interventions focused on the family, some focused on the parent(s) and others focused directly on children (Ramey & Ramey, 1998). Early interventions also differ according to the timing. Some interventions start earlier than others. Also some interventions continue for longer times. The intensity of the programs may also differ (Ramey & Ramey, 1998).

Basically, genetics, prenatal environment, socio-cultural norms and special characteristics of the society that the child lives in are considered as important factors in personal histories of the children. Family histories are also crucial. For this reason,

information about the family life is gathered before the start of the program (Ramey & Ramey, 1998).

The results of the studies on early interventions differ based on the object of the interventions, the timing and intensity of the interventions, the environment that the child resides in, and individual differences (Ramey & Ramey, 1998). Kagitcibasi (2007, pp. 241-243) pointed out the importance of timing for early interventions. The earlier and the more persistent the intervention is, the better the outcomes of development.

Based on the relationship between early intervention and development, the volunteers of KUMYUP worked with the children between 12 to 36 months. The volunteers who participated the following project term work with the same child even if the child is in the home for 4-6 years old children to ensure the continuation of the intervention.

Chapter 2

LITERATURE REVIEW

There are studies about different aspects of institutions in different countries and the effects of these institutions on children's development. In the next section, the reasons for children being in institutions, the general characteristics of the institutions, the effects of these features on children and the reasons for deficits in development of institutionalized children will be discussed. As the last part of this chapter, the hypotheses of the study will be stated.

2.1 Research on Deprivation

The results of different studies on humans and animals support Mustard's theoretical model on early development. For example, Hubel and Wiesel in 1960s (as cited in Mustard, 2003) conducted a study on children born with cataracts. According to the results, there was no development of visual neurons in the children who were born with cataracts. This result shows that stimulation in the first years of life influences brain development by affecting brain structure and function.

Hart and Risley (2005, pp.175-190) conducted a study about the association between the role of SES, early experience and brain development. It was indicated that children who have low SES families had poor verbal skills when compared with children with high SES families. However, if parents of low SES were supported to use the same vocabulary as parents of high SES, children from low SES families develop similar verbal skills to children from high SES families. These findings indicate the importance of early experience and stimulation for language development.

Dennis (1973) conducted a longitudinal study on the development of children resided in an institution in Beirut in 1955. The results of the study indicated that children who were adopted prior to 2 years of age caught the IQ of children raised in family environment with subsequent environmental stimulation. Dennis (1973) pointed out that children who had deficiencies in their IQ due to environmental deprivation could attain normal IQ score if they were adopted before they were 2 years old. This is an important finding that supports the theory about the role of early deprivation on early development.

Kreppner et al. (2007) conducted a longitudinal study on normal versus impaired functioning in children who experienced deprivation in institutions. The seven domains that the researchers included in their study for analyzing impairment and normality were cognitive impairment, quasi-autistic pattern of

development, inattention/overactivity, disinhibited attachment, conduct problems, emotional problems, and peer relationship problems. According to the findings of the study, children whose institution experience was completed before the age of 6 months had significantly less multiple impairments, than children whose institution experience lasted 6 months or more than 6 months. There wasn't a statistically significant difference between impairments of children who experienced institutionalization before the age of 6 months and impairments of adopted children who did not experience institutionalization. It appears that if children do not experience institutional deprivation longer than the age of 6 months, they exhibit a full recovery of the impairments due to institutionalization. During the follow-up studies, similar results were found. Another important finding of the study was that the main reason for impairment was psychological deprivation rather than nutritional deprivation (Kreppner et al., 2007). This study is important for understanding the crucial role of timing for early development.

To sum up, research shows that early deprivation has crucial negative effects on early development. Lack of psychological deprivation is important for optimal development. The findings of different studies indicate that the effects of early deprivation are more crucial than later deprivation for development. For this reason, eliminating deprivation or developing

intervention to enrich the early conditions are important for optimizing development.

2.2 Research on Interventions in the Institutions

Walker et al. (2007) conducted a study on stunted 9-24 months old Jamaican children. Four different groups were established. These groups were a control group with no intervention, a group who only received nutrition intervention, a group who only received stimulation as intervention and a group who received both stimulation and dietary supplementary. It was found that when compared with the no intervention group, all of the children in different intervention groups developmentally improved after the intervention. When children were 7, 11 and 18 years old, follow-up studies were conducted. At age 7, the benefits of the different interventions continued. Yet, the results of the follow-up at age 11 indicated that although the cognitive gains were still apparent in the groups who received stimulation, the gains of nutrition were no longer observed. A similar trend was found when the children were 18 years old (Walker et al., 2007). The results of the study showed the importance of stimulation for early development. Based on the findings of the study, it could be stated that an intervention based on early stimulation has long-lasting positive effects on deprived children's development.

Muhamedrahimov, Palmov, Nikiforova, Groark and MCCall (2005) conducted a pilot study on institutionalized children's emotional development. The aim of the intervention program was to promote the relationship between children and caregivers by training caregivers to be more responsive to the needs of the children, and to be consistent and stable as caregivers. With a stable and responsive caregiver, the institutionalized children would be attached to the 'primary caregiver' and have a more family like emotional experience (Muhamedrahimov, Palmov, Nikiforova, Groark & MCCall, 2005). In the pilot study, consistent caregivers were assigned to look after institutionalized children for five days a week. It was found that children with consistent caregivers started to discriminate between strangers and caregivers, and their level of distress increased when the caregiver was not in the room. It was also found that, after the intervention program, children demonstrated stranger anxiety, and were less indiscriminately friendly. Based on this finding, the researchers pointed out that an extensive intervention that provides stable and consistent caregivers might be useful for normalizing socio-emotional development. (Muhamedrahimov, Palmov, Nikiforova, Groark & MCCall, 2005).

Another intervention program was conducted in Romanian institutions. The intervention program was similar to Infant Health and Development Program (IHDP). Originally, the Infant Health and Development program was

designed as an intervention program for low birth weight infants. The IHDP program was revised according to the institution setting (Sparling, Dragomir, Ramey & Florescu, 2005). The aim of the intervention was to improve the quality of environment, caregiving and stimulation so that institutionalized children's trajectory of development would be altered. In order to achieve this goal, the staff was trained, and got supervisions, a caregiving-intervention protocol was developed, and educational games were introduced to the care-givers. Also, the structure of the institutions was changed by the intervention program. One of the changes of the structure was optimizing the child-caretaker ratio. In addition to optimizing the child-caretaker ratio, fewer children started to reside in one room (Sparling, Dragomir, Ramey & Florescu, 2005). The results of the study indicated that the effects of the intervention differed across children due to health condition and physical growth of the child, and whether the child was a favorite child or not. Healthier children, children whose physical development was normal and children who were favorites of care-givers benefitted more than unhealthy, physically underdeveloped and not favorite children. Also, a cumulative effect of longer stay in institutions was found to be important for development. It was indicated that children who stayed longer in institutions did not improve as much by the intervention (Sparling, Dragomir, Ramey & Florescu, 2005). Although positive changes in the development of institutionalized children were assessed, the children did not catch up with normal development. Based on this finding, it

could be stated that the interventions in the institutions should start as early as possible. Another solution for altering institutionalized children's development is that children should be adopted or given back to their biological familie who are economically and psychologically supported (Sparling, Dragomir, Ramey & Florescu, 2005).

The findings of different studies on interventions in institutions demonstrated the importance of timing of the intervention. Also, environmental and socio-emotional stimulation were found to be crucial for development.

2.3 Research on Institutions

2.3.1 The reasons for children being in institutions

The major goal of institutions is to provide a safe and healthy home for children who either do not have parents or whose parents cannot take care of them for various reasons (Stovall-McClough & Dozier, 2004).

There are different reasons for children being in institutions. The reasons for children being in institutions may differ across regions of the world. For instance, in Turkey, the main reason for parents leaving their

children in institutions is economical problems. On the other hand, in Africa, the main reason is the death of the parent(s) because of AIDS. Groark, Muhamedrahimov, Palmov, Nikiforava & Mccall (2005) conducted a study on orphanages in the Russian Federation. The researchers reported that some of the reasons for parents leaving their children are the economic situation in the Russian Federation, social and financial problems, lack of adequate living conditions, illness of the parent(s) or the child, and imprisonment of the parents. There are some similarities and differences in the reasons of placement of children in institutions in Turkey and Russia. Physical or mental health problems, imprisonment, economic difficulties of the family are among similar reasons. Death of the parent(s), mental retardation, divorce, prostitution, rejection of the child and abuse are also major reasons for the placement of children in institutions in Turkey (Yagmurlu, Berument & Celimli, 2005). According to the findings of a study conducted by Dixon, Browne & Hamilton-Giachritsis, (2005), in 15 EU countries, the main reason for children being in institutions is abuse and neglect (69 % of the children). The other included parental abandonment (4 %), 4 % of the children was in institutions due to disability and 23 % was in institutions due to social reasons (e.g. Parents were in prison).

According to the report on Social Work by the Social Services and Child Protection Institution (2001), 5.5 % of the children who need protection

and reside in institutions were found abandoned and no information about their previous life is known. The parents of 7.2 % of the children who need protection are dead. 18 % of these children were neglected and abused by their fathers or mothers. It was stated that 49.5 % of these children's families had economical problems (Social Work Report, 2001).

2.3.2 The general characteristics of institutions

After generally analyzing the reasons for institutionalization, information about the general features of the institutions will be provided in order to have an understanding of the institutionalized children's present living conditions.

Saltz (1973) reported that two institutions she studied in the U.S. had physically good and stimulating environments. The institutions were well-equipped with different rooms for playing and sleeping. The children who are 3 years old or older were sent to preschools. There were 16 children who lived in one unit. In contrast, in some countries including Romania (Castle et al., 1999) and Turkey (Yağmurlu et al., 2005), institutions are not capable of providing a stimulating and healthy environment. Castle et al. (1999) reported that children in institutions experience social, emotional and cognitive deprivation as well as deprivation in nutrition and physical care such as

feeding, bathing and diapering. The institutions have routine and impersonal structure as living arrangements. There is no individuality and individual belongingness in the environment of the institutions (Browne,2008).

Taneja et al. (2002) stated that caregivers working in institutions especially in developing countries are not educated or trained adequetly. In India, the physical needs of the children are more important than psychological and social needs for the caregivers (Taneja et al. 2002). This situation is also true for the Turkish institutions. The relationship between the caregivers and institutionalized children is more like a professional relationship but not like a mother and child relationship (Browne, 2008). Instability of the caregivers due to heavy work load and low wages is another problem of the institutions (Groark et al. 2005). In some institutions, the caregiver-child ratio is too low which makes the work load of the caregivers even more. As a result of the low caregiver-child ratio, children in institutions experience social and emotional deprivation. Children in institutions experience lack of interaction with adults due to low caregiver to child ratio and instability of the caregivers. They are observed to be socially withdrawn (Browne, 2008).

The ward system is used in some of the institutions in Turkey. In the ward system, very high numbers of children sleep together in the same room and play together in another room. The environment of the institutions using

the ward system is very different from home environment that children need. Another problem with some of the Turkish institutions is that some of these institutions lack toys and playing materials (Yagmurlu et al., 2005).

2.3.3 The effects of institutions on children

Aforementioned characteristics of the institutions may result in delays in the development of children who reside in institutions. Children in institutions may experience significant delays in several areas of development such as social development, language development, emotional development, fine-motor and gross motor coordination and cognitive development (Giese & Dawes, 1999). Children also demonstrate delays in physical development (Ellis, Fisher & Zaharie, 2004). Rutter et al. (1998) pointed out that physical features such as height, weight and head circumference are associated with cognitive development. The researchers (1998) reported that there is a positive correlation between quality of the institutions and nutrition. It was found that nutrition, physical growth and cognitive development were positively correlated. It was also emphasized that physical size of the children was negatively associated with problems such as anxiety and affect symptoms, developmental delays and disruptive behavior. Ellis et al. (2004) studied the relationship between duration of institutionalization, physical growth, and

mental health. The findings of the study revealed that there is a negative correlation between physical stature and anxiety-affective symptoms and developmental delays even when duration of institutionalization was controlled. On the other hand, there is a positive relation between physical stature and disruptive behaviors (Ellis et al., 2004).

According to the findings of Ellis et al (2004), all institutionalized children in the sample had delays in physical and emotional development. The results also indicated that these children had behavioral problems such as oppositional deviance. The results of another study (Roy, Rutter & Pickles, 2004) revealed that institutionalized children are more likely to have higher rates of emotional and behavioral problems when compared with children who reside with their foster parents. These enduring problems result in problems of inattention and over-activity at the school context (Roy et al., 2004).

Institutionalized children may also have problems in development of attachment. Attachment may be defined as the emotional bond between the caregiver and infant formed during the first three years of life. During stressful events, children seek proximity and contact to their primary caregivers in order to feel secure (Zeanah, 2008). Research shows that human beings are biologically predisposed to 'have attachment' (Zeanah, 2008). Children, who are securely attached to their caregivers, use them as a "secure base" from

which to explore the world (O'Connor et al., 2003). Gaining and maintaining a close relationship with the primary care-giver are crucial for reducing level of fear of the child in order to start exploring the world (O'Connor et al. 2003). Children who are securely attached to their primary caregivers also use them as a 'secure haven' to return to when they are distressed (Zeanah, 2008).

For the formation of secure attachment, adequate levels of socio-emotional stimulation, positive attitudes, proper nurturance, reciprocal exchange, developmentally appropriate care-giving, responsiveness and sensitivity by the caregiver are desirable (Groark et al. 2005). After separation or distress, infant with secure attachment seeks contact with the primary caregiver. During separation, infant shows direct expressions of negative affect. On the other hand, during reunion, infant clearly approaches and expects comfort from the caregiver.

Bowlby (as cited in Frank et al. 1996) claimed that formation of attachment is not a possibility in institutions due to social deprivation and lack of interpersonal relationships. Children in institutions experience inadequate living conditions, maltreatment and neglect which have negative effects on the development of attachment (Albus & Dozier, 1999). O'Connor et al. (2003) pointed out that attachment problems are among consequences of early severe deprivation. Since the children in institutions experience abandonment by the parent(s) which is traumatic, they demonstrate more attachment related

problems such as atypical patterns of behavior during separation and re-union and atypical forms of insecure attachment when compared with home-reared children. The lack of intense social interaction and a consistent, responsive and sensitive attachment figure in the institution may lead to the formation of insecure attachment. The types of insecure attachment are insecure-avoidant and insecure-resistant. Children with insecure-avoidant type of attachment do not seek the attention of the caregiver when they experience distress due to separation. In the reunion, the interaction between the caregiver and the child lacks affection. The children with insecure-avoidant type of attachment were more social towards strangers during the strange situation paradigm (Zeanah, 2008). The characteristics of caregivers whose infants have insecure-avoidant type of attachment dislike the 'neediness' of the infant, and are not usually emotionally available when the infant is in need (Zeanah, 2008).

Infants with insecure-resistant type of attachment protest during separation; they cry and become very stressed (Zeanah, 2008). They also feel helpless and angry. During reunion, these children resist and behave angrily towards the caregiver (O'Connor et al. 2003). They are hard to be comforted. They demonstrate very limited exploration because they feel that their caregivers are not reliable (Zeanah, 2008). Caregivers whose infants have insecure-resistant type of attachment are usually unpredictable and chaotic,

they sometimes show care but not all times, they are often attentive but mostly tuned in infant's fear (Zeanah, 2008).

In recent years, differing from the conceptualization of secure-insecure patterns of attachment, indiscriminate friendliness concept is considered to be relevant for attachment problems. Zeanah et al. (2005) defined indiscriminate friendliness as not being able to form selective attachment to a single caregiver. Children who are diagnosed with indiscriminate friendliness are over friendly and approach strangers without any distress or even when they are stressed they do not seek the attention of their caregiver (Albus & Dozier, 1999; O'Conner et al., 2003). Normally, infants do not approach strangers. Also, physical affection toward strangers is not common. Thus, indiscriminate friendliness to strangers is not normal for infants (Albus & Dozier, 1999).

Zeanah et al. (2005) compared 136 children who reside in an institution in Romania with 72 children who live in their homes. The results of the study showed that the institutionalized children were unable to form selective attachments to their child-care providers. To be more precise, it was found that only 22% of the children who resided in the institutions demonstrated an organized attachment pattern with a single favorite caregiver. On the other hand, 78% of children living in their own houses demonstrated organized attachment pattern with their mothers (Zeanah et al., 2005). In another study,

Roy et al. (2004) compared children reared in institutions and children reared in foster families. Either group did not live with their biological parents but the children in the latter group were raised in a home environment. According to the findings of the study, the children who were institutionalized lacked selective relationships meaning they were indiscriminately friendly with everyone (Roy et al., 2004). One possible reason for this finding is that children in institutions have multiple and inconsistent caregivers.

Another important conceptualization of attachment problems is disorganized attachment pattern (Vorria et al., 2003). Disorganized attachment may be defined as inconsistent and unorganized behaviors or affects during separation and re-union (Minde, 2003). Infants with disorganized attachment style display interrupted, confused or incomplete strategies for obtaining comfort (Zeanah, 2008). They demonstrate disordered sequences of behaviors during separation and reunion, there may be simultaneous contradictory behaviors, they may be still and frozen or act as if distressed, or they may demonstrate attachment behavior to the stranger (Zeanah, 2008). The caregivers whose infants demonstrate disorganized attachment pattern usually are depressed, may have unresolved losses, may experience trauma, substance abuse or have some kind of dependence, may have bipolar affective disorder, usually maltreat infant (Zeanah, 2008).

Vorria et al. (2003) conducted a study on children who are residing in institutions in Greece. The researchers pointed out that 66% of the institutionalized children in their sample demonstrated disorganized type of attachment whereas only 25% of the children who reside in their homes in their sample developed disorganized type of attachment. It is important to highlight that the home-reared group had mothers who were depressed, alcoholic, mentally ill, or maltreating (Vorria et al., 2003).

Zeanah (2008) pointed out that it is possible that an infant forms different attachment relationships with different caregivers. The most crucial characteristics of caregivers for forming a healthy attachment pattern are being consistent and being emotionally available to the infant.

2.3.4 The reasons for developmental delays in institutionalized children

After explaining the consequences of institutionalization on children's development, the reasons for the developmental delays will be explained in the next section. It is important to point out that the children in institutions had hard living conditions prior to their arrival at the institutions. Thus, the prior living conditions may constitute one of the reasons for the developmental delays. According to Giese and Dawes (1999), there may be more than one

reason for these developmental delays. The major cause of the developmental delays appears to be the lack of a warm relationship with a single caregiver (Giese & Dawes, 1999). Similarly Roy, Rutter & Pickles (2000) stated that the etiology of the developmental delays is multidimensional. Early experiences before the institutional context, genetic factors, and experiences in the institution are among the factors leading to developmental delays (Roy et al., 2000). Less intensive relationship between care-givers and children, poor child-staff ratio and lack of scaffolding are among the causes of the delays (Giese & Dawes, 1999).

Another important factor affecting children's development is the duration of institutionalization. Fisher et al. (1997) compared Romanian adoptees adopted by Canadian parents, Canadian born non-adopted children and Romanian children who have minimal or no experience of institution. The findings of the study revealed that there is a negative relationship between duration of institutionalization and children's development. According to the results of the study, there is a positive correlation between duration of institutionalization and stereotyped behavioral problems, emotional disorders such as depression, post traumatic stress disorder, dysthymic disorder, and generalized anxiety disorder. According to the findings of Rutter et al.'s (1998) study, there are some differences in the developmental catch up due to the duration of institutionalization. It was found that children who were

adopted after 6 months of age could not complete the developmental catch-up by the time they were 4. O'Conner et al. (2003) pointed out that the duration of deprivation also has effects on attachment. They observed a negative correlation between secure attachment and duration, that is as the duration of deprivation increases, the likelihood of displaying secure attachment decreases and displaying atypical behavior during separation increases. On the other hand, Kaler and Freeman (1994) stated that rather than duration, age at abandonment, birth-weight, genetic, environmental and temperamental factors were important for the development of attachment in institutionalized children.

All of these factors appear to affect institutionalized children's development negatively. Improper child and caregiver ratio, lack of proper stimulation and poor interaction between child and caregiver are among the reasons for developmental delays that institutionalized children experience.

2.5 The situation in Turkey

One of the main duties of the State is to prevent or diminish the social problems of all the people who are in need. This task is assigned to Social Work and Children's Protection Institution in Turkey (Sosyal Hizmetler, 1999). Children whose physical, psychological and moral development may be at risk or children whose well-being is in danger are children who need

protection. To be more specific, children whose parents are dead, children whose parents are unknown, children who are abandoned or neglected by their parents, and children who are abused by their parents may be referred to as children who need institutional care and protection. (Sosyal Hizmetler, 1999)

In Turkey, of the 15 070 000 of families, 3 600 000 are in border of poverty (Sirin, 2006). According to the statistics of Turkish Child Report prepared by Turkish Children's Foundation, 1 out of 4 children are poor in Turkey. Even though the economic growth rate has increased, since there aren't enough policies about families and children, there isn't a fair distribution of wealth, there isn't a solution for poverty, and there isn't a social security policy for unemployment. Thus, the problems of families and children get even more complicated because of poverty, increase in unemployment and unfair distribution of wealth (Sirin, 2006). There are 1 400 000 children who need protection and this number is increasing. In 2006, only 17 000 children were in protection and resided at the institutions (Sirin, 2006). According to the national report of the United Nations (1999), 500 children were under the protection of foster care families in 1999 in Turkey. In Turkey, since 1961, 1500 children benefited from foster care family services. As it is evident from these numbers, adoption and involvement as foster care family are not widespread in Turkey (Sirin, 2006).

According to the research of Social Services and Child Protection Institution, in 2008 there are 17 institutions who serve children between 0-6 year of age and the capacity of these institutions is 988, and the number of children who reside in these institutions is 882. There are 23 institutions serving 0-12 year old children and their capacity is 3282, and the number of children residing in those institutions is 2404. Also, there are 8 Sevgi Evleri (home like institutions) in Turkey with the capacity of 740. 576 children reside in Sevgi Evleri (SHCEK statistics, 2008).

2.6 The Present Study

2.6.1 KUMYUP

Koç University "Minik Yürekler" Project (from now on KUMYUP) is one of the student social responsibility programs of Koç University. The program started in Spring 2004. The purpose of KUMYUP is to provide love and care to the institutionalized children in order to support their development. The volunteers of KUMYUP visit Bahcelievler Child Protection Center (KUMYUP, n.d.).

The project has both long-term and short-term goals. Establishing a child centered volunteer system in the institution, making this system a model

for other children's homes and other universities are among the long term goals of the project. Also, helping the students of Koç University to develop a sense of social responsibility, and to create a base for being good parents are the other long term goals of the project (KUMYUP, n.d.).

The short term goals of the project are providing love and care to the children, supporting the emotional, social, language, and cognitive development of children, providing the opportunity for communication and collaboration of the volunteers and the caregivers in the institution. Other short term goals are developing basic secure emotions. Finally, supporting the individual development of the volunteers comprises the last purpose of the project (KUMYUP, n.d.).

Each volunteer works with a particular child for the whole project term, which usually starts in October and ends in January for the fall term and from February to May for the spring term. There are also some volunteers who are not students or staff of Koç University. The most important feature of the project is the stability of the volunteers. The stability of the volunteers is crucial in order not to create another separation experience. For this reason contracts are signed by the volunteers for not leaving the project in the middle of a project term.

Before visiting the children, the volunteers get training about child development, child psychology and what to do with the children. The volunteers also attend three supervision groups for the whole project term. The psychologists and psychological counselors working for the project carry out the supervision meetings. During the supervision groups, the volunteers share their experiences and their emotions with each other. Supervision meetings are important for supporting the volunteers and evaluating the project. The supervision groups take place at the Koç University campus. The supervisors visit Bahçelievler with the volunteers throughout the project term.

2.6.2 Activities of the volunteers in KUMYUP

The volunteers, who are trained by psychologists and psychological counselors, play with children, engage in activities with them both inside the institution and outside in the playground. The volunteers also take care of children's physical needs including feeding during lunch time.

The volunteers visit the institution every Saturday for four months. The volunteers visit the institution for 3 hours from morning till noon. First the volunteers play with the children. Around 10 o'clock the children have a morning snack such as biscuits, fruits and milk. After 10 o'clock, until 12 o'clock, the volunteers again play with the children, and then the children eat

lunch. After lunch, the volunteers prepare the children for the afternoon nap. When the volunteers come to the institution the first thing they do is to put a cartoon flower around the children's necks and when the time is over the flowers are taken back. This system allows the children to know that as long as the flower is on their neck the volunteers are with them (KUMYUP, n.d.).

2.7 Hypotheses

Hypothesis 1: Children in Bahcelievler Institution would have lower pre-test scores when compared with the children in other institutions due to greater environmental deprivation. All of the institutionalized children's development would be below the age norms but children residing in the institutions in Bursa and Kocaeli would have higher scores than children who reside in the institution in Bahcelievler due to a more socially stimulating environment in the former two. The first hypothesis is based generally on the theories emphasizing the crucial role of context on early development (Bronfenbrenner, 1979; Elder, 1998; Kagitcibasi, 2007). The first hypothesis is also based on theories that pointed out the importance of early deprivation on early development (Elder, 1998; Mustard, 2003; Nachmias, Gunnar, Mangelsdorf, Parritz & Buss,1996).

Hypothesis 2: The second hypothesis of the present study is based on attachment theory. It is expected that institutionalized children would have problems in attachment as assessed during the first few observations.

Hypothesis 2a: The institutionalized children would display signs of indiscriminant friendliness. It is expected that children in institutions would approach strangers without any distress. The results of Zeanah et al.'s (2005) study Roy et al.'s (2004) study about institutionalized children lacking selective relationships are the basis of the second hypothesis.

Hypothesis 2b: Institutionalized children would display disorganized attachment style during unification and separation with the volunteers during the first few weeks of observation. Disorganized attachment is conceptualized as inconsistent and unorganized behaviors which are incomplete strategies for obtaining comfort during separation and re-union (Minde, 2003; Zeanah, 2008).

Hypothesis 3: There would be a positive association between the duration of stay in the institution and the developmental delays of children. It is expected that as the duration of stay in the institution increases, the developmental delays would increase too. Specifically research found that there are differences in the developmental catch-up after adoption due to

duration of institutionalization (Rutter et al., 1998). In a different study conducted on institutionalized children, a negative association was found between duration of deprivation and secure attachment (O'Conner et al., 2003).

Hypothesis 4: Institutionalized children, who have a KUMYUP volunteer for a project term, would have a significantly greater increase in their development when the pre and post test scores are compared with children who did not have volunteers. It was also expected that the post-test scores of children in Bahcelievler Institution would still be below the post-test scores of children in other institutions due to more experience of environmental deprivation.

Hypothesis 5a: As a result of contact with volunteers, the institutionalized children would exhibit signs of organized attachment.

Hypothesis 5b: As a result of contact with volunteers, the institutionalized children would start to discriminate strangers and would not approach them.

KUMYUP volunteering program is a partial intervention program. As indicated in different studies, the basic purpose of early intervention programs is to enhance the development of children at risk in a positive manner by

increasing the stimulation in the environment and introducing stable, secure, and sensitive care-giving (Currie, 2000; Love et al., 2005; Ramey & Ramey, 1998). According to the results of Saltzt's (1973) study about the effects of Foster Grandparent Program on institutionalized children, the volunteer program had positive effects on the institutionalized children's development. The fourth and fifth hypotheses are based on the research on the positive effects of early intervention programs on early development (Muhamedrahimov et al., 2005; Sparling et al., 2005; Walker et al., 2007).

Chapter 3

METHOD

3.1 Participants

The sample of the present study consists of 16 children between 17 and 32 months old currently residing in the Bahçelievler Child Protection Center. The intervention group of the present study included 10 girls and 6 boys. Age of the children in the intervention group ranged from 17 to 32 months (M= 21.00 months, SD= 2.66). All of the children had volunteers working with them for 3 months which constitutes a whole project term. The children and volunteer dyads which were paired in prior terms of the project were excluded from the sample. At the first few weeks of the observation, there were more than 16 children included in the sample but some of the children were sent to Sevgi Evleri (smaller home like institutions). Also, 2 children who were included in the sample were adopted.

The control group consists of 12 children in the same age group currently residing in institutions in Kocaeli and Bursa. The control group included 6 girls and 6 boys. Age of the children ranged between 17 to 32 months (M=24.83, SD= 3.64). There were fewer children residing in the

institutions in the control group when compared with the children in the intervention group. Also, some of the children in the same age group were handicapped and were excluded from the control group.

Demographic information such as child's age, and duration of stay at the institution was gathered. The inclusion criteria of the study are residence in institutions and not having a volunteer before. The exclusion criteria are having a handicapping situation and having a volunteer in prior KUMYUP terms. The handicapped children were not included in the sample since the volunteers did not get training about the development of handicapped children and only one volunteer worked with a handicapped child.

3.2 The characteristics of the institutions of the present study

The study was conducted in four different institutions in Turkey. Bahcelievler Children's Protection Center is in Istanbul, Yahya Kaptan Insitution and Gazanfer Bilge Institution are in Kocaeli and Kaplikaya Institution is in Bursa. The four institutions that the researcher made observations had both similar and different environmental characteristics. In the next section, similarities and differences between the four institutions are described. Before the observations were conducted, it was assumed that the environmental conditions and the quality of caregiving were similar in all of

the four institutions, yet during the observations differences between the institutions became quite visible (see Appendix 1 for the summary comparison table).

Bahcelievler Institution is in Istanbul. Among the four institutions Bahcelievler is the biggest one. Children between 0-18 years old reside in Bahcelievler Institution yet there are different houses for different age groups. Children between 0-3 years old reside in one of these houses. During the first two weeks of data collection, this group of children resided in a different house and then they were moved to another house due to restoration in the building. The previous building was very old, not stimulating and not hygienic. The walls inside the building were dirty, not colorful and there were no pictures on them. There was no proper illumination and there was an irritating smell. There were no toys in the environment. As such, the house was not suitable for children's development.

After the second week of the observation, the children were sent to another building. This building was newer and cleaner than the previous one, but the environment was not stimulating and appropriate for children's development. The building had two floors; infants between 0-12 months reside in the first floor, and children between 12-36 months reside in the second. There were four living rooms, four common-use rooms (a

play/sleeping room, a large dining room, a rest room and a nursery) and two storage rooms in the second floor. The children who had spent time with the volunteers of KUMYUP were from two different sleeping rooms. Approximately 20-25 children resided in one room and there were two caregivers in each room. The child to caregiver ratio was high. There were few toys in the rooms that children could reach and play. The walls were white with no pictures on them. There was a television in each room but the available channels were not appropriate for children. Usually, TV series for adults or music channels for adults were on. There were different playgrounds outside for different age groups, which was a positive feature. The caregivers told the volunteers that the following year, the major building would be renewed and the children would move to that building which would provide a better environment for children's development.

The caregivers did not have a formal education on child development, but some of them had real life experience having raised their own children. The caregivers were usually concerned with children's physical development rather than social and emotional development. Generally, caregivers emphasized their concerns on tiring work hours, which were not matched with sufficient compensation. As a result, employee turnover was high in Bahcelievler Institution.

Gazanfer Bilge Institution is in Kocaeli. It is similar to Bahcelievler in the sense that living environments are different for different age groups. Gazanfer Bilge Institution was the smallest of four institutions. The children between 0-36 months stayed in the second floor of the building. Approximately 4-5 children slept in each room where at least one caregiver was present. There were two play rooms other than the rooms children slept. The caregivers mentioned that every three weeks the toys in the play rooms were changed so that the children would not get bored by the same toys. There were also some toys in the rooms that the children slept. The rooms were very colorful and there were different pictures such as number and color charts on the walls. The children could watch cartoons after their breakfast for half an hour each day. Every day, a pre-school teacher made some activities with the children for an hour. The children had their meals in the kitchen. Gazanfer Bilge Institution had a more home-like and child-friendly environment. The caregivers were graduates of child development major of a vocational school. The caregivers were concerned about children's physical, social, and emotional development.

Yahya Kaptan Institution is also in Kocaeli. Similar to Bahcelievler and Gazanfer Bilge, the children between 0-12 years old resided in the institution. The institution was renewed by German professionals. Children between 0-36 months resided together. There were four rooms and 4 children

slept in each room on average. There were two caregivers for 10-15 children. The environment was suitable for children's development. There was a separate play room, in which there were a wide variety of toys. The walls were decorated with numbers and different cartoon characters.

Although the environment was very stimulating and child-friendly, the caregivers were not qualified enough and not very much interested in children's social and emotional development. The caregivers were not specifically educated in child development, but had maternal experience. The caregivers usually left the children between 12 and 36 months in the play room and fed the infants in another room. The children between 12 to 36 months old stayed for at least two hours unattended.

The institution in Bursa was the newest one. The professionals said that the system in Bursa was similar to Istanbul and Kocaeli. However, the children between 0-6 years old were moved to another building as it was observed that elders bullied youngsters.

The children between 0-6 years old resided in the same building, where different age groups stayed together in different rooms. Approximately 4 children slept in one room. For each age group, there was a different playroom with appropriate toys for that age group. There was a room decorated as a

preschool classroom, where children who cannot attend preschool, experienced activities such as singing, learning about different concepts (colors, numbers), drawing, playing with play-dohs under the supervision of a pre-school teacher. There were 3 caregivers for every 10-15 children. There were also 2 professionals, who supervised the caretakers on child development. The nurse was doing regular health controls to keep track of children's physical development. The environment was very stimulating and the caregivers were very concerned about children's physical, emotional, social and cognitive development.

3.3 Materials

In order to assess children's development Ankara Developmental Screening Inventory was administered. Also, the children were observed for a three month period. A systematic observation form is formed by the researcher. Attachment like behaviors were also observed by using the systematic observation form.

3.3.1 Ankara Developmental Screening Inventory

Ankara Developmental Screening Inventory was designed to screen the development of children between 0 to 6 years old. The test was designed in 1992 by Savaşır, Sezgin and Erol. The goal of the researchers was to create a screening test which is appropriate for Turkish culture, unlike the tests that are designed in the West, translated to Turkish and standardized in Turkey (Erol, Sezgin & Savaşır, 1993). Extensive information about Ankara Developmental Screening Inventory is provided below.

The items of the test were designed to evaluate four different but related spheres of development which are language and cognitive development, fine motor development, gross motor development, and social skills development (Erol, Sezgin & Savaşır, 1993).

In order to conduct the test, children's exact age needs to be calculated. The test consists of 154 items, but not all items are used for the same child. The items that will be administered is selected by the test administrator based on the age of the child. The items are administered by asking the mothers or caregivers of the child to report the development of the child (Erol, Sezgin & Savaşır, 1993).

In the present study, the items were administered to the volunteers in the Bahcelievler group and to the caregivers of the children who reside in institutions in Kocaeli and Bursa.

Erol, Sezgin and Savasir (1993) conducted a study on 278 children in order to establish the validity and the reliability of the inventory. The inventory was administered to four different groups. These groups were low SES, preterm babies, institutionalized children, and mentally retarded children (Erol, Sezgin & Savaşır, 1993).

Reliability

The inventory was administered to 86 low SES mothers twice in 6-10 days. The Pearson's r of the three different age groups were all very high (0-12 month old r =.99, 13-48 months old r = .98, 49-72 months old r =.88). Thus, test-retest reliability was found to be high (Erol, Sezgin & Savaşır, 1993).

Validity

The low SES group of the sample and the low SES group of the validity-reliability study's sample were compared and no differences between the groups were found. Thus the scores did not differentiate between independent samples which have similar demographic backgrounds (Erol, Sezgin & Savaşır, 1993).

When the scores of home-raised children were compared with institutionalized children's scores, it was found that the latter group scored lower than the former group. The difference was observed in all ages. Yet when One-way ANOVA was conducted, it was found that the scores between the two groups were significantly differed only in the 37-48 months old group. The researchers stated that the reason for not finding statistically significant differences in the younger group might have been due to the small sample sizes (Erol, Sezgin & Savaşır, 1993). The preterm infants got lower scores than the low SES infants. Yet the only statistical difference was found between 13-18 months old group (Erol, Sezgin & Savaşır, 1993). The mentally retarded children got the lowest scores. As expected, institutionalized children had higher scores than the mentally retarded children, but lower scores than the home-raised children (Erol, Sezgin & Savaşır, 1993).

With these results, it could be stated that the inventory can assess the developmental delays or deficits in children who are expected to have developmental problems such as preterm babies, mentally retarded children, or institutionalized children (Erol, Sezgin & Savaşır, 1993).

According to the study it was found that Ankara Developmental Screening Inventory correlated with other developmental inventories such as Denver Developmental Screening Inventory and Bayley Development Scale for Infants (Erol, Sezgin & Savasir, 1993).

3.3.2 Systematic observation form

In order to observe volunteer and child dyads, a systematic observation form was prepared by the researcher based on a developmental perspective. The goal of the form is to evaluate the general development of the children and to be able to make systematic observations about attachment like behaviors. The form was also used in comparison to the volunteers' responses to Ankara Developmental Screening Inventory as an additional indicator of children's development.

Four different developmental areas were included in the observation form. The systematic observation form is available in Appendix B. In the systematic observation form, a part was formed for motor development. Information about gross motor and fine motor development was included in this part. Another part was created in order to observe cognitive development. Object permanence was assessed for each child at the beginning and at the end of the project. Language development was observed by recording the words and sentences of the children. Also, it was recorded whether the language of the child was accurate or not, and to whom the child talked to. Qualitative data, based on systematic observation form were used also to detect indicators of attachment behaviors since no quantitative measures of attachment could be used. Strange situation paradigm which is the most common method for the measurement of attachment cannot be applied in the present study because of the environmental factors of the institutions. A laboratory environment is

needed in order to apply Strange Situation Paradigm. As well as the problem of the context, videotaping (which is crucial for analyzing the Strange Situation Paradigm) was not allowed by the Social Services and Child Protection Foundation. Without recording the behaviors of the children, analyses could not be made.

In the present study, for analyzing the data both quantitative and qualitative methods were used. First of all, results of Ankara Developmental Screening Inventory were a base to compare the differences between the two groups (Bahcelievler vs. other institutions). Also qualitative data will be used to have an understanding on the developmental process of the institutionalized children in a holistic manner. Yoshikawa, Weisner, Kalil & Way (2008) pointed out that with qualitative data each child is analyzed deeply as a person not as a group. In the present study, since quantitative and qualitative methods of analyses used, information based on the differences is analyzed both on a group level and on an individual level. In order to understand the big picture of development, time and context analyzed qualitatively as well was quantitatively.

3.4 Procedure

The researcher started to visit the institutions with the volunteers in November 2006. For the first three weeks, the researcher only made observations. After three weeks, the Ankara Developmental Screening Inventory was administered to the volunteers. Ankara Developmental

Screening Inventory was administered again after three months as a post test. The same procedure was applied in the institutions in Kocaeli and Bursa but for the control group Ankara Developmental Screening Inventory was administered to the caregivers. The observations of the researcher continued for three months during the pre and post test administration for each child approximately 60 minutes of observation were conducted.

After data collection, two types of comparisons were conducted. First, a comparison between the groups (children residing in institution and have volunteers vs. children residing in institutions and not having volunteers) was conducted in order to understand whether being with volunteers created a difference in children's development. The second comparison was conducted within subjects (the development of each subject) by comparing the results of pre and post tests, in order to find out the developmental pattern of each subject over a period of three months.

Chapter 4

RESULTS

The main purpose of the present study was to investigate the impact of KUMYUP volunteering project on institutionalized children's socio-emotional, cognitive, language and motor development. In order to analyze the hypotheses, both quantitative and qualitative analyses were conducted. Thus, in the present study both systematic standardized quantitative measures and qualitative data based on systematic observations were gathered to understand the developmental trajectory of institutionalized children and the effects of the volunteering system on the development of institutionalized children.

4.1 Descriptive Findings

The descriptive statistics regarding the quantitative measures of the study are presented in Table 4.1.

The general impression obtained from the descriptive statistics is that the institutionalized children who did not have any interaction with volunteers (labeled as the control group) scored higher in all of the pre-test scores of Ankara Developmental Screening Inventory.

In order to understand whether the differences between the two groups were statistically meaningful, repeated measures analyses of variance (ANOVA) were conducted on each of the quantitative measures.

Table 4.1. Means and standard deviations of pre and post- test scores on Ankara Developmental Screening Inventory.

	Control (N=12)		**Intervention (N=16)**	
	Pre-test	**Post-test**	**Pre-test**	**Post-test**
General Development	103.42 (13.11)	107.17 (10.62)	82.12 (5.92)	94.56 (8.27)
Language Development	34.83 (6.49)	37.92 (6.36)	25.00 (3.01)	30.69 (3.36)
Fine-Motor Skills	17.33 (1.72)	16.83 (1.11)	13.88 (1.08)	16.13 (2.12)
Gross-Motor Skills	22.17 (1.53)	22.67 (.98)	19.69 (1.58)	21.69 (1.35)
Social Development	29.08 (3.89)	28.92 (3.42)	23.56 (2.03)	26.06 (2.89)

Note. Numbers in parentheses represent standard deviations.

4.2 Quantitative Data

Repeated measures analysis of variance on the measures of Ankara Developmental Screening Inventory's pre and post-test scores were conducted for different institutions. Age was used as a co-variant to eliminate the effect of age on the differences. Five different ANOVAs were conducted in order to compare the differences in the scores of general development, language development, gross motor development, fine motor development and social development. Age was not found to have any significant effects on any of the scores. Also, in order to analyze the effect size, Cohen's *d* was calculated for all the significant results. In addition to all of these analyses, Scheffe test, was used to determine those means which differed statistically from each other.

4.2.1 General development

The results of the ANOVA for general development revealed that there is a significant interaction effect between having a volunteer or not having one and the difference between the pre and post-test scores of general development (F (1, 25) = 6.73, $p < .05$, $MSE=33.17$).

Table 4.2 Analysis of variance between institutions, age for general development

Source	Mean Square	F	P
Pre-Test- Post-Test	2.40	.07	.79
Age	5.98	.18	.67
Group	593.69	16.74*	.00
Pre-Test- Post-Test/ Group	223.06	6.73*	.01

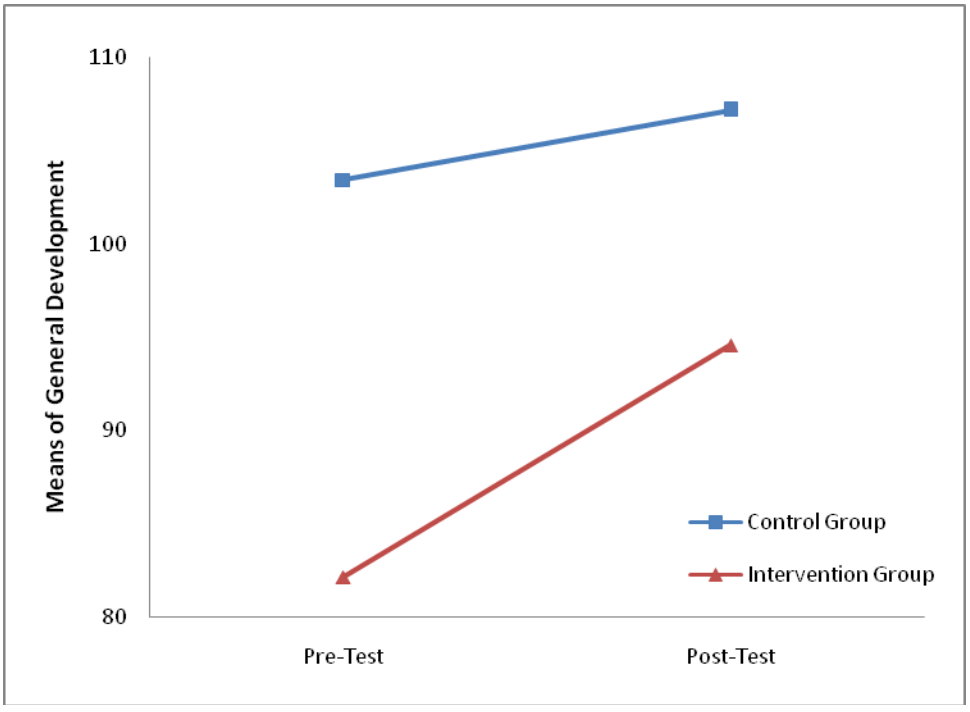
Note. * $p < .05$, $df_{error} = 25$.

In order to analyze the effect size, Cohen's *d* was calculated. For general development of the intervention group, Cohen's *d* was found to be 1.79, which constitutes a huge effect size. On the other hand, for general development of the control group, Cohen's *d* was found to be 0.33, which constitutes a small effect size.

Scheffe test was used to identify which groups' means have a significant difference. According to the Scheffe test, the critical difference was found to be 11.75. After calculating the critical difference, the differences between the various means were calculated. When the differences between the means were compared with the critical difference, it was found that the

difference between pre-tests of the control and the intervention group is larger than the critical difference. This means that the pre-test scores of the two groups are significantly different (see, Table 4.2). It was also found that the difference between the post-tests of the control and intervention groups is larger than the critical difference. Thus, the post-test scores of the two groups are significantly different. The difference between the pre and post test scores of the control group is not significant, whereas the difference between the pre and post test scores of the intervention group is statistically different. The differences between the pre and post-test scores are shown in Figure 4.1.

Figure 4.1. The graph of the means of pre and post scores of General Development



To sum up, it could be concluded that the children in other institutions scored significantly higher both in pre and post-test for general development but the children in Bahcelievler Institution had a greater improvement in their general development (see Table 4.2 and Figure 4.1).

4.2.2 Language development

The results of the ANOVA statistics for language development revealed that there is a significant difference between the language scores of intervention and control groups ($F(1,25) = 14.21$, $p < .05$, $MSE = 11.67$). Both pre and post-test scores of the control group were higher than the pre and post-test scores of the intervention group (see Table 4.1). When the pre and post-test scores of the two groups were compared, there was no significant interaction between having a volunteer or not having one and the difference between pre and post-test scores ($F(1, 25) = 2.00$, $p > .05$, $MSE = 9.36$).

Table 4.3 Analysis of variance between institutions, age for language development

Source	Mean Square	F	P
Pre-Test- Post-Test	2.92	.31	.58
Age	.20	.02	.86
Group	165. 86	14.21*	.00
Pre-Test- Post-Test/ Group	18.71	2.00	.17

Note. $df_{error} = 25$.

4.2.3 Fine motor development

ANOVA statistics were conducted for fine motor development. According to the results, there is a significant interaction effect between having a volunteer or not having one and the difference between the pre and post-test scores of fine motor development (F (1, 25) = 11.69, $p < .05$, $MSE=2.51$). Cohen's d was employed to calculate the effect size. For fine motor development of the intervention group, Cohen's d was found to be 1.38, which constitutes a very large effect size. On the other hand, for fine motor development of the control group, Cohen's d was found to be 0.36, which constitutes a small effect size.

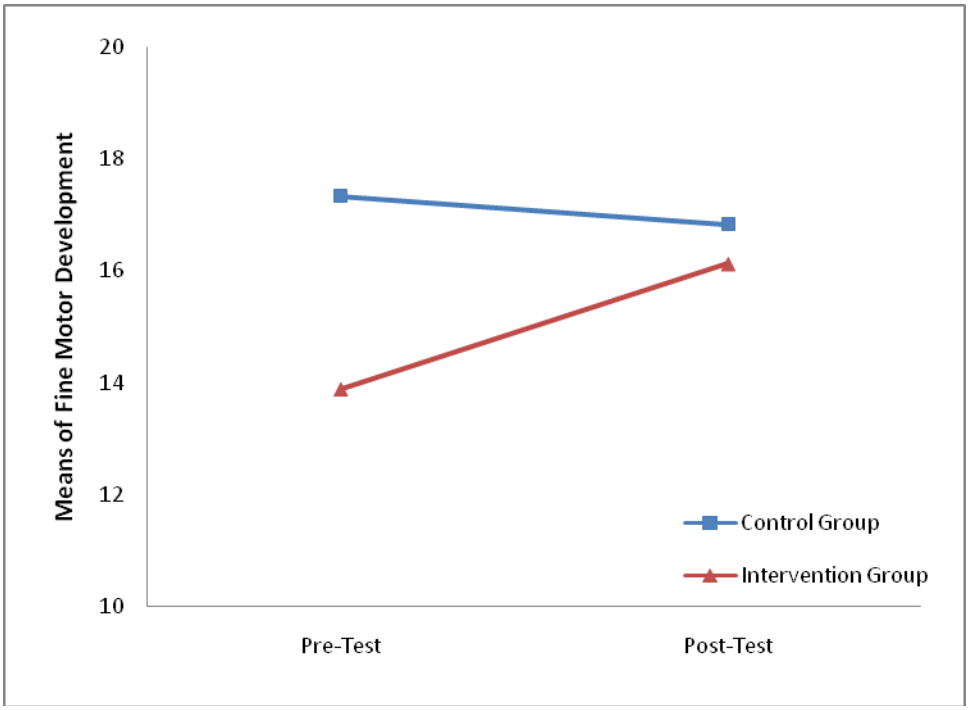
Table 4.4 Analysis of variance between institutions, age and fine motor development

Source	Mean Square	F	P
Pre-Test- Post-Test	2.63	1.05	.32
Age	4.29	1.71	.20
Group	16.09	9.56*	.01
Pre-Test- Post-Test/ Group	29.32	11.69*	.00

Note. * $p < .05$, $df_{error} = 25$.

In order to understand in which groups there was a significant difference over time, Scheffe test was used. It was found that, the critical difference is 4.26. When the differences were compared with the critical difference, none of the differences were found to be significant. The reason for this inconsistency may be that the Scheffe test is more conservative than the F test. It is important to state that the mean of pre-test scores for fine motor skills of children with volunteers is lower than the children in other institutions but the means of post test scores for the two groups are approximately equal. It could be proposed that the children who had volunteers have caught up with the fine-motor development of the children who did not have volunteers.

Figure 4.2. The graph of the means of pre and post scores of Fine Motor Development



4.2.4 Gross motor development

The results of ANOVA statistics conducted for gross-motor development revealed that there is a statistically significant difference between pre and post test scores of Gross Motor development (F (1, 25) = 5.49, $p < .05$, $MSE=.705$).

Table 4.5 Analysis of variance between institutions, age and gross motor development

Source	Mean Square	F	P
Pre-Test- Post-Test	3.87	5.49*	.03
Age	1.87	2.64	.12
Group	4.30	2.58	.12
Pre-Test- Post-Test/ Group	2.66	3.77	.06

Note. * p‹ .05, $df_{error} = 25$.

In order to analyze the effect size, Cohen's *d* was calculated. For gross motor development of the intervention group, Cohen's *d* was found to be 3.51, which constitutes a huge effect size, whereas for the control group, Cohen's *d* was found to be 0.41, which constitutes a medium effect size.

For both intervention and control groups the post test scores are higher than pre test scores. No interaction effect of having a volunteer and difference between pre and post test scores was found but it should be pointed out that the p value is near the significance level.

4.2.5 Social development

According to the results of the ANOVA statistics for social development, there is a significant interaction effect of having a volunteer or not and the difference between the pre and post scores (F (1, 25) = 8.43, $p < .05$, *MSE=3.04*).

Table 4.6 Analysis of variance between institutions, age and social development

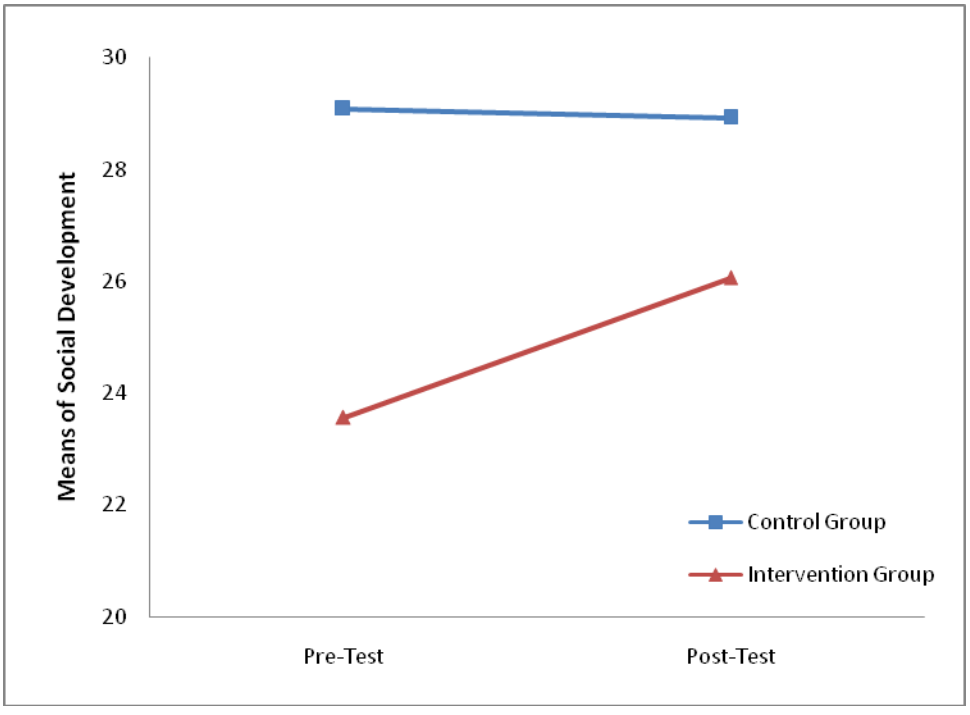
Source	Mean Square	F	P
Pre-Test- Post-Test	1.15	.38	.54
Age	2.75	.91	.35
Group	15.20	3.82	.06
Pre-Test- Post-Test/ Group	25.67	8.43*	.01

Note. * p‹ .05, $df_{error} = 25$.

For social development of the intervention group, Cohen's *d* was found to be 1.03, which constitutes a large effect size, whereas for the control group, Cohen's *d* was found to be 0.01, which is a negligible effect size.

In order to understand in which group there was a significant difference, Scheffe test was used. The critical difference is 3.98. When the differences between the means are compared with the critical difference, it was found that the only statistical difference was between the pre-test scores of the intervention and control group. While the pre-test scores between the two groups differed, the post-test scores did not significantly differ, which means that the children who worked with a volunteer caught up with the other institutionalized children's social development. The relationship between the means of pre and post test scores may be examined by Figure 4.2.

Figure 4.3. The graph of the means of pre and post scores of social development



4.2.6 Findings based on standardized t-scores of general development

Raw scores were used in order to make comparisons between the intervention and the control group and to compare the pre and post test scores of each child. For general development, t-scores were used to compare the development of the child with general population (Erol, Sezgin & Savasir 1993). Thus, the raw scores of general development were converted to t-scores by the measure used by Erol, Sezgin and Savasir (1993). Some of the t-scores were calculated by using extrapolation. According to the results of the ANOVA statistics for the t-test scores of general development, there is no significant interaction effect of having a volunteer or not and the difference between the pre and post scores (F (1, 25) = 2.79, $p > .05$, $MSE=32.60$).

4.2.7 The association between duration of institutionalization and development

The association between the duration of institutionalization and children's development was analyzed using correlations. Different correlations were conducted to understand whether different areas of development had a relationship with duration of institutionalization. None of the correlations were significant but the relationships were all in the expected direction showing that

there may be a relationship between duration and developmental delays (see Table 4.7). It was expected that as the duration of institutionalization increases there would be an increase in the developmental delays. One reason for not finding significant relationship may be the small sample size (see Appendix 3 for table of correlations).

4.3 Qualitative Results

In the next part, qualitative results based on observations are discussed. With the qualitative data, the findings of the quantitative methods are enriched and qualitative data will bring the findings closer to the complexity of the developmental change (Yoshikawa, Weisner, Kalil & Way, 2008). More detailed observation notes are available in Appendix 4.

Forming Attachment Relationships

Bowlby (in 1969, as cited in Frank et al. 1996) pointed out that since children in institutions experience social deprivation and lack interpersonal relationships, they may not form attachment to a caregiver. Children in institutions also experience inadequate living conditions, maltreatment and neglect which has negative effects on development of attachment (Albus & Dozier, 1999).

If children are securely attached to their caregivers, they use their caregivers as a "secure base" to explore the world (O'Connor et al., 2003). In order to reduce the level of anxiety, and fear during exploration, children try to maintain the close relationship with the primary care-giver (O'Connor et al. 2003).

In the following paragraphs, observations about the attachment relationship of the children residing in the institutions are described.

Seyhan (21 months old, female, Bahcelievler Children's Home)

When KUMYUP volunteers first visited the institution, Seyhan was constantly crying and shouting. She threw herself and banged her head to the floor. She didn't allow the volunteer to approach her. For a few visits, this situation continued. After these first visits, the volunteer understood that Seyhan needed some intimacy. Since that time, the volunteer only held her in her arms and hugged her for 3 or 4 visits. They preferred quiet places and stayed still without talking or playing. After not seeing each other for a month, when the volunteer came back, Seyhan was happy to see her. She smiled at the volunteer and hugged her. They started playing together. But after a while she started to cry. This time, she soothed herself by sucking her finger and it

didn't take as much time to soothe her as before. In March, she slept in her volunteer's arms twice.

As Seyhan and her volunteer spent time together, Seyhan started to have less temper tantrums. She was easily soothed and started to relate to other children and caregivers. Also, as mentioned before, Seyhan fell asleep a few times in her volunteer's arms, this shows that Seyhan trusts her volunteer and uses her as a secure base.

Aysu (22 months, female, Bahcelievler Children's Home)

In the second term, when the volunteer visited Aysu again after a long time, she was very happy to see her again. She hugged her and kissed her and held her hand for the whole day. One day, Aysu was walking with many toys in her hand. She did not play with the toys but she did not want to share the toys with other children either. When the researcher (who is a stranger to her) took one of the toys from her hand, she dropped the rest of the toys and ran to her volunteer's arms with an angry and sad manner.

This may be an indicator of the trust relationship that Aysu had with her volunteer. First of all, Aysu was not angry with her volunteer when the volunteer returned after a holiday break. She could be easily soothed by the

caregiver when she was sad and angry. Also, Aysu used her volunteer as a secure base when a stranger (the researcher) approached her and took one of her toys.

Zeynep (19 months, female, Bahcelievler Children's Home)

...her volunteer was ill for a long time and could not come to visit her. After a long time, when Zeynep saw her volunteer, she smiled and showed her hand to the volunteer. Her volunteer mentioned that she used to put stickers in Zeynep's hand and added that Zeynep showed her hand because she remembered that routine of theirs.

Zeynep and her volunteer shared a special type of greeting. Zeynep remembered their special greeting even after a long time. Even though her volunteer did not come for a long time, Zeynep was happy to see her and wasn't angry with the volunteer as if Zeynep knew her volunteer would come for her. All of these are indicators of the special relationship that they shared.

Mertcan (18 months, male, Bahcelievler Children's Home)

His volunteer was the volunteer of another child who was sent to Sevgi Evleri (home like institution). The volunteer told that she and Mertcan were not getting along very well and compared Mertcan with the previous child…

He always wanted to be held. He started to cry when the volunteer did not hold him. If the volunteer did not hold him, he approached to strangers to hold him up.

At the end of the term, his relationship with the volunteer improved. Mertcan started to run to her when she called him. He also started to play more with his volunteer and hugged her after the games.

For one visit his volunteer could not come, she phoned to another volunteer and talked with him on the phone, Mertcan was very happy to hear her voice.

The attachment relationship between Mertcan and his volunteer improved as they spent more time together. Mertcan was happy to even hear her voice. Before, they could not play or relate very much but their relationship changed as time passed. They also started to have special games that they played together.

The effects of separation on development

The children in institutions experience abandonment by the parent(s) which may be traumatic, the children in institutions demonstrate attachment related problems such as atypical patterns of behavior during separation and re-union and atypical forms of insecure attachment when compared with home-reared children (O'Connor et al. 2003). One reason for the attachment problems may be the traumatic separation from the primary caregiver. Also, another major cause of the developmental delays that institutionalized children have appears to be the lack of a warm relationship with a single caregiver (Giese & Dawes, 1999).

In the next part, observations about the effects of separation on children's development are described.

Rabia (24 months old, female, Bahcelievler Children's Home)

Rabia had a good relation with her volunteer. Her volunteer mentioned that they had a special tickling game that they played together in each visit. When Rabia saw her volunteer, she smiled at him. If the volunteer did not come to visit her, she was sad. At the last week of the first term, her family took Rabia back. The caregivers mentioned that the family took her for the

third time that year. During the first two weeks of the second term, she stayed with her family. In the mean time, her volunteer was paired with another child in another group. After two weeks, the family took her back to the institution again.

When she saw her volunteer she smiled, but after a while she started crying even when she was with her volunteer. It could be observed that she was developmentally regressed. She did not eat on her own as she used to do and she didn't play with other children or her volunteer. She also did not play the tickling game with her volunteer. She did not smile for a long time even when she saw her volunteer.

As mentioned above, Rabia experienced several separations from her family. Separations from the primary caregiver in such a manner are traumatic for every child. As observed in Rabia's situation, these separations affected Rabia emotionally and for a while she developmentally regressed. After Rabia turned back to the institution, she emotionally had hard time. She cried frequently and the volunteer mentioned that he could not soothe her easily as before. She lost interest in their plays. All of these may be examples of the effects of separation on children.

Nilay (30 months, female, Bahcelievler Children's Home)

Nilay arrived at the institution in the second month of data collection. The caregivers told that she used to stay with her parents before coming to the institution. In the beginning, she was a happy child. Unlike other children in her group, Nilay could talk in full sentences. Nilay and her volunteer had a good relationship at first but as time passed Nilay started to isolate herself from the volunteer, other children and the caregivers. She stopped walking, talking and sleeping. The caregivers mentioned that she only drank milk if they insisted and did not eat or drink anything else for all day long. She cried a lot. She only sat on a swing without moving and she slept on the swing when she was in the playground with other children. The caregivers told that she would be adopted soon because she was regressed from a developmental stand point.

The developmental regression that Nilay had and the emotional difficulties may be an example of the effects of separation from the primary caregiver.

Ebrar (22 months, female, Gazanfer Bilge Institution)

...In one of the visits, Ebrar's mother came to the institution so Ebrar would spend the time with her mother and her aunt. They brought her back in

an hour for lunch. After she turned back, she seemed unhappy, isolated herself from others and became silent. She looked out of the window and did not want to eat. The caregivers mentioned that her mother did not visit her frequently. That day Ebrar did not recognize her mother and the caregivers mentioned that her mother was frustrated because of this reason.

Ebrar's mother did not visit her in a routine manner. Ebrar did not recognize her and she was not happy after she met with her. Her emotional state after meeting her mother shows that separation and inconsistent/ infrequent visits have emotionally negative effects on children.

Negative Effects of the Prior Home Environment and Positive Effects of the Institutions

Servet (17 months, male, Yahya Kaptan Institution)

Servet was brought to the institution four months before the observation. The caregiver mentioned that he developed rapidly since he was in the institution.

... His motor development was delayed; he had a balance problem and he could not run. He also did not talk. He did not have any words. When the

caregiver did not understand him, he started to cry and shout. At the last two weeks of the observation, he started to babble.

...The caregiver also mentioned that his mother was mentally retarded and could not take care of the children. The children had flea and they were very thin. She visited them in the institution with their father but they started to argue with each other and went away without spending time with their children.

... after two months, it was observed that his motor development was better(he started to run and walk backwards), he had a better balance, he could turn pages.

Servet's developmental problems can be a good example of the negative effects of the poor family conditions prior to institutionalization. Servet also had an older brother who was mentally retarded and an older sister who had developmental problems. The role of genetics and environment on their development was quiet visible. The institution's environment and the behaviors of the caregivers in the institution had positive effects on the development of Servet and his siblings since the institution environment is more stimulating than these siblings' home environment. It could be observed that Servet had a rapid development after he was institutionalized.

Aleyna (23 months, female, Yahya Kaptan Institution)

Aleyna was the favorite child of the caregivers due to her physical appearance and good manners. The caregivers mentioned that she was very intelligent and had good manners. They liked to hug her and kiss her. She liked to hug and kiss the caregivers too. The caregivers mentioned that their (Aleyna and her sisters) mother left the children unattended when she was at work. The home environment was not appropriate for their development. They added that Aleyna was very uncomfortable when she was first brought to the institution and did not adapt to the institution easily. The caregivers also told that sometimes her mother visited them but it was not in a routine manner.

Aleyna had a hard time to adapt to the institutional environment at first but being the favorite child and getting the special attention of the caregivers positively affected her development. It could be observed that she was happy to get the special attention of the caregivers.

Indiscriminate Friendliness

As described before indiscriminate friendliness is defined as not being able to form selective attachment to a single caregiver (Zeanah et al., 2005).

Some of the common behaviors of children who are diagnosed with indiscriminate friendliness are; being over friendly and approaching strangers without any distress or even when they are stressed they do not seek the attention of their caregiver (Albus & Dozier, 1999; O'Conner et al., 2003). The children in institutions are observed to be indiscriminately friendly with everyone (Roy et al., 2004).

In all of the institutions except the institution in Bursa, children were overly friendly to the strangers. When the children saw the strangers (the volunteers or the researcher) visiting them, they tried to hug them, talk to them and get their attention. Only the children in the institution in Bursa did not approach to the strangers. One of the reasons of this difference may be about the attention and care that they get in their institution. Both the environment and the quality of the care differed in Bursa.

Seyhan (21 months, female, Bahcelievler Children's Home)

In April, when Seyhan's volunteer did not come, a visitor was assigned to look after her. Seyhan was very friendly with the visitor (it is important to note that she had not seen the visitor before). She played with the visitor and spend the day with him without showing signs of stress.

This indicates that Seyhan did not discriminate strangers. Even though she had a good relation with her volunteer, when the volunteer was absent Seyhan was comfortable spending time with the stranger.

Mertcan (18 months, male, Bahcelievler Children's Home)

Mertcan played with everyone, he was happy to see his volunteer but he did not discriminate strangers, he approached strangers without any stress. He spent time with the visitors who are strangers to him without showing any signs of distress.

Mertcan's situation was similar to Seyhan's. Mertcan and her volunteer bonded to each other, but when the volunteer was absent, Mertcan was comfortable sending time with a stranger.

It is important to emphasize that except the children on Kaplikaya Institution in Bursa, all the children in the institutions came near the researcher and the volunteers that they had seen for the first time. Most of the children in Kaplikaya Institution discriminated strangers, looked at the stranger from a far place, and observed what the stranger was doing. After a few visits, the children in Kaplikaya Institution were more responsive to the researcher.

Disorganized Attachment Pattern

Disorganized attachment pattern is among the attachment problems that children in institutions demonstrate (Vorria et al., 2003). Disorganized attachment may be defined as inconsistent and unorganized behaviors or emotions observed during separation and re-union (Minde, 2003).

Gamze (28 months, female, Bahcelievler Children's Home)

...the next visit, Gamze rejected her volunteer. She cried and shouted when he came near her. When he was away, she stopped crying. It was a very hard experience for the volunteer. Gamze started to play with another volunteer. Her volunteer stayed away from her and observed her behaviors. When he approached her, she started to cry constantly. When she was eating her snack with the other volunteer, she started to behave normally with her own volunteer. After the snack, they started to play as if nothing happened before. This relationship pattern was experienced once or twice again.

The relationship pattern observed between Gamze and her volunteer may be an example of disorganized attachment type. At first, they had a very good relationship but Gamze was very disappointed that the volunteer left at the end of the day. Thus, the next visit she rejected her volunteer. As mentioned above, this pattern was common during the first few visits.

Language Development

One of the areas of development that is negatively affected by institutionalization is language development (Giese & Dawes, 1999). Both cognitive development and social development have a role in language development. It was found that as the social interaction increased between the child and the primary caregiver, early vocabulary growth increased (Windsor, Glaze, Koga & the Early Bucharest Intervention Project, 2007). According to the results of Hart and Risley's (2005, pp.191-221) study on children's early language development which was measured by vocabulary development, a positive association was found between language development and amount of input from adults. As mentioned before, the caregivers told that they were concerned with the physical needs of the children rather than emotional and social needs. They also mentioned that they could not spend enough time with the children because of the work load.

Arda (19 months, male, Bahcelievler Children's Home)

In the first term, Arda did not have any words. He did not babble. Also he did not have eye contact with the volunteer or the caregivers very much. The second term, he made more eye contact with his volunteer. He also

started to have words and two-worded sentences like 'kus var', 'kedi var', 'dut var'. The volunteer mentioned that she taught these words to him. She told that 'every time we were in the playing ground outside, I made him run after me at first. Then I started to show him birds, cats and cars and named them frequently. So after some time he started to use the word and I encouraged him'.

Gamze (28 months, female, Bahcelievler Children's Home)

Gamze tried to talk but her words were not accurate and could not be understood. At the last visit, she called the volunteer 'abi'. The volunteer was very happy to hear that and she smiled when she called him like that.

Gulcin (24 months, female, Bahcelievler Children's Home)

She did not talk in the first term but at the end of the second term, she started to say 'abla' to her volunteer.

Zeynep (19 months, female, Bahcelievler Children's Home)

... She also modeled her volunteer. She started to use some words the volunteer used such as 'yenisi', 'burada'. She also made sounds when she saw the birds.

These are all examples that children learned words from the volunteers since the volunteers labeled objects and talked with the children frequently.

Emirhan (24 months, male, Gazenfer Bilge Institution)

Emirhan had a brother residing in the same home with him. His brother was older than him and both brothers' speech could not be understood.

Emirhan's case can be an example of how both genetics and environmental situation is crucial for the formation of language. The children who resided in the same room with Emirhan and mostly spent time with him did not talk either.

Emre Ali (27 months, male, Kaplikaya Institution)

Emre Ali has an older brother who resided in the same institution, but his brother was in a different group. Emre Ali's language was not very accurate. He pointed at the objects when his language was not understood. He knew the name of his body parts. He showed the right parts when the caregiver asked him.

As mentioned before, the caregivers were more attentive in Kaplikaya Institution compared with the other institutions. Also, a pre-school teacher worked with some of the children from that age group. Although Emre Ali's language was not very accurate, he was one of the children who had the most number of words in the sample of the present study.

Chapter 5

DISCUSSION

The main purpose of the present study was to investigate the influences of a volunteering system on institutionalized children's development. Institutional care has negative effects on children's cognitive, behavioral, emotional, social and physical development (Browne, Hamilton-Giachritsis, Johnson & Ostergen, 2006; Ellis, Fisher & Zaharie, 2004; Giese & Dawes, 1999; MacLean; 2003; O'Connor, Marvin, Rutter, Britner & the English and Romanian Adoptees Study Team, 2003; Rutter & the English and Romanian Adoptees (ERA) Study Team, 1998; Vorria et al., 2003; Zeanah, Smyke, Koga & Carlson, 2005).

In the present study, the development of children was examined in terms of language development, gross-motor development, fine-motor development and social development. Children's attachment behaviors were also observed to understand the attachment patterns, which constitute a part of socio-emotional development. In the last part of this section, the limitations of the study as well as future directions and some recommendations based on the findings are included.

5.1 Discussion of the Findings

The present study predicted that children in Bahcelievler Institution would have lower pre-test scores when compared with the children in other institutions. The main reason behind this difference is greater environmental deprivation that children in Bahcelievler Institution experienced. According to Bronfenbrenner's theory, child development is affected by the environment. Bronfenbrenner (1979) defined the ecology of human development as the dynamic interactions between active, developing and complex bio-psychological organisms and the alterations in the environment the individual encounters with. Also, the findings of neurobiological studies point out the importance of early deprivation on early development (Mustard, 2003; Nachmias, Gunnar, Mangelsdorf, Parrtiz & Buss, 1998; Siegel, 1999, pp.1-22). The results of the present study indicate that children in Bahcelievler Institution have significantly lower pre-test scores than the children in other institutions in all areas of development. These results confirm the first hypothesis. The result of the present study about the effects of early stimulation on early development is similar to the findings of neurobiological studies. In Bahcelievler Institution, the environmental stimulation and socio-emotional stimulation are observed to be lower than the environmental and socio-emotional stimulation in the other institutions. Similar to the findings of the present study, the results of different studies demonstrated the crucial

negative effect of institutionalization on children's development (Sparling, Dragomir, Ramey & Florescu, 2005; Walker et al., 2007).

The second hypothesis of the present study was based on attachment theory. It was expected that institutionalized children would have problems in attachment during the first few weeks of the observation. It was first predicted that institutionalized children would display indiscriminant friendliness such that these children would approach strangers without any distress. Children with consistent caregivers discriminate between strangers and caregivers, and the children's level of distress increases when the caregiver is not in the room or when a stranger approaches (Muhamedrahimov, Palmov, Nikiforova, Groark & MCCall, 2005). The results of a study conducted by Zeanah et al. (2005) indicated that institutionalized children were unable to form selective attachments to their child-care providers.

In line with Zeanah et al.'s (2005) study, it was observed that most of the institutionalized children had problems in forming selective attachments. It was observed that the children in all of the institutions except Kaplikaya Institution did not discriminate strangers. When a stranger came to visit them, the children tried to attract attention, climbed up to the stranger's lap and tried to hug the stranger. In Bahcelievler Institution, when the volunteers visited the institution for the first time, some of the children who could not be paired with

a volunteer started to cry, shout and have temper tantrums. Others started to display stereotypic behaviors such as banging their heads, and swinging. It was observed that the children in institutions other than the Kaplikaya Institution did not discriminate strangers and were even overfriendly with the strangers. As mentioned in the previous section, Kaplikaya Institution had both physically and socio-emotionally stimulating environment. There were different toys in the environment and the children could play with the toys whenever they wanted. There was a preschool like room, in which the children who could not be sent to a preschool were educated by a preschool teacher. Moreover, the child to caregiver ratio was not high; the caregivers were well educated and they were very interested in children's physical and socio-emotional development. All of these factors appeared to have positive effects on the development of attachment.

The second part of the second hypothesis was about disorganized attachment pattern. It was expected that the institutionalized children would display disorganized attachment during unification and separation with the volunteers during the first few weeks of observation. After the first visit, some of the children in Bahcelievler Institution cried a lot when it was time for the volunteers to leave the institution. The caregivers tried to soothe them but some of the children could not be soothed for a long time. When the volunteers visited again the following week, some of the children acted as if

they did not know the volunteers. They started to cry when they saw their volunteer, approached the caregivers when the volunteers approached. Even after some of them started to spend time with the volunteers, they cried a lot when it was time for the volunteers to leave. These types of inconsistent behaviors during separation and unification indicated that the children in institutions may have disorganized attachment pattern.

A positive association was expected between the duration of institutionalization and the developmental delays of children. In order to analyze the association between the duration of institutionalization and developmental delays, correlations were run. In the present study, correlations between duration of institutionalization and developmental delays were not significant but the relationship between the two variables was as expected. With the results of the present study, the hypothesis about the relationship between the duration of institutionalization and the developmental delays cannot be confirmed. The results of the present study about the association between the duration of institutionalization and developmental delays were not consistent with the previous studies in literature. Fisher et al. (1997) studied the relationship between duration of institutionalization and institutionalized children's development. They found a positive correlation between duration of institutionalization and stereotyped behavioral problems, emotional disorders such as depression, post traumatic stress disorder, dysthymic disorder, and

generalized anxiety disorder. On the other hand, Kaler and Freeman (1994) stated that age at abandonment, birth-weight, genetic, environmental and temperamental factors were important for the development of attachment in institutionalized children rather than the duration of institutionalization. Small sample size of the present study may be a reason for the insignificant results of the present study and the inconsistency between the present study and the previous studies.

According to the fourth hypothesis, when compared with the pre-test scores, institutionalized children who have a KUMYUP volunteer for a project term would have a significant increase in their development in the post-test scores however their development would still be below the children residing in the other institutions with more favorable environmental conditions. The development of the institutionalized children was assessed by Ankara Developmental Screening Inventory. As mentioned before, in Ankara Developmental Screening Inventory development of children consists of language development, fine motor skills, gross motor skills and social skills development.

For general development, significant differences between the pre-test scores of the children in Bahcelievler institution and the children in other institutions were found (see Table 4.1, and Table 4.2). When the pre-post

differences within subjects were analyzed, it was further found that the difference between the pre and post test scores of the children in Bahcelievler institutions is significantly higher than the ones in the other institutions. It could be stated that there is positive effect of one to one relationship with a volunteer on institutionalized children's general development. It was also found that the difference between the post tests of the two groups is significant. Although the children in Bahcelievler institution had a greater degree of development after working with volunteers, their general developmental score is still significantly lower than the children in the other more favorable institutions. On the other hand, when the t-test scores of general development were compared no statistically significant differences were found. One reason for this inconsistency between the results of raw scores and t-scores might be about extrapolation. As mentioned before, some of the t-scores for general development were calculated by using extrapolation for this reason the results of the t-scores might not be very reliable.

The results for language development are different than the general development. According to the results of the present study, there is no significant effect of volunteering on language development since the difference between the pre and post language scores of children residing in Bahcelievler Institution and have a volunteer for a project term were not significantly different. Both pre and post test scores of the children in the other institutions

are significantly higher than the children in Bahcelievler Institution (see Table 4.3).

Similar results were found for gross motor skills development. The pre and post test scores of children in Bahcelievler Institution are significantly lower than the pre and post test scores of children in other institutions. The findings also show that there is no significant effect of volunteering on gross motor skills development (see Table 4.4). However no significant effect of volunteering on gross motor development was found, the observations of the researcher were not consistent with this finding. Since the children started going to the playing ground with the volunteers, their motor skills development were observed to improve. The children became more balanced, they started to run, climb up and down the stairs. Also, the first time they went out with the volunteers, some children were very distressed; they started to cry and hold the volunteer's hand stronger. After a few times, the children became excited and happy to be playing outside in the playing ground.

According to the results for fine motor skills development the differences between the pre and post test scores and the differences between the institutions are not significant. Nevertheless, an important finding on fine motor skills development is that while in pre-test scores the mean of the scores of the children in Bahcelievler institution is lower than the ones in other

institutions, in the post-test scores the mean scores of the two groups are approximately equal. Thus it could be stated that working with a volunteer may have some positive effects on fine motor skills.

The results for social development indicate that the pre and post test scores of the two groups are significantly different. The children in Bahcelievler Institution had significantly lower scores during the pre test scores of social skills development when compared with the children in other institutions. In the post test scores, the means of the two groups did not differ significantly. The social skills development post-test scores are approximately equal. For social skills development, the children with volunteers caught up with the children in other institutions.

From all of these results, it could be concluded that the children in Bahcelievler Institution working with volunteers had a greater improvement in their general development and social skills development. While the pre and post test scores of language, fine motor skills and gross motor skills development were not significantly different in the two groups, the relationships were as expected. The results of the present study are compatible with previous studies about the effects of interventions, based on early stimulation, on institutionalized children's development (Saltz, 1973; Sparling, Dragomir, Ramey & Florescu, 2005; Walker et al., 2007). Saltzt (1973)

reported that the Foster Grandparent Volunteer Program had positive effects on institutionalized children's cognitive, social development.

It was expected that as a result of contact with the volunteers, the institutionalized children would exhibit signs of organized attachment. The children knew that the volunteers would come back. A relationship based on trust was observed to be established between the children and volunteers during the last few visits of the observation. The children started to demonstrate happiness when the volunteers came in the morning and started soothing themselves and even waved goodbye during separation.

It was also hypothesized that as a result of the contact with volunteers; the institutionalized children would start discriminating the strangers. When the children formed a relationship with their volunteers, they started to use them as a secure base. When a stranger approached them, some children started to hug their volunteer or run away from the stranger. However, the children discriminated strangers when their volunteers were around. When the volunteers were not around, the children approached the strangers and started playing with them.

Some further findings of the observations are discussed below: while, the results of the differences of pre and post test language scores of Ankara

Developmental Screening Inventory were not significant, it was observed that some of the children who had volunteers started to have more words. It was indeed observed that the volunteers taught the children different words such as bird, car etc.

The stereotypic repetitive behaviors of the children such as banging heads diminished as children formed attachment relationships with their volunteers.

It was observed that even though the caregivers did not have stimulating relationships with the children; the children were not very interested in having relationships with each other either. It was expected that since children could not get stimulation from the caregivers, they would be relating to each other in order to compensate for that. Indeed the volunteers visit to the institution, the children started playing with each other. It was observed that the volunteers tried to play in groups so that children would start recognizing each other. With the assistance of the volunteers, the children started playing together and know each other's names. Some children started becoming friends, called her/his friend and invited each other to play games, held hands, and became happy when the friend was around. The behavior of adults guiding children to achieve their highest level of potential development is called scaffolding (Vygotsky, 1978, pp.84-91). The volunteers provided

scaffolding to the children to communicate with each other so that their level of socio-emotional stimulation by showing interest in each other increased.

5.2 Methodological Considerations

5.2.1 Limitations of the Study

One of the limitations of the present study is the sample size. The sample size of the study is small, which constitutes a problem for making generalizations. One of the reasons for the small sample size was the limited number of KUMYUP volunteers. There were 60 volunteers of KUMYUP, yet some of the volunteers were the volunteers of an older age group. Also, some of the volunteers and institutionalized children were pairs in a prior term of KUMYUP. As mentioned before, the sample size was more at the first weeks of the term, then some of the children were sent to Sevgi Evleri, and two children were adopted. The size of the control group in the present study is even less. The other institutions which constitute the control group had less institutionalized children.

Another limitation is based on the design of the study. When the study was planned, it was decided that the observations of the children and

volunteers would also be video-taped. In the protocol of KUMYUP project, camera recording was allowed. When the present study started, camera recording was not allowed by the director of Bahcelievler Institution. Although systematic observation was conducted by the researcher, some data may have been lost. This limitation may have had a negative effect on the reliability of the study.

Another limitation based on the design is also a result of the problems of the cooperation with Bahcelievler Institution. There was a hypothesis based on the relationship between physical development and socio-emotional and cognitive development of the institutionalized children. Data on children's physical development (height, weight, and head circumference) could not be obtained from the Bahcelievler Institution. Thus, that hypothesis was cancelled.

Another limitation of the study is about obtaining data from different informants. Ankara Developmental Screening Inventory was administered to the volunteers for the Bahcelievler Institution group, but the inventory was administered to the caregivers for the control group. One of the disadvantages of using different informants during data collection is about the reliability of the data. First of all, volunteers may not know the children that they worked with during the pre test since they only had 3 visits to the institution. It should

be pointed out that turnover ratio of the caregivers in Bahcelievler Institution was high. Thus, some of the caregivers of Bahcelievler Institution did not have information about the children and their development very well. Second, volunteers may be biased while answering the questions of the inventory in order to demonstrate that the children that had formed a relationship with them had a rapid increase in their development. It is important to point out that the caregivers were also observed to have an intention to increase the developmental scores of the children that they take care.

5.2.2 Future Directions

Some recommendations for related future studies can be made based on the two year field experience to improve the limitations of the present study.

First of all, videotaping and having more than one researcher conducting the observations are crucial for improving the reliability of the study.

Second, the environmental characteristics of the four institutions were different from each other. Prior to data collection, it was assumed that the institutions would have similar environmental factors but as the data collection started it was observed that environmental factors were visibly different. In

future studies, careful observations about environment and quality should be conducted before selecting the institutions.

Another important issue for improving the study is about analyzing the relationship between volunteers' empathic skills development, self concept, level of stress of the volunteer and children's development. The association between the relationship between the volunteer and the child and child's development should also be studied in future studies. The findings of Rietschlin's (1998) study, conducted on 850 people aged between 22-89 years of age, showed that there is a small but significant effect of volunteerism (that lasted for approximately a year) on reducing psychological stress. The results also demonstrated that volunteering activities are positively associated with self-esteem and social support.

Wilson and Musick (2000) stated that the effects of volunteering on mental health depend on the intensity of volunteering experience, the nature of volunteer work and the life-cycle stage that the volunteer is in. In future studies, relationship between volunteering and psychological development of the volunteers should be examined.

The positive effects of volunteering may also contribute to the positive effects on the development of institutionalized children. The association

between volunteers' psychological development and institutionalized children's socio-emotional, cognitive and language development should also be studied.

5.3 Recommendations based on the findings of the study

Despite the limitations, the study is an important initial field study and a 'natural experiment' about evaluation of the effects of KUMYUP volunteering project on the development of children in need of protection. This study constitutes an important social subject. The institutional system requires a change in policy and practice provided for children in need of protection. The results of the present study may be used as an evidence of the importance of a systematic volunteering system on institutionalized children's development. As stated before, research shows that early deprivation has negative effects on children development (Ellis, Fisher & Zaharie, 2004; Giese & Dawes, 1999; MacLean; 2003; O'Connor, Marvin, Rutter, Britner & the English and Romanian Adoptees Study Team, 2003; Rutter & the English and Romanian Adoptees (ERA) Study Team, 1998; Vorria et al., 2003; Zeanah, Smyke, Koga & Carlson, 2005). MacLean (2003) suggested that partial interventions that are less expensive and that may be used in more institutions should be implemented. KUMYUP project may be an important example for the partial interventions that could be implemented in institutions.

There may be some different policy recommendations based on the findings of the study.

- *Improvement in the system of the institutions- staff, environment*

Groark and McCall (2006) pointed out that children in institutions need to have few and consistent caregivers who are warm, sensitive and responsive. Also, they need to have a safe, clean environment, and proper nutrition. It was proposed that the staff in child-rearing institutions should be trained to be warm, sensitive, responsive and have a proper knowledge of children's development. Also, there should be changes in the structure of institutions such as stability and consistency of caregivers and having a stimulating environment (Groark & McCall, 2006). Research demonstrates that institutionalized children's socio-emotional, cognitive, motor and language development improved when the staff gets trained and changes in the structure are made (Groark & McCall, 2006). Sevgi Evleri and Children's Villages which have more stimulating and home like environments should be widespread.

Another system to improve the socio-emotional stimulation in institutions may be forming mother-child units. Mothers of children in need of protection may also need shelter thus mother-child units in the institutions should be created. With this system children may experience more socio-emotional

stimulation and one to one relationship with their primary caregiver (Browne, 2008).

- *Systematic Volunteerism should be widespread.*

The results of the present study point out the importance of a systematic volunteering system which is a partial intervention for institutionalized children's development. Training the caregivers and/or changing the structure of the institution may be a more holistic approach and might have more effects on institutionalized children's development but partial interventions such as systematic volunteering is more cost effective and can be spread easily. In order to spread the project, awareness of the problems of the institutions should be increased so that public support could be obtained. Also the public should be informed about the importance of the long term commitment of volunteering. The key issue about volunteering is being systematic. The children in need of protection and residing in the institutions experienced separation from their primary caregivers. In order not to create another traumatic separation experience, the volunteers should be fully dedicated to the program. The volunteers should be trained about the needs of the institutionalized children and supervisions should be conducted to understand the emotions of the volunteers. Also, the volunteering program should be carefully designed and implemented.

It should be pointed out that institutionalized children do not need clothing or money as much as sustained love and care from a consistent adult. By visiting children in the institutions, volunteers may create a positive change in children's sense of belongingness and feelings of being special for someone. By providing socio-emotional stimulation to the institutionalized children, volunteers may have positive effects on the development of these children.

It is also very important that there may be different volunteering projects which have different backgrounds. For instance, KUMYUP project was based on attachment theory and the project's aim was to create an opportunity for children to have a special bond with the volunteers. Other volunteering programs may have more educational background. The effects of different programs may be integrated to have a more holistic approach when intervening with the children.

5.3.1 Recommendations for KUMYUP based on the observations during the project

KUMYUP project was found to have significant effects especially on children's social development. The aim of the project was to create an opportunity of attachment for children residing in institutions.

Some recommendations can be made for the project can be made. First of all, the volunteers could be informed about the children that they have relation with. Rejection by the children could be experienced by the volunteers or the volunteers may have high and unrealistic expectations about the effects of themselves on the child. By all of these negative factors, the volunteers may get unmotivated. Knowing about the child's personal history (whether the child come from his/her home, whether the child had formed a relationship with a volunteer previously etc.) may help the volunteers to see the big picture of the child's life.

Second, although some toys were brought by the volunteers to the institution, it was observed that sometimes the toys were not used functionally. The volunteers should be informed about how to and when to use the toys. Also, as well as the toys, books, play-dohs, crayons could be brought to the institutions and all of those could be used more systematically by using a timeline chart. By this, there would be a system that integrates both educational and socio-emotional support for the children.

Finally, the volunteers share their feelings and ideas about the project at the end of the project term in a supervision meeting. It is important to record the ideas about the project of the volunteers and analyze them to use the results for improving the project.

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APPENDICES

APPENDIX 1

Table 3.1. Summary table for comparing the institutions that were observed in the present study.

Institution	City	Status in Study	Child-Caregiver Ratio	Training of the Caregivers	Environmental Stimulation	Children per Room
Bahcelievler Institution	Istanbul	Intervention group	20-25 children/2 caregivers	No formal training	No toys around, no pictures on the walls, outside playing ground	20-25
Gazanfer Bilge Institution	Kocaeli	Control group	4-5 children/1 caregiver	Training on child development	Toys changed frequently, a separate playing room, a separate teaching room, pictures on walls	4-5
Yahya Kaptan Institution	Kocaeli	Control group	10-15 children/2 caregivers	No formal training	A separate playing room, toys changed frequently, pictures of letters and numbers on the walls	4-5
Kaplikaya Institution	Bursa	Control group	10-15children/3 caregivers	Training on child development	Couple of separate paying rooms (each for a different age group), toys changed frequently, outside playing ground, pictures on walls, separate teaching room	4-5

APPENDIX 2

Systematic Observation Form

Institution Observation Protocol

Instructions for the Observer: The focus of each observation is the development of institutionalized children. Some different categories of development are made by the researcher in order to make the observation more systematic

Before the Observation

- It is important to become familiar with each part of the observation form and become familiar with the environment of the institutions prior to conducting the observations.

During the Observation

- It is important to have clear descriptions for each observation conducted, every indicator should be described and included in the observation form.

- It is important to have operational definitions.

After the Observation

- After each observation review your observation notes.

OBSERVATION FORM

BACKGROUND INFORMATION

Child Observed _____ Child's Age_____ Child's Sex_____

Setting _____ Date of Observation _____

Physical Characteristics

Height _____ Weight._____

SECTION ONE: MOTOR SKILLS

I. Gross-Motor Skills

12 months	18 months	24 months
□ Walk	□ Carry things w. hand	□ Run
□ Grasp	□ Kicks ball (hard)	□ Pedalling (3 wheels)
□ Grasp little things	□ Jumps (hard)	□ Jump
	□ Feeds him/herself	□ Balance

□ Undress

□ Throw things

□ Climb up stairs

□ Crawl into, around obj.

□ Carry, handle,pull, push

□ Put and take out things

□ Pour water

II. Fine Motor Abilities

Stacking blocks

Picking up Raisins

Put block in container, remove them

Response to Playdough

Stringing Beads

Scribbling w. crayon

Turning pages

Hand and leg preference

Indications of tool use

SECTION TWO: EMOTIONAL DEVELOPMENT

□ Self Regulation (Feel calm & Relaxed)

□ Interested in the world (hear, see, smell, taste, touch)

□ Selective interest in volunteer. (smile, joyful)

□ Responsive

□ Dialogue (smile in response to smile, reach for an object that volunteer holds, make sounds when talked to)

□ More complicated behavior (instead of pointing the toy, carry and bring)

Please provide your rationale:

II. Time Sampling of Attachment Behavior

	1	2	3	4	5	6	7	8	9	10
Makes physical Contact										
Smiles										
Show Obj.										
Move closer										
Visual Contact										
Neg. React. to Stra.										

SECTION THREE: Cognitive Development

I. Object Permanence

Dropping toy (bakıyor mu?)

Hiding toy while watches

Visible displacement of toy

Invisible displacement of toy

II. Language Development □ Anlaşılıyor □ Anlaşılmıyor

Konuşma (to whom, under what circumstances, reaction to the volunteer)

Kelimeler

APPENDIX 3

Table 4.7 Correlations between duration of institutionalization and the pre test scores of Ankara Developmental Screening Inventory

Subscale		Duration in months	Pre General	Pre Language	Pre Fine Motor	Pre Gross Motor	Pre Social
Duration in months	Pearson Correlation	1	-.322	-.300	-.280	-.375	-.299
	Sig. (2-tailed)	.	.109	.136	.165	.059	.137
Pre General	Pearson Correlation		1	.990(**)	.877(**)	.853(**)	.970(**)
	Sig. (2-tailed)		.	.000	.000	.000	.000
Pre Language	Pearson Correlation			1	.865(**)	.802(**)	.949(**)
	Sig. (2-tailed)			.	.000	.000	.000
Pre Fine Motor	Pearson Correlation				1	.640(**)	.784(**)
	Sig. (2-tailed)				.	.000	.000
Pre Gross Motor	Pearson Correlation					1	.827(**)
	Sig. (2-tailed)					.	.000
							28
Pre Social	Pearson Correlation						1
	Sig. (2-tailed)						.

Note: ** Correlation is significant at the 0.01 level (2-tailed).
Children(n=28)

APPENDIX 4

Qualitative Data

Nilay (30 months, female, Bahcelievler Institution)

Nilay arrived at the institution in the second month of data collection. The caregivers told that she used to stay with her parents before coming to the institution. In the beginning, she was a happy child. Unlike other children in her group, Nilay could talk in full sentences. Nilay and her volunteer had a good relationship at first but as time passed Nilay started to isolate herself from the volunteer, other children and the caregivers. She stopped walking, talking and sleeping. The caregivers mentioned that she only drank milk if they insisted and did not eat or drink anything else for all day long. She cried a lot. She only sat on a swing without moving and she slept on the swing when she was in the playground with other children. The caregivers told that she would be adopted soon because she was regressed from a developmental stand point.

Seyhan (21 months, female, Bahcelievler Institution)

When KUMYUP volunteers first visited the institution, Seyhan was constantly crying and shouting. She threw herself and banged her head to the floor. The volunteer that took care of Seyhan was an experienced one and that

was the main reason why this volunteer was assigned to take care of her. At first, another volunteer who didn't have such experience, wanted to be Seyhan's volunteer, but then she told the leader of the volunteers that she cannot stay with Seyhan since she cried and hurt herself constantly. She didn't allow the volunteer to approach her.

For a few visits, this situation continued. After these first visits, the volunteer understood that Seyhan needed some intimacy. Since that time, the volunteer only held her in her arms and hugged her. They preferred quiet places and stayed still without talking or playing.

In December, Seyhan's volunteer did not come for one time and when other volunteers came to the institution, Seyhan started looking for her volunteer in an anxious manner. Then, the researcher (who was a stranger for her) grabbed her; she smiled and hugged the researcher. She cried less but she still wanted to be hold in arms. When the researcher took her out to the playground she was frightened and wanted to go back in the room. She held the researcher's hand more tightly and wanted me to be hugged

.

After a month, when the volunteer came back from the break, Seyhan was happy to see her. She smiled at the volunteer and hugged her. They started playing together. But after a while she started to cry. This time, she

soothed herself by sucking her own finger and it didn't take as much time to soothe her as before.

Seyhan did not like to share the toys with other children. When other children approached to the toys, she started to shout and cry. She only played with her volunteer. In February, she saw one of the children from another room and she escaped from her.

In March, she slept in her volunteer's arms two times. In April, when Seyhan's volunteer did not come, a visitor was assigned to look after her. Seyhan was very friendly with the visitor (it is important to note that she had not seen the visitor before). She played with the visitor and spent the day with him without showing signs of stress.

Rabia (24 months, female, Bahcelieveler Institution)

Rabia had a good relation with her volunteer. Her volunteer mentioned that they had a special tickling game that they play together in each visit. When Rabia saw her volunteer, she smiled at him. If the volunteer did not come to visit her, she was sad.

At the last week of the first term, her family took Rabia back. The caregivers mentioned that the family took her for the third time that year.

During the first two weeks of the second term, she stayed with her family. In the mean time, her volunteer was paired with another child in another group. After two weeks, the family took her back to the institution again.

When she saw her volunteer she smiled, but after a while she started crying even when she was with her volunteer. It could be observed that she was developmentally regressed. She did not eat on her own as she used to do and she didn't play with other children or her volunteer. She also did not play the tickling game with her volunteer. She did not smile for a long time even when she saw her volunteer.

After a month, she started to eat on her own. She started playing with her volunteer and she was as happy as before. She started making noises and pointing at the things she wanted. She started kissing her volunteer. The volunteer also taught her to wave her hand. When her volunteer gave instructions, she did what she was asked to do. In April, her volunteer did not come for a visit. When she didn't see him, she started to swing and cry and she refused to play with a visitor whom she didn't see before. This may be an indicator of a selective relationship style.

In the beginning, she did not talk, but during the last two visits, she started to say 'no' and 'throw' which the volunteer used frequently in their games.

Gamze (28 months, female , Bahcelievler Institution)

The caregivers told that she was abandoned by her family and she experienced physical abuse by her parents.

During the first two weeks, she seemed very happy playing with her volunteer and other children. She liked to be hold by her volunteer. She did not talk, but made some noises. She tried to talk but her words (sit, come) were not very accurate. She imitated her volunteer and enjoyed doing that. When the volunteer brought her a toy car, she seemed very happy.

The next visit, Gamze rejected her volunteer. She cried and shouted when he came near her. When he was away, she stopped crying. It was a very hard experience for the volunteer. Gamze started to play with another volunteer. Her volunteer stayed away from her and observed her behaviors. When he approached her, she started to cry constantly. When she was eating her snack with the other volunteer, she started to behave normally with her own volunteer. After the snack, they started to play as if nothing happened before. This relationship pattern was experienced once or twice again.

In April, this pattern was not observed. She started to select friends. She preferred to play with Gorkem, another child that resided in the same house. When they were on the swingers in the park, they started to imitate each other. When her volunteer asked her to show Gorkem, she pointed him and smiled at him. They also held each others' hand. Gamze tried to talk but her words were not accurate and could not be understood. At the last visit, she called the volunteer 'abi'. The volunteer was very happy to hear that and she smiled when she called him like that.

Aysu (22 months, female, Bahcelievler Instiution)

Aysu and her volunteer had a very good relationship. Her volunteer had previous experience in this project. The volunteer understood Aysu's needs such as being hugged, kissed or played with. In the second term, when the volunteer visited Aysu again after a long time, she was very happy to see her again. She hugged her and kissed her and held her hand for the whole day. One day, Aysu was walking with many toys in her hand. She did not play with the toys but she did not want to share the toys with other children either. When the researcher (who is a stranger to her) took one of the toys from her hand, she dropped the rest of the toys and ran to her volunteer's arms with an angry and sad manner. In the time sampling observation of attachment behavior, there

was a great difference between the first and last observation. It could be understood that the relationship between Aysu and her volunteer improved as time passed.

In the second term, she started to climb up and down the stairs without help. She started to wear her own slippers. She also started toilet training. All of these indicate that her gross motor and self help skills developed.

She was not interested in pens and papers. When her volunteer told her she could do it, she started to use the pen. Also, in the first term, she only did one task out of four tasks that indicated object permanence. After 3 months, she was able to do all of the four tasks of object permanence.

Her linguistic skills did not improve as much as the other areas of development. She did not talk. She pointed at the objects of interest. She did not babble and have any words.

Arda (19 months, male, Bahcelievler Institution)

Arda was an overweighed child. He ate a lot and he did not move around very much. He could not run, or climb the stairs. After three months, he started to run chasing his volunteer, he could climb up and down the stairs

without help and his moves became in a normal pace. One reason of this change might be the games he played with his volunteer. His eating habits also improved in the second term. He started to use the spoon and ate on his own.

Arda cried a lot when volunteers left the house for the first three times. After the third time, he understood that left after they had lunch together and he started crying during lunch time and refused to eat his meal. The following week, he hugged the volunteer for a few minutes. For two weeks, his volunteer could not come to visit him and when she came back, he refused to play with her. He was angry with her. He did not stay with her and started hugging the caregivers in the institution. After she tried to play with him for half an hour, he forgave her and started to play with her.

Arda and his volunteer liked listening to music and dancing. He always showed his intention to listen to music from her i-pod or mobile phone. It was like a special play between him and his volunteer.

In the first term, no hand preference was observed. He was not interested in holding the pen or drawing. However, in the second term, he followed the researcher to take and draw with the pen. He also started to prefer his right hand for drawing. He knew how to open the cap and closed the cap of the pen.

In the first term, Arda did not have any words. He did not babble. Also he did not have eye contact with the volunteer or the caregivers very much. The second term, he made more eye contact with his volunteer. He also started to have words and two-worded sentences like ‘kus var’, ‘kedi var’, ‘dut var’. The volunteer mentioned that she taught these words to him. She told that ‘every time we were in the playing ground outside, I made him run after me at first. Then I started to show him birds, cats and cars and named them frequently. So after some time he started to use the word and I encouraged him’.

Gulcin (24 months, female, Bahcelievler Institution)

Gulcin and her volunteer had a good relationship. Gulcin did not make eye contacts very much but her volunteer was similar to her. Sometimes, they did not play together in the play ground but follow each other. They did not make eye contacts with each other very much. Her volunteer was not very responsive. Gulcin did not talk and she pointed at the objects. She also nodded her head to say ‘no’. When her volunteer swing her, Gulcin seemed very happy and started making eye contacts with the volunteer. She liked to swing a lot. Sometimes she slept while swinging. When the volunteer went away,

she looked for her to get permission. She had a selective interest in the volunteer. She smiled when she saw her volunteer.

At the end of the first term, Gulcin had an operation. Her volunteer was not informed about this. In the beginning of the second term, Gulcin had a balance problem and the caregivers told the volunteer that Gulcin had an operation and just came back from the hospital.

In the first term, Gulcin did not eat her lunch on her own, but she started to eat by herself after 3 months. Also, in the first term, she did not talk. By the end of the second term, she started to say 'abla' to her volunteer.

Mertcan (18 months, male, Bahcelievler Institution)

His volunteer was the volunteer of another child who was sent to Sevgi Evleri (home like institution). The volunteer told that she and Mertcan were not getting along very well and compared Mertcan with the previous child. Mertcan played with everyone. He was happy to see his volunteer, but he did not discriminate strangers.

He always wanted to be hold. He started to cry when the volunteer did not hold him. If the volunteer did not hold him, he approached to strangers to

hold him up. He put stuff like balls and pens in his mouth. In the first few weeks, he started crying during the lunch time when he understood that his volunteer would go away after lunch time. For once, his volunteer could not come. The volunteer called and talked with Mertcan. Mertcan seemed to be very happy to hear her voice.

He could not use the spoon for feeding himself. He ate with his hands. His gross motor development was delayed. He could not climb up or down the stairs; he also had a balance problem. He could not run.

At the end of the term, his relationship with the volunteer improved. Hhe started to run to her when she called him. He also started to play more with his volunteer and hugged her after the games.

Zeynep (19 months, female, Bahcelievler Institution)

Her volunteer told that especially in the second term of the project, Zeynep's development was improved rapidly. She learned waving when her volunteer was leaving. She started climbing up and down the stairs without help. She started to eat on her own. Her volunteer was ill for a long time and could not come to visit her. After a long time, when Zeynep saw her volunteer, she smiled and showed her hand to the volunteer. Her volunteer mentioned that she used to put stickers in Zeynep's hand and added that Zeynep showed her hand because she remembered that routine of theirs. She

also modeled her volunteer. She started to use some word the volunteer said such as ‘yenisi’, ‘burada’. She also made sounds when she saw the birds.

Servet (17 months, male, Yahya Kaptan Institution)

Servet was brought to the institution four months before the observation. The caregiver mentioned that he developed rapidly since he was in the institution.

Servet had a brother who was mentally retarded. Servet resided in the same house with his brother. His brother was not able to walk, he had developmental abnormalities and he was aggressive towards other children. Servet also had an older sister who resided at another house but frequently visited Servet and his brother. The caregivers also mentioned that his mother was also mentally retarded and could not take care of her children. The children were neglected; they were very thin, physically under developed and had flea. She visited her children with her husband, but they started to argue and left the institution without spending time with their children.

Servet’s motor development was delayed; he had a balance problem and he could not run. He also did not talk. He did not have any words. When the caregiver did not understand him, he started to cry and shout. He did not eat by himself. He was fed by the caregivers. After two months, it was

observed that his motor development was better (he started to run and walk backwards), he had a better balance, he could turn pages.

He modeled Aleyna, but they could not play together. When Aleyna bite him, he started to cry. He was then soothed by the caregiver. He could play symbolic play. He used the cushions and a box as a car. He also used a thin box as a telephone. He modeled his brother in some of the plays.

He recognized his sister when she visited him. They played together and when his sister left, he started to cry. After that, he hugged the caregiver and sat on her lap for a while. He also self-soothed himself by sucking his finger.

He followed the directions of the caregiver, but not the researcher's directions. This shows that he differentiated strangers and caregivers. He always cried when someone left the playroom.

Aleyna (23 months, female, yahya Kaptan Institution)

Aleyna was the favorite child of the caregivers due to her physical appearance and good manners. The caregivers mentioned that she was very

intelligent and had good manners. They liked to hug her and kiss her. She liked to hug and kiss the caregivers too.

Aleyna had two sisters in the institution. They visited her frequently, she was very happy to see them but when they went away she cried a lot. The caregivers mentioned that their (Aleyna and her sisters) mother left the children unattended when she was at work. The home environment was not appropriate for their development. They added that Aleyna was very uncomfortable when she was first brought to the institution and did not adapt to the institution easily. The caregivers also told that sometimes her mother visited them but it was not in a routine manner.

When she first met the researcher, she approached her and hugged her. She called the caregivers 'mother'. She called the husband of one of the caregivers 'daddy'.

She followed the instructions of the caregivers. She liked to play imaginary games. She liked to play with the dolls. She did not like to share the toys with other children. She bit other children when she got angry.

She talked but not in full sentences. She only used one word at a time. The words that she mainly used were 'baby', 'mum', 'daddy' and 'give'. She

was fed by the caregivers. The caregivers told that she only ate biscuits and yoghurt and drank milk.

Ebrar (22 months, female, Gazanfer Bilge Institution)

Ebrar could not talk. She played by herself and was not interested in other children. She showed aggression to her friends without any reason. She did not follow caregivers' instructions. When other children were angry with her, she went to the caregiver and hugged her. She was not interested in listening to fairy tales. She waved her hand when a caregiver was leaving.

In one of the visits, Ebrar's mother came to the institution so Ebrar would spend the time with her mother and her aunt. They brought her back in an hour for lunch. After she turned back, she seemed unhappy, isolated herself from others and became silent. She looked out of the window and did not want to eat. The caregivers mentioned that her mother did not visit her frequently. That day Ebrar did not recognize her mother and the caregivers mentioned that her mother was frustrated because of this reason.

Nur (24 months, female, Gazanfer Bilge Institution)

Nur was one of the first children who came close to and tried to find out what was inside the researcher's bag. When she was sitting on the caregivers lap, she came by and hugged the researcher. She did not discriminate strangers, but when she felt unhappy, she approached the caregivers and the caregivers soothed her.

She liked to play with other children. She tried to talk but her language could not be understood. During the last week of the observation, she used some different words such as 'abla-sister', and 'acikti-hungry'. She followed the instructions of the caregivers. She was very interested in listening to fairy tales. She modeled other children and the caregivers. She could not eat on her own.

Sumeyye (32 months, female, Gazanfer Bilge Insitution)

Sumeyye had a brother and a sister in the institution and they resided in the same house. They knew that they were siblings. She liked to play with her brother. One of the caregivers mentioned that although Sumeyye was very stubborn, she was her favorite child. Sumeyye sat on the caregivers lap for a long time and hugged her. She did not have toilet training. She told the caregivers that she needed to go to the toilet, but she still had diapers.

She had a temper tantrum, when a child got the ball she was playing with. It took a very long time for her to be soothed. The caregivers tried to soothe her, tried to distract her attention but those attempts were not successful. She was soothed only when the other child gave the ball back to her. When she was frustrated, she was aggressive. She shouted, cried and harmed other children.

She used words such as ‘pee’, ‘sit’, ’won’t do’, ‘take’, ‘give’. After she saw the researcher in the institution for a few times, she approached her and told her that her father died. She did not answer the researcher’s questions; she was not very responsive at first. Then she tried to communicate with the researcher. Also she rejected to play with her when the researcher tried to observe object permanence.

Emirhan (24 months, male Gazanfer Bilge Instituion)

Emirhan had a brother resided in the same house with him. His brother was older than him. Both of their language could not be understood. Emirhan modeled his brother and they played together. Emirhan did not have toilet training. He did not feed himself.

When he first saw the researcher, he came by and gave her a toy. He did not discriminate strangers. He was not very interested in playing with the children. When other children hit him, he did not respond back. He sucked his finger and soothed himself when the caregivers left him in his bed.

Sinem (29 months, female, Kaplikaya Institution)

Sinem could talk but her language could not be understood easily. She used two-worded sentences. Some of her words were 'mom', 'garden', 'give', 'look'… she used sentences such as 'what's this?', 'look, mom'…

She was frustrated when another child took her bicycle. During that time, she went to the caregiver and cried. She could be easily soothed by the caregivers. She did not show aggression toward other children. She had a brother at the institution, but she did not want to spend time with him. She was even very agitated when the caregiver hugged her brother. She pulled her hair and harmed herself to get attention.

She could not concentrate on the tasks that she was assigned by the pre-school teacher. She was trying to play with her toy while the other children were doing activities with the pre-school teacher. She could not count from 1 to 5. She enjoyed playing with play-dohs, but she did not follow the teacher's guidelines.

Ummus (25 months, female, Kaplikaya Institution)

Ummus did not talk, she tried to say some words but her words could not be understood. When the caregivers did not understand what she wanted to say, she was very frustrated. When she was agitated, she hit other children or the caregivers or shouted at them. She was aggressive; when she wanted something and she couldn't get it, she started to cry, shout, threw things and harm people.

She did not discriminate the strangers. When she met the researcher for the first time, she hugged her. She did not like to play with other children. Generally, she played by herself. She was usually around the caregivers and was more interested to be with them rather than other children.

Ummus had an older sister in the institution. The older sister was a preschool student. However, her language could not be understood as well. The caregivers mentioned that their mother was mentally retarded.

Mehmet and Ahmet (26 months, male, Kaplikaya Institution)

Mehmet and Ahmet were identical twins. The only difference between them was a scar on Ahmet's head. They played together all the time. They banged their head to get attention or to soothe themselves at the same time. When the caregivers were interviewed about one of them, the caregivers mentioned about both of them. The caregivers also told that their developmental levels were the same.

They both did not talk. At the last visit, there was a new child in their group. He was aggressive. He hit and harmed them frequently. When this new child was with them they said 'go'. Ahmet tried to communicate with the caregivers by pointing at the objects but Mehmet did not do that.

Emre Ali (27 months, male, kaplikaya Institution)

Emre Ali had an older brother who resided in the same institution, but in a different group. Emre Ali's language was not very accurate. He pointed at the objects when he was not understood. Usually, he wanted to have the attention of the caregivers. When they were playing with another child, he started to cry. He did not play with other children very much.

He was aggressive when other children did not give him what he wanted. He bit other children, and also hit them. When the caregivers tried to

stop him, he took his shoes off and started to run and shout. He banged his head when the caregivers were not taking care of him.

In the next visit, he seemed calmer. He helped the caregivers to tidy up the play room. He played with the caregivers and other children. He hugged one of the caregivers and sat on her lap. Later, when all the children danced together, he danced with one of the caregivers. The caregivers mentioned that he was one of the favorite children. When the caregiver asked him whether he liked her, he hugged the caregiver.

He knew the name of his body parts. He showed the right parts when the caregiver asked him. The teacher in the institution instructed him to count till 5. He only said 1, but the teacher mentioned that he could count until 5.