Educational Sciences: Theory & Practice • 14(5) • 1851-1860

www.edam.com.tr/estp
DOI: 10.12738/estp.2014.5.2065

Effectiveness of Multipurpose Unit Early Classroom Intervention Program for 4–5-Year-Old Children*

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Abstract

This research examined the effectiveness of Multipurpose Unit Early Classroom Intervention Program (MUECIP) prepared for 4–5-year-old (48–60 months) children whose development is at risk because of their families' socioeconomic conditions. The research adopted a preliminary test—final test control group trial model. The research participants were children born in 2006 and living in Center of Canakkale Province and Kepez Town in the 2010–2011academic year. There were 28 children in the study group, 14 of whom were studying at the Canakkale Onsekiz Mart University ÇABA Multipurpose Early Childhood Classroom Unit and 14 of whom were studying at the Kepez Municipality Preschool Education Classroom. The groups were examined using the Children and Family Recognition Survey, Raven Progressive Matrix Test, Denver II, and Development Assessment Observation Form for 48–60 month old children. Preliminary test results and non-parametrical techniques were used to analyze the data. In the experimental group, MUECIP was conducted by the researcher 4 half days a week for 13 weeks, and for the control group, the Ministry of Education Preschool Education Program (2006) was conducted using traditional methods. The results indicated that MUECIP was effective in increasing general development levels, cognitive and psychomotor developments, self-care skills and partially effective in improving the language and personal-social development skills of the children. It is recommended that the prepared MUECIP be spread more widely and promoted as an alternative model in the early education of children from lower socioeconomic families.

Keywords

Children at Risk, Disadvantaged Children, Early Childhood Education, Early Intervention Programs, Multipurpose Unit Early Classroom Intervention Program.

"Early Intervention" is a preventative strategy for school-age or younger children at risk because of unfavorable living conditions or the special needs resulting from these conditions. Early intervention programs affect a child directly by giving them structured experiences, and indirectly by enhancing their environment by showing interest in the child and promoting their development, with the aim of minimizing the effects of their physical, cognitive or emotional problems (Erdiller, 2010; Karoly, Kilburn, & Cannon, 2005).

* This research was prepared by exploiting the postgraduate thesis titled "Determining the Effectiveness of the Early Intervention Programs Prepared for 4–5-year-old Children: Canakkale Province Sample" which was promoted within the scope of Canakkale Onsekiz Mart University Scientific Research Projects (Project No: 2010/107).

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Every year, one-fifth of new-born babies risk growth retardation and one quarter of these consequently have developmental problems at 5 years old. To make up for these problems, 20–30% make use of private education services because of social or family difficulties such as stimulus deficiency (Haber, 1991 as cited in Derrington, Shapiro, & Smith, 1999). Nearly 1.5 million babies are born in our country every year (Sola & Diken, 2008; Türkiye İstatistik Kurumu [TÜİK], 2010). It was reported that 3.7% of these babies had a developmentally related problem and 10% had a risk of growth retardation due to issues such as low birth weight (Yeşinel, 2006). Such children often do not learn effectively in the early years of their life and, therefore, when they reach school age show insufficiencies in their cognitive, language, social, and motor development skills as well as having problems with self-care and communication, meaning that they often struggle to adapt to school compared to their peers (Bruder, 2010; Reynolds, Mann, Miedel, & Smokowski, 1997). These areas of insufficiency often only first appear as academic failure at elementary school (Erdiller, 2010).

Early Intervention Programs, which aim to support the children who are at developmental risk because of poverty and other environmental factors, are generally based on two main ideas. The first is that a child's first psychological experience significantly affects the learning of subsequent skills. The period from birth to 3 years old is a critical period for the development of intelligence, but when the necessary stimulus is not provided, children are unable to reach their potential. The second idea is that mothers in low socioeconomic do not often provide sufficient in stimulating, modelling or promotion of the cognitive and language skills required for the normal development necessary to prepare their children for school (Diefendorf & Goode, 2005; Halperen, 2009). Research has shown that there are significant associations between socioeconomic level and the learning environment at home (Foster, Shim, Mccarthy, Franze, & Lambert, 2005); the home environment and center based education quality and a child's language and literacy skills (Pinto, Pessenha, & Aguiar, 2013); the family's income and socio-demographic characteristics (ethnicity, mother's employment, family structure, education levels of the parents), children's participation rates in early education programs when they are 3 and 4 years old (Bainbridge, Meyers, Tanaka, & Waldfogel, 2005); and the socioeconomic level and sources supplied by the family to the child (Aikens & Barbarin, 2008).

Turkey is one of the fastest growing countries of Europe, with 10.12% of the total population being 5 years-old or younger in 2010. Nearly 63% of these children lived in the city, and 37% lived in the countryside. Based on data from 2008, 28.8% of children between 0 and19 years old from disadvantaged backgrounds were between 0 and 5 years old at preschool age (UNICEF, 2013). However, only 62% of the preschool 5-year-old population in the 2012–2013 academic year were attending school and only 48% of these children had participated in preschool education, with 14% enrolling because of their parents' wishes. As a result of the 4+4+4 arrangement introduced by the Ministry of National Education, this means that 38% of children starting elementary school in the forthcoming academic year will not have had any preschool education (Eğitim Reformu Girişimi & Anne Çocuk Eğitimi Vakfı [ERG & AÇEV], 2013).

All early childhood intervention programs protect the needs of children. Although these programs share a common purpose, the services offered to children and families vary due to different program aims (Karoly et al., 2005). Early intervention programs target families using various criteria such as being a single parent, ethnicity, socioeconomic level, low education level, drug addiction, mother's age or other characteristics as well as on children such as those at high risk in developmental terms (such as low IQ), and those who were born with low birth weight or developmental insufficiencies (Karoly et al., 2005; Ramey & Ramey, 1992). Early intervention programs are generally implemented in line with targets related to four main models; Center Based, Family Based, Center-Family Based, and Two-Generation Programs. While center based programs are more intense, home visit based programs are conducted over a longer period.

An effective early intervention program provides important economic and social benefits for children, families and the society. Some of these positive effects emerge immediately after the completion of the program while others emerge in the transition to adolescence and adulthood. Research which has examined the short term effects of early intervention programs has found that cognitive, motor and communication skills, social development, adaptation to school, school maturity, and the IQ levels of participating children are more advanced than children who had not made use of these programs (Baker, Piotrkowski, & Brooks-Gunn, 1999; Erdiller, 2010; Karoly et al., 1998; Ramey & Ramey, 1998; Wagner & Clayton, 1999). It has also been found that the parents' increased knowledge regarding

their child's development, attitude and behavior improved the parent-child relationship and were effective in reducing the parents' negative behavior (Rafe, 2006; Wagner & Clayton, 1999). Research which has examined the long term effects of early intervention programs found that grade repetition rates, the incidence of committal and trial at children's courts, and the rates of placement and time spent in private educational institutions of children who participated in the program reduced the cost of social relief given to the family, while academic skills and success, educational performance and taxable incomes increased. Further, there was also an increase found in university entrance rates, and the ownership of computers and credit cards. Children who had gone through these programs in their preschool years tended to be working in higher status jobs and had higher economic worth (Diefendorf & Goode, 2005; Illig, 1998; Kağıtçıbaşı, Sunar, Bekman, & Cemalcılar, 2005; Schweinhart, 2003).

Goodson, Layzer, St. Pierrre, Bernstein, and Lopez (2000) examined the effects of Comprehensive Child Development Program (CCDP) in a longitudinal research which included not only child development support but also support for parents found that the disadvantaged families who participated in this home based program were more likely to choose parenting and child goals and services, which in turn were associated with higher child mental scores. Nievar, Jocobson, Chen, Johnson, and Dier (2011), examined the effect of the HIPPY program, which is a free, home based parenting and early childhood enrichment program that helps children and parents get ready for school, on the learning environment in Spanish speaking Latin families with 3–4-year-old children at home, and found that the participating parents had higher self-sufficiency and more enriched home environments. Malmberg, Mwaura, and Sylva (2010) examined the effect of an intervention program focused on the cognitive development of East African (Kenya, Zanzibar, and Uganda) preschool children at Madrasa Resource Center (MRC) and found that the cognitive gains of the participating children were higher than the children in the control group and the quality of the cognitive development in the preschool education was more effective than in other institutions.

In research specifically focused on Turkey, Kandır and Orçan (2009) examined the early learning skills of five to six year-old children from families with different socioeconomic levels who had studied at preschool education institutions and found that the preschool start age of children from families with lower and higher socioeconomic levels was lower and that the Early Learning Skills Total Scores, and the Thinking, Language and Number Skills lower dimension total scores were higher. Further, it was found that the preschool starting age of children from higher socioeconomic families was significantly lower, and that the younger a child started preschool education, the higher the increase in the Language and Number Skills total scores. Kağıtçıbaşı et al. (2005) scrutinized both center based and home based early support intervention programs for children from low income and low educational level families in Istanbul province and found that both types had contributed to more successful lives for the children over the long term. Those who had received support as children were found as adults to have a higher possibility of entering university and higher computer and credit card ownership. Further, it was found that the participants' language skills were more advanced, they had higher status jobs and they had started work at a later age. When the effects of these two types of interventions were examined separately, it was found that those who had gone to nursery school tended to continue their education longer and worked in higher status positions that those who had not gone to nursery school.

Research has also been done on the effectiveness of different intervention strategies to support the development of children at risk. Studies have focused on developmental areas such as early literacy skills and on outcomes such as a reductions in aggressive behavior, solutions to anxiety issues, and preschool child obesity, many of which have shown that center based intervention approaches can lead to normal development (Neil & Christensen, 2009; Stoltz et al., 2013; VanDerHeyden, Snyder, Broussard, & Ramsdell, 2008;). However, of these existing early intervention studies, there have been few which have focused on center based interventions promoting the full range of developmental areas for at risk children in terms of their socio-demographic characteristics. Further, many existing studies have not referred to the various early childhood education models nor focused on family participation and education. This research examined the effectiveness of an center based Multipurpose Unit Early Classroom Intervention Program (MUECIP) developed by the researchers. This research adopted an center based intervention approach for children from lower socioeconomic families, with the aim of promoting all developmental areas and preparing them for nursery class.

The general purpose of this research was to determine the effect of our early intervention program on at risk 4 to 5 year old children. Answers were sought for the following research questions:

1. Is there a significant difference between the preliminary test and final test scores for the experimental group?
2. Is there a significant difference between the preliminary test and final test scores for the control group?
3. Is there a significant difference between the final test scores for the experimental group and the control group?

Method

Research Model

This research, which sought to determine the effect of MUECIP on the development of 4 to 5 year old at risk children, was designed as a preliminary test-retest control group model. According to Karasar (2005, p. 97), this type of model allows for an objective assessment of developmental growth, wherein the pre-experiment and post-experiment measurements are applied to an experimental and a control group.

Study Group

The participants were 28 children born in 2006. The experimental group was 14 children (6 female, 8 male) studying at the ÇABA Multipurpose Early Childhood Classroom Unit within the Canakkale Onsekiz Mart University Faculty of Education in the 2010–2011academic year, and the control group was 14 children (4 female, 10 male) studying at the Preschool Education Classroom within the body of Canakkale Province Kepez Municipality Youth Education and Cultural Centre.

Data Collection Tools

Children and Family Recognition Survey: We used the "Children and Family Recognition Survey" which was developed by the researchers to determine the socio-demographic and cultural characteristics of the families. The survey has 35 questions and has three parts. The first part of the survey focuses on the children, and the second and third parts gather information related to the parents' characteristics such as age, educational level, profession, employment status and monthly income.

Raven's Standard Progressive Matrices Test: "The Progressive Matrices Test," which was developed by John Carlyle Raven in England in 1936, measures the abstract reasoning ability of people from different language and culture backgrounds (Mutlu, 2010). The test consists of 60 items and 5 parts labeled A, B, C, D, E. There are 12 patterns in each part with the patterns within each part being based on the same principles (Öner, 2008, p. 160). For each item, there is a shape with a part missing and the child has to choose the correct missing shape from 6 or 8 optional shapes which may or may not complement the missing part. In the test, one point is given for every set answered correctly, with the highest score being 60. The first edition of the "Raven Progressive Matrices Test" wherein child norms were given was developed in 1938, and the 2nd Edition, wherein adult norms were given, was developed in 1940. The test-retest reliability coefficients calculated for the subtests vary between .55 and .93. A standardization of the test for 6–15-year-olds in Turkey was developed in 1993 by Sahin and Duzen and tested on 2777 Turkish children. The split half reliability for the 6–15-year-olds was .91 for the entire sample (Kiriş & Karakaş, 2004).

Denver Developmental Screening Test: The Denver Developmental Screening Test was developed by Frankenburg, Dodds, Fandal, Kazuk and Cohrs (1967) to assist health staff in identifying developmental problems in children. The test was reviewed again in 1990 and Denver II was created. The first standardization of the Denver Developmental Screening Test in Turkey was conducted in 1987 by Yalaz and Epir. The test- retest reliability of the Turkish form was 89% and its scorer reliability was 95% (Öner, 2008). The Denver II has 121 items which measure 4 developmental areas in children; Personal-Social, Fine Motor, Language and Gross Motor skills. From the total score, the children are rated into four definitive classes; "normal," "abnormal," "questionable," and "non-testable" (Yalaz, Anlar, & Bayoğlu, 2009). If a child demonstrates normal behavioral development, the child passes, but if an abnormal development is detected, the child is evaluated into one of the three other classes depending on the level of failure.

Development Assessment Observation Form for 48–60 Months Children (DAOF): The Preschool Education Program Book for 36–72 month old children published in 2006 by the Ministry of National Education includes the developmental characteristics for 36–48, 48–60, and 60–72 month old children. For each age group, the normally ex-

pected child behaviors for Psychomotor Development, Social-Emotional Development, Language Development, Cognitive Development, and Self Care Skills are listed. Based on the characteristics for 48–60 month old children in the program book, a three point Likert type observation form was prepared for this research called "Development Assessment Observation Form for 48–60 month old children (DAOF)." In the observation, children were assessed according to their performance of specific targeted behaviors. The ranking categories were "Can Independently Do," "Can Partially Do," and "Cannot Do." No validity or reliability studies were performed as this form is only an observation form to determine whether a child can perform the expected age related behavior.

MUECIP conducted on the experimental group

MUECIP is an intervention program which was developed by the researchers for 4–5-year-old (48–60 months) children after examining the scope and content of several early intervention programs in the world and Turkey (Carolina Abecadarian Project, Head Start, Incredible Years, Parents As Teachers, Portage, Project Care, Mothers' Education Program, AÇEP, BADEP etc.), early childhood education models and approaches (High-Scope, Persona Dolls, Orff Schulwerk), several source books (Brookes, Berlin, & Fuligni, 2000; Charner, 2010; Goodkin, 2004; Halperen, 2009; Hayes & Creange, 2001; Krogh & Slentz, 2001; Whalley & The Pen Green Centre Team, 2009) and several application based research papers(Aktan, 2005; Bertan, Haznedaroğlu, Koln, Yurdakök, & Güçiz, 2009; Castro, Bryant, Peisner, & Skinner, 2004; Foster et al., 2005; Raikes et al., 2006; Temel & Ömeroğlu, 1993). When preparing this program, the goals and gains for a 48–60 month old child's developmental characteristics and a 36–72 month old child's education needs were taken from the Ministry of National Education Preschool Education Program Book (2006). However, "Orff's Persona Dolls and High/Scope Approaches" was also exploited to promote all child developmental areas in the program.

Graphics and boards in relation to classroom size, seasons, what are we doing today, our Birthdays, and responsibilities were developed for the routine activities in the prepared program. Within the scope of the program, field trips were organized every week, family participation was determined using the "Parents Participation Form" , a "Home Visits" program was conducted to learn about the families' home environments and to observe children in their own natural environments, and approximately one-hour "Individual Interviews" were conducted with the family of each child at school.

MUECIP was conducted 4 days a week with 5 activities every day for 13 weeks between 22 November 2010 and 18 February 2011 in the 2010–2011academic year. The research instruments were implemented by the first author in this research, and support was received from three undergraduate students studying at the Preschool Teaching Undergraduate Program at COMU who had been previously informed about the MUECIP material preparation and procedures.

The activities related to the Ministry of National Education Preschool Education Program (2006) were implemented using traditional teaching methods in the control group (MEB, 2006) by the classroom teacher. The children in the control group attended the ÇABA Multipurpose Early Childhood Classroom Unit between 6 and10 June 2011 and received education based activities chosen from MUECIP, while the respective parents participated in a 3-hour Parent Education Seminar themed "Home Activities with Children".

After the completion of the program, final tests for both the experimental and control groups were administered from 21-25 February 2011. The Developmental Assessment Observation Form for 48–60 month old children was given to the control group together with the respective classroom teacher, and the other data collection tools were administered by the first author in this research. The final tests for each group were conducted in their own classrooms to allow the children to feel more comfortable.

Data Analysis

To ensure equality in both the experimental group and the control group, statistical hypothesis testing was conducted. First, the Raven Progressive Matrices Test was given to determine the type of hypothesis tests to be used and a Shapiro-Wilks Test was given to determine the normal distribution for the Denver II data. This method was preferred as there were less than 30 participants in the experimental and control groups. The results indicated that the Raven Progressive Matrices Test data distribution was normal, but the Denver II Developmental Screening Test data showed an abnormal distribution. Therefore, an unrelated group "t" test was conducted to equate the students' abstract thinking skills, and the nonparametric Kruskal Wallis "U" test was conducted to equate the Denver results.

Frequency and percentage distributions were calculated for the data collected with Child and Family Recognition Survey for both the experimental group and the control group. Also, using these collected non-continuous variables, chi-square analyses were conducted to ensure equality in the experimental group and control group.

After the post-application measurements were completed, statistical analyses were conducted to determine the effectiveness of the application. Because the Denver II results distribution was not normal and because the Developmental Assessment Observation Form for 48–60 month old children was not a scale, nonparametric techniques for the hypothesis tests were conducted. A Wilcoxon Test was used to compare the preliminary-final test results for the experimental group and the control group, and a Mann Whitney "U" Test was used to compare the final test results for both groups.

The data was analyzed using the SPSS Windows 11.0 statistical package. As the research was an experimental research model, all results were tested using a one-way ANOVA test with the significance level being a minimum of *.05*. The conditions which showed significant results at *.01* and *.001*.

Findings

We first examine the results of the first goal of the research; "Is there any significant difference between the preliminary test and final test scores for the experimental group?"

The preliminary test and final test scores received by the children in the experimental group from the sub-dimensions of the Denver II and Developmental Observation Form were compared and statistically significant differences were found in the sub-dimensions of both data collection tools. Significant differences were found in the final test at *.001* for the Denver II Language sub-dimension and for DAOF Self-Care Skills and Cognitive Development sub-dimensions; at *.01* for the Denver II Personal-Social, Fine and Gross Motor sub-dimensions; at *.01* for DAOF Psychomotor and Language sub-dimensions; and at .05 for DAOF Social sub-dimension. A significant result at *.05* was obtained in the chi-square analysis for the Denver II General Developmental Level. MUECIP, which was applied to the experimental group following the preliminary test application, was found to significantly increase the general developmental levels of the children.

These research findings are consistent with early intervention previous studies. Research which examined the effects of the Abecadarian Project on the development of children from 6 months to 5 years old found that all the children's developmental test scores had increased in the short-term research study follow-up conducted while the students were at nursery school and the scores they received from the success tests had also increased in the long-term follow-up study. The program aims were to promote motor skills and cognitive, language and social development (Campbell & Ramey, 2007). In an experimental research project wherein a Summer Nursery School Pilot application was implemented, 360 children attended a preschool education program for twelve weeks. At the completion of the program, it was found that the scores from the grammar competency test had increased significantly (Bekman, Aksu-Koç, & Erguvanlı-Taylan, 2004).

We now examine the second goal our research; "Is there any significant difference between the preliminary test and final test scores for the control group?"

The preliminary test and final test scores received by the children in the control group from the sub-dimensions of the Denver II and Developmental Assessment Observation Form were compared and statistically significant differences were found in the sub-dimensions of both data collection tools. Significant differences were found at .001 for DAOF Cognitive sub-dimension; at *.01* for the Denver II Fine and Gross Motor sub-dimensions; at .01 for DAOF Psychomotor, Social and Self-Care sub-dimensions; and at .05 for the Denver II Personal-Social and DAOF Language sub-dimensions. This was an expected increase but unlike the experimental group a hundred percent development was not observed in any of the sub-dimensions. No statistically significant results were obtained from the chi-square analysis which was conducted for the Denver II General Developmental Level.

The development progress was normal for the children who participated in the education program. Similar results have been obtained in previous research. Campbell &Ramey (2007) observed in their research that the scores received by the children in the control group from the development tests suddenly increased when they started nursery school.

We now examine the third goal of our research; "Is there any significant difference between the final test scores for the experimental group and the control group?

Statistically significant differences were obtained for the Denver II Fine Motor ($p < .05$) and Gross Motor ($p < .05$), the Developmental Assessment Observation Form Social Development ($p < .05$), and the Language Development ($p < .05$), Cognitive ($p < .001$) Development and Self-Care Skills ($p < .001$) sub-dimensions. Significant results were found at *.05* in the chi-square analysis which was conducted for the Denver II General Developmental Level. All these differences were in favor of the experimental group. However, there were no statistically significant differences between the scores for the Denver II Personal-Social and Language sub-dimensions or the Developmental Assessment Observation Form Psychomotor Development sub-dimensions for the children in either the experimental or control groups. This is probably because the items in the Denver II and Developmental Assessment Observation Form sub-dimensions were independent of each other and there were few items despite the fact that the Denver II was a valid, reliable test. Based on these findings, it could be said that MUECIP was effective in promoting general developmental and cognitive levels and self-care skills in children at risk in socioeconomic terms, and partially effective in promoting psychomotor, language and personal-social developments.

Discussion

Based on our first research question, which examined the differences between the preliminary test and the final test scores of the experimental group, statistically significant differences were found in the sub-dimensions of both the Denver II and Developmental Assessment Observation Form. This finding is consistent with previous studies done in relation to early intervention. Research which examined the effects of the Abecadarian Project on the development of children from 6 months to 5 years old found that all the children's developmental test scores had increased in the short-term research study follow-up conducted while the students were at nursery school and the scores they received from the success tests had also increased in the long-term follow-up study. The program aims were to promote motor skills, and cognitive, language and social development (Campbell & Ramey, 2007). In an experimental research project wherein a Summer Nursery School Pilot application was implemented, 360 children attended a preschool education program for twelve weeks. During the completion of the program, it was found that the scores from the grammar competency test had increased significantly (Bekman, Aksu-Koç, & Erguvanlı-Taylan, 2004). These findings support the results of our research.

Based on the findings of our second research question which examined the difference between the preliminary test and final test scores for the control group; statistically significant differences were found in the sub-dimensions of both data collection tools in the scores from the sub-dimensions of the Denver II and Developmental Observation Form. The development progress was normal for the children who participated in the education program. Similar results have been obtained in previous research. Campbell &Ramey (2007) observed in their research that the scores received by the children in the control group from the development tests suddenly increased when they started nursery school. These findings support the results of our research.

Based on the findings of the third goal of the research which examined the differences between the final test scores of the experimental and the control group, statistically significant differences were found in favor of the experimental group in the sub-dimensions of both the Denver II and Developmental Observation Form. In research which examined the effects of the HIPPY program in New York and Arkansas, the test scores of the children in the experimental group and those of the children in the control group were compared. It was found that the cognitive development of the children in the experimental group in both New York and Arkansas were higher than those of the children in the control group (Baker et al., 1999), and that the IQ and language developments of the 4-5year old children from disadvantaged economic backgrounds who participated in the experimental group for an Early Education Project were higher than those of the children in the control group (Karoly et al., 1998). These findings support the results of this research. In another research project which longitudinally examined the 'More at Four Program' in North Carolina which was financed by the state to prepare children for nursery school and increase the success of aged 4 at risk children, it was found that substantial improvements were shown in language and literacy, math, general cognitive knowledge and social skills (North Carolina Department of Public Instruction, 2008). Cognitive, language, social, behavioral and motor skills were also found to be improved in the participating children in a program delivered by the Pittsburgh Early Childhood Initiative to increase early school success of children from high risk groups, and were above the national

norms at the end of the program (Bagnato, Suen, Brickley, Smith-Jones, & Dettore, 2002). These findings partly support the results of our research.

The literature review found that there was little research which had examined the effects of center based intervention programs for 4–5 year old at risk children. Therefore, our discussion is limited because of this paucity of previous research.

Data obtained from the Turkey Early Childhood Development Ecologies showed that 53% of mothers and 52% of fathers were only elementary school graduates, and 43% of families had low economic status. Significant differences were also seen between the educational level of the mother and the economic level of the family, and all child development indicators were more negative in families with lower socioeconomic levels (Baydar, Kuntay, Gökşen, Yağmurlu, & Cemalcılar, 2010). Based on data from 2010, 10.12% of the total population was 5 years old or younger, while 63% of these children lived in the city (province and district center), and 37% lived in the countryside (UNICEF, 2013). When the inequalities of opportunity and our research results are considered together, it can be concluded that it is necessary to develop and disseminate society based models which provide free educational opportunities for the disadvantaged children and their families who do not have access to or who have difficulty accessing preschool education such as the disabled, the poor, immigrants, Gypsies, and children who live in remote areas. Further, there needs to be enrichment in the programs delivered by preschool teachers in the countryside through the development of specific materials based on the actual needs of the children in their classrooms using various early childhood education models and approaches which could contribute to the child's early development. Such innovations could contribute to the removal of the prejudice in early age children by focusing on such topic as conflict solutions and respecting differences. Education academics and administrators also need to focus on developing and spreading early intervention programs through the organization of supportive education programs for both teachers and families in line with the needs in their region. They need to take the initiative to develop local society based models and encourage teacher candidates studying in their departments to become involved in these projects.

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