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COMPARING THE EXECUTIVE FUNCTION SKILLS OF TURKISH AND REFUGEE PRESCHOOL CHILDREN: FLEXIBLE ITEM SELECTION TASK (FIST)[i]

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Abstract:
Executive function skills constitute an important basis for learning and adaptation in early childhood. The executive function skills can easily improve in children who uses good practices in preschool. These skills are especially important because they help children overcome all complex tasks required to manage themselves. The aim of the present study was to examine abstraction and cognitive flexibility components, which are important components of executive functions, in 4-6-year-old Turkish children and refugee children attending kindergarten and nursery school using Flexible Item Selection Task (FIST). In addition, the research aimed to compare the abstraction and cognitive flexibility according to gender and age variables using three different sections: Turkish students attending kindergarten, Turkish students attending nursery school and refugee children attending nursery school. The study was a survey type of quantitative research, and a cross-sectional survey approach was used. The participants were 99 Turkish and refugee children who were 4-6-year-old and attended kindergarten and nursery schools in central town of a province in Turkey. The schools where 48-60-month-old children are taught are called kindergarten in Turkey while the schools for 61-72-month-olds are called nursery schools. The study included one kindergarten and two nursery schools. These schools are located in the city center, long distances from each other and in different neighborhoods. The Turkish children in the study were both kindergarten and nursery school children whereas refugee children were only nursery school children who attended to the nursery school together with Turkish children. Children were evaluated by their class-gender and class-age combinations. There were 16 Turkish boys and 16 Turkish girls attending kindergarten, 17 Turkish boys and 19 Turkish girls attending nursery school, and 16 refugee boys and 15 refugee girls attending nursery school. In terms of class-age combinations, there were 15 Turkish students in kindergarten, 16

[i] OKUL ÖNCESİ DÖNEMDEKİ TÜRK VE MÜLTECİ ÇOCUKLARIN YÜRÜTÜCÜ İŞLEV BECERİLERİNİN KARŞILAŞTIRILMASI: NESNE SEÇİMİNDE ESNEKLİK GÖREVİ (NSEG)

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Turkish students in nursery school and 16 refugee students in nursery school in 48-60-month age group while 61-72 months age group had 17 Turkish students in kindergarten, 20 Turkish students in nursery school and 15 refugee students in nursery school. Flexible Item Selection Task (FIST) was used as the data collection tool in the study. The implementation of the measuring tool was carried out individually with each child by the researcher and took about 10 minutes. The results of the study revealed that there was no significant difference among Turkish kindergarten, nursery school and refugee children nursery school groups for abstraction scores based on gender and age groups. However, a significant difference was found between Turkish and refugee children for the cognitive flexibility scores. While the gender and age groups of Turkish and refugee children attending kindergarten had no significant differences for the abstraction component, there was a significant difference between gender and age groups for cognitive flexibility scores. For a more detailed analysis, studies dealing with high-level cognitive skills and working memory, one of the components of executive functions, are needed.

Keywords: abstraction component, cognitive flexibility, early childhood education, pre-school education, pre-school teacher

Özet:
Yürütücü işlev becerileri erken çocukluk yıllarında öğrenme ve uyum için önemli bir temel oluşturmaktadır. Okul öncesi dönemde iyi uygulamalarla pratik yapan çocukların yürütücü işlev becerileri kolayca gelişebilmektedir. Bu beceriler çocukların özellikle kendilerini yönetebilmelerini gerektiren tüm karmaşık görevleri üstesinden gelmesine yardımcı olacağı için önemlidir. Bu çalışmanın amacı anaokulu ve anasınıfına devam eden 4-6 yaş Türk çocuklarla mülteci çocukların yürütücü işlevlerin önemli bileşenlerinden olan soyutlama becerisi ve bilişsel esnekliği, Nesne Seçiminde Esneklik Görevi (NSEG) kullanarak incelemektir. Aynı zamanda araştırmada 4-6 yaş çocukları anaokulu, anasınıfı ve mülteci çocuklar olmak üzere üç farklı kesit alınarak cinsiyet ve yaş değişkenlerine göre soyutlama becerisi ve bilişsel esnekliği karşılaştırmak amaçlanmıştır. Araştırma nicel araştırma modellerinden tarama modeli niteliğindedir. Tarama modellerinden kesitsel tarama modeli olarak tanımlanmaktadır. Araştırmada 4-6 yaş arasındaki Türk ve mülteci çocukların yürütücü işlevlerinin karşılaştırılması örneklemindeki katılımcılar Türkiye'nin bir şehir merkezinde bulunan anaokulu ve anasınıfına devam eden Türk ve mülteci çocuklardan oluşmaktadır. Katılımcılar Türkiye'de bir il merkezinde bulunan anaokulu ve anasınıfına giden 4-6 yaşlarındaki 99 Türk ve mülteci çocuktu. Türkiye'de 48-60 aylık çocukların eğitim gördüğü okullara anaokulu, 61-72 aylık çocukların ait okullara ise anasınıfı adı verilmektedir. Çalışmada bir anaokulu ve iki anasınıfı içeriyordu. Bu okullar şehir merkezinde, birbirinden uzun mesafelerde ve farklı mahallelerde yer alıyordu. Çalışmaya katılan Türk çocukları hem anaokulu hem de anasınıfı çocukları iken, mülteci çocukları sadece, Türk çocuklarla birlikte anasınıfına giden çocuklar. Çocuklar sınıf-cinsiyet ve sınıf-yaş kombinasyonları

şeklinde değerlendirildi. Çalışma, anaokuluna giden 16 Türk erkek ve 16 Türk kızı, anasınıfına giden 17 Türk erkek ve 19 Türk kızı, anasınıfına giden 16 mülteci erkek ve 15 mülteci kızı içeriyordu. Sınıf-yaş kombinasyonları olarak, 48-60 ay yaş grubunda, anaokuluna giden 15 Türk öğrenci, anasınıfına giden 16 Türk öğrenci ve anasınıfına giden 16 mülteci öğrenci varken, 61-72 ay yaş grubunda, anaokuluna giden 17 Türk öğrenci, anasınıfına giden 20 Türk öğrenci ve anasınıfına giden 15 mülteci öğrenci bulunuyordu. Çalışmada veri toplama aracı olarak Nesne Seçiminde Esneklik Görevi ölçeği kullanılmıştır. Ölçüm aracının uygulanması her çocuk için araştırmacı tarafından bireysel olarak gerçekleştirilmiş ve yaklaşık 10 dakika sürmüştür. Toplamda çalışma grubu olarak belirlenen 99 okulöncesi dönemi çocuğu ile araştırma yürütülmüştür. Çalışmada veri toplama aracı olarak Flexible Item Selection Task (FIST) aracı kullanılmıştır. Yaklaşık 10 dakika süren ölçme aracının uygulanması araştırmacı tarafından her bir çocukla bireysel olarak yapılmıştır. Çalışmanın sonunda, çalışmaya katılan okulöncesi çocuklarının bulunduğu Türk anaokulu anasınıfı ve mülteci çocuk gruplarına göre soyutlama becerileri puanlarında, yaşa ve cinsiyete göre anlamlı bir farklılık olmadığı görülmüştür. Buna karşılık Türk ve mülteci çocukların bilişsel esneklik puanları arasında anlamlı bir farklılık bulunmuştur. Bunun yanında, anaokuluna devam eden Türk ve mülteci çocukların cinsiyetlerine ve yaşlarına göre soyutlama becerilerinde anlamlı bir farklılığa rastlanmazken, bilişsel esneklik puanları arasında cinsiyet ve yaşa göre anlamlı bir farklılık olduğu tespit edilmiştir. Durumun daha detaylı analizi için üst düzey bilişsel becerileri kapsayan ve yürütücü işlevlerin bileşenlerinden biri olan çalışma belleğinin ölçüldüğü çalışmalara ihtiyaç vardır.

Anahtar Kelimeler: bilişsel esneklik, erken çocukluk eğitimi, okul öncesi eğitim, okul öncesi öğretmeni, soyutlama becerisi

1. Introduction

Executive function skills are important in child development and can be observed at early ages. Determining these skills at earlier ages and supporting children for their deficiencies can promote their cognitive and social development and play crucial role in the planning of their educational lives. This role makes more sense when implemented in a way to include the disadvantaged children. Refugees in Turkey constitute such a disadvantaged group.

Refugee children are exposed and try to adapt to the daily changes in Turkey, which is a transit country for refugees. They have to deal with cultural conflicts and difficult migration processes, and have to adapt to their educational lives. Little is known about the executive function skills of these children, which might play a key role in their cognitive and social development. In addition, previous studies found that weaknesses in executive function skills are easier to improve with various intervention programs from early childhood years, and that children respond better to early intervention programs (Barnett et al., 2008). Therefore, interventions in preschool years were reported

to work best (Benson, Sabbagh, Carlson, & Zelazo, 2013; Kaufman, 2010; Tuncer & Avcı, 2019; Tuncer 2018; Vitiello & Greenfield, 2017; Welsh, Nix, Blair, Bierman, & Nelson, 2010; Zelazo, 2004). In addition, studies showed that executive function skills could help explain the low and high socioeconomic level and understand the widening income inequality among children over the past few years (Cahalan & Perna, 2015). Thus, it is necessary to determine the executive function skills of refugee children in Turkey in order to support their cognitive processes with the help from peers/friends, schools and teachers and to plan a support system that will bring their executive function skills to the same level as the children of the country in which they are located and to make equal use of the same educational environments. Although many studies were carried out on the conditions of refugee children in Turkey (Emin, 2019; Kaya, 2019; Sallan, Turkmen & Kayhan, 2019; Sezgin, 2019; Moralı, 2018; Kardeş & Akman, 2018; Korkut, 2018; Akpınar, 2017; Gümüşten, 2017; Sağlam, 2017; Tüzün, 2017; Kağnıcı, 2017; Uzun & Bütün, 2016; Yavuz & Mızrak, 2016; Şeker, 2015), there has been no studies, to the best of our knowledge, comparing their executive functions with their peers. The present study is important for planning the education of refugee children more realistically in early childhood by comparing their executive function skills with those of Turkish children.

2. Literature Review

2.1. Executive Functions

Executive functions are a number of cognitive skills that play a key role in learning and behavioral regulation (Nayfeld, Fuccillo, & Greenfield, 2013), and they act in association with cognitive processes (Tuncer & Avcı, 2018). In other words, this function refers to conscious, cognitive control processes which are necessary for high-level mental function and play roles in problem solving (Logue & Gould, 2014; Wong, Jacques, & Zelazo, 2008). In other words, executive functions are the cognitive processes required to control thoughts, behaviors and emotions. At the heart of complex executive functions that begin to develop early in life and consist of planning and regulation concepts, there are three basic executive function processes: working memory, impulse control and cognitive flexibility (Diamond, 2013; Garon, Bryson, & Smith, 2008; Zelazo & Carlson, 2012). Cognitive flexibility and abstraction are two processes that play an important role especially in conceptual thinking and problem solving (Duncker & Lees, 1945; Gelman, 2006). This process allows individual to perform targeted actions and to respond consciously to the individual's environment (Vandenbroucke, Verschueren, & Baeyens, 2017).

The flexibility involved in cognition is the ability to generate ideas and reactions and to change them when necessary (Lezak, Howieson, Loring & Fischer, 2004). It is at the heart of executive functions (Carlson, 2005). Cognitive flexibility also expresses the abilities to switch between mind sets and to produce alternative strategies (Anderson, 2002). It includes the ability to simultaneously evaluate multiple aspects of the same stimulus (Jacques, Zelazo, Lourenco & Sutherland, 2008). In other words, cognitive

flexibility is the condition of being aware that there may be alternative ways in the face of an emerging event, a willingness to adapt to sudden situations, that is, to be flexible (Martin & Anderson, 1998). Individuals who can see different alternatives in the face of events are cognitively more flexible than those who do not. These individuals are not only eager when trying new ways of communicating but also feel competent and safe in demonstrating their behavior. Individuals with cognitive flexibility are confident in the skills they possess and believe that the result of their acts will be successful (Küçüködük, 2015). However, it was mentioned that the most important thing in cognitive flexibility is not to see the best, but to be able to see all possible options before making a choice (Martin and Anderson, 1998; Bilgin, 2009).

Cognitive flexibility, which is the ability to adjust behavior appropriately in a changing environment (Dajani et al., 2020), is also mentioned to be the third component of executive functions (Diamond, 2013). This is because the cognitive flexibility includes the ability to see events from many different perspectives, to adapt to the changing demands, to find new ways to solve a problem, and to change the current thinking (Tuncer, 2018). Cognitive flexibility also includes the ability to switch between mental states, rule sets or tasks (Miyake et al., 2000). This executive function process prepares individuals to easily adapt to the changes in their environment (Tuncer, 2018) because the complexity of daily life brings with it the need to be cognitively flexible. In order to adapt to a newly developing situation or to solve an emerging problem, one must be aware of the options in the current situation and can apply different behavioral options willingly, feeling self-sufficient in the process (Anderson, 1998). In other words, all these require cognitive flexibility.

Preschool children can easily sort items in cognitive flexibility dimension by one aspect (for example, sorting pictures by color or shape) (Best & Miller, 2010; Carlson, 2005; Diamond, 2013). When the child is then given the instruction to change the sorting rule, for example, from color to shape, i.e., when a new stimulus-response relationship is enabled, the child is expected to follow the new rule by suppressing the previous one. While recognizing the new rule and acting accordingly is possible in 4-year-olds, younger children show a tendency to continue sorting by the earlier rule (Best & Miller, 2010). However, the tasks of constantly switching between two different dimensions prove much more difficult during adolescence (Brocki & Tillman, 2014; Davidson, Amso, Anderson, & Diamond, 2006; Diamond, 2013). This is because the capacity to learn from mistakes and to design alternative strategies develops in early childhood and grows in middle childhood (Tuncer, 2018).

Abstraction, on the other hand, refers to the process by which the individual properties of objects and the relationships between the objects are obliterated and "*experienced alone*" (Werner, 1948). According to researchers who have cognitive perspective, abstraction in general is a constant change associated with new experiences such as noticing the similarities in one's experiences (Kaplan & Elif, 2015). Thus, the ability to abstract is a skill that allows finding the similarities between objects (Gentner &

Lowenstein, 2002), which is extremely important for generalization (Son, Smith, & Goldstone, 2008).

Abstraction skill requires not hiding anything else, or at least distinguishing information related to an action from others. Therefore, it is a representation of the extent to which the important or useful information is stored while all others are discarded. Abstraction thus allows information to be processed quickly and easily without being disturbed by unrelated variables of other dimensions. Consequently, all abstractions include selectively discarding some of the information presented (Hampton, 2003).

In early childhood, cognitive skills develop with age. Cognitive flexibility and the ability to abstract are the process of adapting the thoughts and behaviors as a response to suddenly evolving situations. The early childhood is the most effective period of acquiring these skills (Geurts, Verté, Oosterlaan, Roeyers, & Sergeant, 2004).

Another point emphasized about executive functions is that its development differs depending on age, experiences and many protective or restrictive factors (Cooper-Kahn & Foster, 2013; Harris, 2016; Zelazo, 2015) because restrictive factors prevent the child from having rich experiences by disrupting the development. Harmony is at the top of these factors since one of the important aspects of the executive functions is the ability to quickly adapt to changing situations. At the moment, there is a group of people in the world that has to struggle to adapt to different environments in various countries by encountering many difficulties due to the daily life changes of the new country. This group is refugees and their children (Birman, 2002).

Refugee children try to continue their lives by leaving their own safe environment for various reasons and going to a new society, i.e., a different environment. Although the schools offer these children a stable and safe environment, refugee children have to make an additional effort to adapt to the environment for different reasons such as the difficult migration processes that they go through, different cultural characteristics and language (Hart, 2009). These children should be provided with the same opportunities as the other children through identifying their daily life needs and supporting their cognitive processes, and arrangements should be made regarding their learning environments caring for their physical, psychological and cognitive well-being in reliable environments which are appropriate for their individual condition and cognitive competence (Kirk & Cassity, 2007). This is because such a planned arrangement would take them to more advanced levels by creating an infrastructure for their academic achievements and accelerating their ability to adapt to life. Indeed, current studies show that executive function skills develop in infancy and early childhood and creates the infrastructure for the development of more complex skills such as abstract thinking and complex problem solving (Best & Miller, 2010; Dilworth-Bart, 2012). Another study found that there is a relationship between complex executive functions and academic achievement in children between the ages of 5 and 17, and that this relationship changes with age (Best, Miller, & Naglieri, 2011). Similarly, executive functions were reported to develop rapidly, especially between the ages of 6 and 12 (Brocki & Bohlin, 2004; Jacobsen, de Mello, Kochhann, & Fonseca, 2017; Romine & Reynolds, 2005). In addition, it was also

mentioned that the development in early childhood is a process related to the maturation and life experiences of the brain, has positive effects on children's early learning skills including language, thinking and math skills, develops in direct proportion to age, but should be addressed as a whole to improve the mentioned executive functions of children (Cooper-Kahn & Foster, 2013; Harris, 2016; Zelazo, 2015).

In the present study, abstraction and cognitive flexibility, important components of executive functions, of Turkish and refugee children attending kindergarten and nursery school between the ages of 4 and 6 were evaluated using Flexible Item Selection Task (FIST). For this purpose, the following questions were examined;

- Are there differences among different preschool children for abstraction and cognitive flexibility scores?
- Are there differences between genders among Turkish children attending kindergarten for abstraction and cognitive flexibility scores?
- Are there differences between genders among Turkish children attending nursery school for abstraction and cognitive flexibility scores?
- Are there differences between genders among refugee children attending nursery school for abstraction and cognitive flexibility scores?
- Are there differences between the two age groups of Turkish children attending kindergarten for abstraction and cognitive flexibility scores?
- Are there differences between the two age groups of Turkish children attending nursery school for abstraction and cognitive flexibility scores?
- Are there differences between the two age groups of refugee children attending nursery school for abstraction and cognitive flexibility scores?

3. Method

3.1. Model of the Research

In this study, the executive functions of Turkish and refugee children between the ages of 4 and 6 were compared. For this purpose, abstraction and cognitive flexibility, which are important components of the executive functions, were evaluated in Turkish and refugee children. The study was a survey type quantitative research. According to Karasar (2009, p.77), a survey model is a research approach that reflects an existing condition as it is. In addition, the research aimed to compare abstraction and cognitive flexibility of children in three sections, i.e., Turkish children in kindergarten, Turkish children in nursery school and refugee children in nursery school, based on gender and age variables. In this respect, the research was a cross-sectional type survey model. This type of research is conducted by taking sections at one time in accordance with the characteristics of the variables to be explained (Fraenkel, Wallen & Hyun, 2011).

3.2. The Study Groups

The participants of the study were children attending two nursery school and a kindergarten in a central town of a province in Turkey. The schools where 48-60-month-

old children are educated are called kindergarten in Turkey. On the other hand, the schools for 61-72-month-olds are called nursery schools. The present study included one kindergarten and two nursery schools. These are schools located in the city center, long distances from each other and in different neighborhoods. The Turkish children in the study were both kindergarten and nursery school children. On the other hand, refugee children were only nursery school children who attended to the nursery school together with Turkish children. The study included a total of 99 preschool children in the study. They were 32 (32.3%) Turkish children attending kindergarten, 36 (36.4%) Turkish children attending nursery school and 31 (31.3%) refugee children attending nursery school. Gender and age distributions of the students are given in Table 1.

Table 1: Frequency and Percentage Distributions of Turkish and Refugee Children by Gender and Age Levels

		Turkish children attending kindergarten		**Turkish children attending nursery school**		**Refugee children attending nursery school**	
	Categories	**F**	**%**	**F**	**%**	**F**	**%**
Gender	Boys	16	50.0	17	47.2	16	51.6
	Girls	16	50.0	19	52.8	15	48.4
Age	48-60 months	15	46.9	16	44.4	16	51.6
	61-72 months	17	53.1	20	55.6	15	48.4
Total		32	32.3	36	36.4	31	31.3

3.3. Data Collection Tool

3.3.1. Personal Information Form

The form created for children included questions to obtain information about age, gender and the name of the school and the name of the class. In addition, there was a section in this form to be filled by the researcher about duration of the time to fill the scale and the date on which the survey was carried out.

3.3.2. Flexible Item Selection Task (FIST)

Flexible Item Selection Task (FIST) applied to children as a data collection tool consists of abstraction and cognitive flexibility components, and 30 items. It has been developed by Sophie Jacques and Philip David Zelazo (2001) in 2001 and Turkish adaptation study of this scale was performed by Şahin (2015). Permission was first granted from Sophie Jaques via e-mail to use the scale. Then, permission was asked and taken from Gulhan Şahin, who performed the Turkish adaptation study of the scale. In the implementation of Flexible Item Selection Task (FIST), the first choice evaluates the child's abstraction of the common properties of objects, and the second choice evaluates the ability to switch flexibly between related dimensions through abstraction. In total, maximum scores of 15 points could be obtained for each of abstraction and cognitive flexibility.

3.4. Scale Implementation Procedures for Children

In the process of implementing the scale for children, specific procedures have been established which are different from those of adults. Presence of written implementation procedures minimizes ethical violations when working with children and ensures that the scale is applied to each child in the same way by everyone (Einarsdóttir, 2007).

First, the research proposal was submitted to the ethics committee and the necessary permission was obtained indicating there was no ethical concern. Then, a written application was made to the Provincial Directorate of National Education for permitting the research to be conducted in the designated schools.

During this application, written copies of the scale were sent to the Provincial Directorate of National Education and to families through administrators and teachers of the schools along with a note containing information about the purpose of the research, what procedures would be applied in the research, information about the scale to be applied and a sample of scale items and a family consent form. The families were asked to sign the consent form. The scale was applied only to the children whose families allowed the scale to be used.

3.4.1. Organizing the Environment for the Implementation of The Scale

In each school where the scale would be implemented, the school administration was asked to allocate a place that had a desk and two chairs for the child and the researcher who would apply the scale. Care was taken that there were no items in this room that could distract the child. It was also made sure that the room was noise-free and did not contain elements that pose a safety risk to the child.

The researcher who would apply the scale first began by aligning with the child and making eye contact, telling the child her name and introducing herself. She then explained to the boy what to do, saying, "Hi, my name is Nuran. I am here to visit your school today. I want to play a game with you. This game will last no more than 15 minutes and I will show you some pictures and I want to talk to you about these pictures. Do you want to talk with me and play this game?" After this proposal, when the child responded positively, they went to the room and the scale was started. In case of a negative response, she told the boy "It was so nice to meet you. Thank you" and the child was allowed to go back to the class.

The researcher, who sat around the desk in a position across the child who agreed to participate, first put a sticker on her index finger and on child's index finger which would be used during the application, and asked the child to indicate the answers for the questions asked with his/her finger with the sticker. The implementation of the scale took about 8-10 minutes.

At the end of the implementation of the Flexible Item Selection Task (FIST) scale, the researcher told the child that the game was over and gave the sticker as a gift and accompanied the child to his/her class.

3.5. Analysis of Data

Data collected from children aged 4-6 years were evaluated using the SPSS-24 software. The distribution of the data obtained by Flexible Item Selection Task scale was examined and it was found that there was no data with outlier problem. In addition, during the examination of the outliers of variables, the stem-and-leaf-plot and boxplots were examined and the very high and very low values were interpreted as outliers (Tan, 2016, p.100). In the context of stem-and-leaf-plot and boxplots, there was no data with outliers. The skewness and kurtosis values were examined for each group of children in the study and are shown in Table 2. Skewness and kurtosis values were used for the evaluation of the normality of the score distributions of children regarding the components of the scale. The skewness and kurtosis values examined for testing the assumption of normality varied between -1 and +1 (Table 2). It was mentioned that the skewness and kurtosis coefficients in the range of -1 to +1 could be regarded as an indication of normality (Morgan, Leech, Gloeckner & Barrett, 2004, p.50). When the homogeneity of the test variances, i.e., the distribution of Levene's homogeneity test, was examined, it was found that the test variances of the score distribution were homogeneous at $p > .05$ level based on Levene's statistics, i.e., the homogeneity assumption was met. It was observed that the score distribution for the components of the scale was continuous and at interval scale level. The independence of the two samples (groups), dependent variable measurements at range or ratio scale level and meeting the normality and homogeneity assumptions fulfilled the parametric test assumptions (Köklü, Büyüköztürk & Bökeoğlu, 2007, p.152-161).

Table 2: Skewness and Kurtosis Values Related to the Normality of Children's Scores in the components of the Scale

	N=99	**Turkish children attending kindergarten**		**Turkish children attending nursery school**		**Refugee children attending nursery school**	
Scale	Component	Skewness	Kurtosis	Skewness	Kurtosis	Skewness	Kurtosis
Flexible Item Selection Task	Abstraction	-.613	-.502	-.945	-.165	-.585	-.960
	Cognitive flexibility	-.080	-.971	-.369	-.463	-.988	-.317

Since the skewness and kurtosis values ranged from +1 to -1, normality was confirmed, and variance was homogeneous based on Levene's statistics (Levene's Statistics for abstraction: 1.349, $p = .264 > .05$; and Levene's Statistics for Cognitive Flexibility: 1.297, $p = .278 > .05$). Upon revealing that the data met the parametric test assumptions, independent samples t-test was used to determine whether there was a difference between the gender and age subgroups of children for abstraction scores and cognitive flexibility scores since there were two levels in each of these subgroups. Since the children group, on the other hand, had more than two categories, the differences between the student groups for abstraction scores and cognitive flexibility scores were evaluated using One-Way ANOVA (One-Way Analysis of Variance). Tukey test was used for

multiple comparisons as a Post Hoc test in one-way analysis of variance to compare the groups with more than two levels when the difference was significant for a variable (Can, 2014, p.152).

4. Findings and Comments

First Subproblem: Are there differences among the children groups for abstraction scores and cognitive flexibility scores?

Table 3: One-Way ANOVA Results for Abstraction Scores and Cognitive Flexibility Scores of the Three Preschool Children Groups

	Group	N	$\overline{X}$	S	F(2-96)	p	Post Hoc (Tukey HSD)
Abstraction	Turkish children attending kindergarten	32	12.81	2.13	0.36	.701	
	Turkish children attending nursery school	36	13.08	1.98			
	Refugee children attending nursery school	31	12.65	2.36			
Cognitive flexibility	Turkish children attending kindergarten	32	8.47	3.89	12.68	.000*	1>3, 2>3
	Turkish children attending nursery school	36	8.50	3.49			
	Refugee children attending nursery school	31	4.16	4.52			

*p<.05 Categories: Turkish children attending kindergarten = 1; Turkish children attending nursery school = 2; Refugee children attending nursery school = 3

The differences among the three preschool children groups for abstraction scores and cognitive flexibility scores were tested. No significant difference was found among the three preschool children group for the abstraction component of the Flexible Item Selection Task scale [$F_{(2-96)} = 0.36$, $p = .701 > .05$]. Although the average abstraction score of Turkish children attending nursery school were higher than that of Turkish children attending kindergartens, the difference was not significant. It was found that the skill levels of children in all groups related to the finding similarities between the objects were similar to each other.

A significant difference was found among the three preschool children group for the cognitive flexibility component of the Flexible Item Selection Task scale [$F_{(2-96)} = 12.68$, $p = .000, < .05$]. This significant difference was due to the fact that the average cognitive flexibility scores of Turkish children attending kindergarten ($\overline{X} = 8.47$) and the average cognitive flexibility scores of Turkish children attending nursery school ($\overline{X} = 8.50$) were

higher than that of the refugee children attending nursery school ($\overline{X}$ = 4.16). The finding that that Turkish children attending preschool were aware of alternative ways meant that they were confident to adapt to the situations and to be flexible compared to refugee children.

Second Subproblem: Is there a gender difference for abstraction scores and cognitive flexibility scores between the Turkish boys and girls attending kindergarten?

Table 4: Independent Samples t-test for the Difference between Turkish Boys and Girls Attending Kindergarten for Their Abstraction Scores and Cognitive Flexibility Scores

	Gender	N	$\overline{X}$	S	t	SD	p
Abstraction	Boy	16	13.25	2.29	1.17	30	.252
	Girl	16	12.38	1.93			
Cognitive Flexibility	Boy	16	10.13	3.40	2.63	30	.013*
	Girl	16	6.81	3.71			

$p < .05$

Turkish boys and girls attending kindergarten were compared for their abstraction scores and cognitive flexibility scores (Table 4). No significant difference was found between the two genders for the abstraction component of Flexible Item Selection Task scale ($t_{(30)} = 1.17$, $p = .252 > .05$). However, there was a significant difference between the genders for cognitive flexibility component of Flexible Item Selection Task ($t_{(30)} = 2.63$, $p = .013 < .05$). This significant difference was due to the higher average cognitive flexibility scores of Turkish boys attending kindergarten ($\overline{X}$ = 10.13) compared to that of Turkish girls ($\overline{X}$ = 6.81).

Third Subproblem: Is there a gender difference within Turkish children attending nursery school for abstraction scores and cognitive flexibility scores?

Table 5: Independent-Samples t-test for the Difference between Turkish Boys and Girls Attending Nursery School for Their Abstraction Scores and Cognitive Flexibility Scores

	Gender	N	$\overline{X}$	S	t	SD	p
Abstraction	Boy	17	13.35	1.90	0.77	34	.447
	Girl	19	12.84	2.06			
Cognitive Flexibility	Boy	17	8.77	3.19	0.43	30	.673
	Girl	19	8.26	3.80			

*$p < .05$

Turkish boys and girls attending nursery school were compared for their abstraction scores and cognitive flexibility scores (Table 5). No significant difference was found between the two genders for the abstraction component of Flexible Item Selection Task scale ($t_{(34)} = 0.77$, $p = .447 > .05$). Similarly, there was no significant difference between the two genders for cognitive flexibility component of Flexible Item Selection Task ($t_{(34)} = 0.43$, $p = .673 > .05$).

Fourth Subproblem: Is there a difference between the two genders in refugee children attending nursery school for abstraction scores and cognitive flexibility scores?

Table 6: Independent-Samples t-test for the Difference between Refugee Boys and Girls Attending Nursery School for Their Abstraction Scores and Cognitive Flexibility Scores

	Gender	N	$\overline{X}$	S	t	SD	p
Abstraction	Boy	16	12.38	2.31	0.65	29	.520
	Girl	15	12.93	2.46			
Cognitive Flexibility	Boy	16	2.38	3.14	2.45	29	.020*
	Girl	15	6.07	5.08			

*p < .05

Refugee boys and girls attending nursery school were compared for their abstraction scores and cognitive flexibility scores (Table 6). No significant difference was found between the two genders for the abstraction component of Flexible Item Selection Task scale ($t_{(29)} = 0.65$, $p = .520 > .05$). However, there was a significant difference between the two genders for cognitive flexibility component of Flexible Item Selection Task ($t_{(29)} = 2.45$, $p = .020 > .05$). This significant difference was due to the higher average cognitive flexibility scores of refugee girls ($\overline{X} = 6.07$) compared to that of refugee boys ($\overline{X} = 2.38$).

Fifth Subproblem: Is there a difference between the two age groups of Turkish children attending kindergarten for their abstraction scores and cognitive flexibility scores?

Table 7: Independent-Samples t-test for the Difference between the Two Age Groups of Turkish Children Attending Kindergarten for Their Abstraction Scores and Cognitive Flexibility Scores

	Age	N	$\overline{X}$	S	t	SD	p
Abstraction	48-60 months	15	12.27	2.09	1.30	30	.178
	61-72 months	17	13.29	2.11			
Cognitive Flexibility	48-60 months	15	7.00	3.02	2.12	30	.043*
	61-72 months	17	9.77	4.18			

*p < .05

Two age groups of Turkish children attending kindergarten were compared for their abstraction scores and cognitive flexibility scores (Table 7). No significant difference was found between the two age groups for the abstraction component of Flexible Item Selection Task scale ($t_{(30)} = 1.30$, $p = .178 > .05$). However, there was a significant difference between the two age groups for cognitive flexibility component of Flexible Item Selection Task ($t_{(30)} = 2.12$, $p = .043 < .05$). This significant difference was due to the higher average cognitive flexibility scores of 61-72 months old Turkish children attending kindergarten ($\overline{X} = 9.77$) compared to that of 48-60-month-olds ($\overline{X} = 7.00$).

Sixth Subproblem: Is there a difference between the two age groups of Turkish children attending nursery school for abstraction scores and cognitive flexibility scores?

Table 8: Independent-Samples t-test for the Difference between the Two Age Groups of Turkish Children Attending Nursery School for Their Abstraction Scores and Cognitive Flexibility Scores

	Age	N	$\overline{X}$	S	t	SD	p
Abstraction	48-60 months	16	12.56	1.97	1.44	34	.160
	61-72 months	20	13.50	1.93			
Cognitive Flexibility	48-60 months	16	8.31	3.32	0.29	34	.777
	61-72 months	20	8.65	3.69			

*p < .05

Two age groups of Turkish children attending nursery school were compared for their abstraction scores and cognitive flexibility scores (Table 8). No significant difference was found between the two age groups for the abstraction component of Flexible Item Selection Task scale ($t_{(34)} = 1.44$, $p = .160 > .05$). Similarly, the difference between the two age groups were not different for cognitive flexibility component of Flexible Item Selection Task ($t_{(34)} = 0.29$, $p = .777 > .05$).

Seventh Subproblem: Is there a difference between the two age groups of refugee children attending nursery school for abstraction scores and cognitive flexibility scores?

Table 9: Independent Samples t-test for the Difference between the Two Age Groups of Refugee Children Attending Nursery School for Their Abstraction Scores and Cognitive Flexibility Scores

	Age	N	$\overline{X}$	S	t	SD	p
Abstraction	48-60 months	16	12.25	2.15	0.96	29	.344
	61-72 months	15	13.07	2.58			
Cognitive Flexibility	48-60 months	16	2.63	3.32	2.06	29	.049*
	61-72 months	15	5.80	5.14			

*p < .05

Two age groups of refugee children attending nursery school were compared for their abstraction scores and cognitive flexibility scores (Table 9). No significant difference was found between the two age groups for the abstraction component of Flexible Item Selection Task scale ($t_{(29)} = 0.96$, $p = .344 > .05$). However, the difference between the two age groups was significant for cognitive flexibility component of Flexible Item Selection Task ($t_{(29)} = 2.06$, $p = .049 < .05$). This significant difference was due to the higher average cognitive flexibility scores of 61-72 months old refugee children attending nursery school ($\overline{X} = 5.80$) compared to that of 48-60-month-olds ($\overline{X} = 2.63$).

5. Results and Discussion

One of the most important results of the present study was the significant difference among the preschool student groups for the scores of cognitive flexibility component of Flexible Item Selection Task scale [$F_{(2\text{-}96)} = 12.68$, $p = .000 < .05$]. This significant difference

was due to the fact that the cognitive flexibility scores ($\overline{X}$ = 8.47) of Turkish children attending kindergarten and the cognitive flexibility scores of Turkish children attending nursery school ($\overline{X}$ = 8.50) were higher than the cognitive flexibility scores of refugee children attending nursery school ($\overline{X}$ = 4.16). In other words, the cognitive flexibility of Turkish children attending to preschools was better than that of refugee children. Cognitively flexible people are considered to be the individuals with unique strategies who may be aware of their potential and can combat the problems they experience in difficult situations (Tutuş, 2019).

Compared to other groups in society, refugees have less chance to carry out their future plans due to social uncertainty, socioeconomic difficulties and traumatized events (Hodes, 2000). Therefore, they need more support in the process of gaining the skills and qualifications necessary for a sustainable life in the society in which they live (Şeker & Aslan, 2015). This is because the effect of chaos in the place where they come from increases their level of anxiety and stress. Chaos has both direct and indirect effects on the cognitive development of the children. Refugee children themselves may also experience post-chaos trauma and stress disorder caused by past experiences. Some studies found that as in adults stress disorder, depression and anxiety are common in refugee children (Hart, 2009; Dalhouse and Dalhouse, 2009; Roxas, 2011).

Excessive stimulation of the direct, chaotic environment can lead to distraction, obstructions and a retreat from stimulation, since the attention capacity of young children is not developed enough to detect and ignore unnecessary information (Evans, 2006; Vernon-Feagans, Willoughby and Garrett-Peters, 2016). It is expected that refugee children have low cognitive flexibility due to the conditions they live in because the cognitive flexibility also includes the ability to adapt easily to new situations. However, different studies also showed that refugee children have difficulty with adapting to the school environment and have a wide range of adaptation problems (Emin, 2019; Kaya, 2019; Sallan, Turkmen & Kayhan, 2019; Sezgin, 2019; Moralı, 2018; Kirova, 2010; Suarez-Orozco, 2000). They also have problems with adapting to the life in the country they live in (Suarez-Orozco, 2000), which inevitably impair their cognitive flexibility skills. Refugee children are often considered as multiple disadvantaged groups because they experience a mixture of many traumatic events. Negative experiences affect children's physical, social, emotional and cognitive processes (Şeker & Aslan, 2015). However, the individual wishes and needs of these children are universal needs, similar to those of other children (Pinson & Arnot, 2007). Meeting these needs is unfortunately limited to the opportunities that compulsory migration could provide them. There have been many recent studies in the literature dealing with the situation of refugee children in Turkey (Emin, 2019; Kaya, 2019; Sallan, Turkmen & Kayhan, 2019; Sezgin, 2019; Moralı, 2018; Kardeş & Akman, 2018; Korkut, 2018; Akpınar, 2017; Gümüşten, 2017; Sağlam, 2017; Tüzün, 2017; Kağnıcı, 2017; Uzun & Bütün, 2016; Yavuz & Mızrak, 2016; Şeker, 2015). These studies involve the refugee children's right and adaptation to education (Emin, 2019; Kaya, 2019; Kardeş & Akman, 2018; Tüzün, 2017; Gümüşten, 2017; Yavuz & Mızrak, 2016; Sugar, 2015), the situation of working children (Sallan, Turkmen & Kayhan, 2019),

cultural harmony and language (Kağnıcı, 2017; Uzun & Bütün, 2016), various problems experienced by children (Akpınar, 2017; Moralı, 2018; Korkut, 2018), the problems they face in school and the attitude of teachers (Yavuz & Mızrak, 2016; Uzun & Bütün, 2016; Sağlam, 2017) and their expectations (Korkut, 2018). In addition, there are studies in which refugee children were compared in terms of various variables. For example, in a master's thesis in which Coşgun (2019) compared refugee and Turkish children, it was found that the cognitive flexibility levels of Turkish children were better than those of refugee children. Refugee children face a wide range of challenges that could significantly affect their development all over the world. In a recent study with 448 children between the ages of 5 and 12, in which children's cognitive, sensory and behavioral processes were examined to understand the development of refugee children in Lebanon, it was found that the working memory and obstructive control scores, steps of executive functions, were lower in refugee children compared to other children in the class, even though the refuge children were older than their classmates (Kim, Brown, Dolan, Sheridan & Aber, 2020). The findings of the present study were in accordance with the findings from the abovementioned studies.

The cognitive flexibility process refers to the ability to deal with a problem using a different perspective from what is available, and requires taking advantage of a perspective which is flexible enough to adjust changing demands or priorities (Diamond, 2012). In other words, adapting to a new situation is closely related to the level of cognitive flexibility. However, the number of refugee children with cognitive problems is increasing every year (Fazel, Wheeler & Danesh, 2005). Here, the critical importance of the school comes to the fore.

Gümüşten (2017) studied intervention programs for the education and adaptation of refugee children and mentioned that refugee children need teachers' support in schools to be able to deal with negative experiences and actively use their cognitive processes. It was concluded that if various interaction-based practices could be made by organizing sessions on emotion recognition, emotion regulation, empathy, friendship, self-respect, cultural harmony and environmental recognition, there would be a significant increase in both social and cognitive skills of these children.

It should be kept in mind during the educational process that refugee children are vulnerable groups experiencing health problems, anxiety, insecurity, focusing problems, depression, post-traumatic stress disorder due to the impact of the migration process. Indeed, migration processes affect children most. Due to their sensitive situations, teachers and school employees need to pay more attention to and care for refugee students. The struggles of individuals can continue only if they have hopes for the future (Bennet, 2007; Oikonomidoy, 2010). If these children are given more attention, care and support to improve their ability to deal with challenges and to adapt more easily, there will also be a significant change in their cognitive flexibility levels. One of factors that affects this change is language. Many studies revealed a strong relationship between language learning and adaptation, and a mutual relationship between learning a second language and social skills (Candappa & Egharevba, 2000; Marriott, 2001; Stanley, 2001;

Loewen, 2004). Mercan Uzun & Bütün (2016) studied the case of Syrians in Samsun province of Turkey and found that children could not socialize and had serious problems since they did not have enough level of Turkish. Wagner (2013) found that supporting families and children for language acquisition and giving them a culture-based education are the most basic needs of refugees. In addition, in Korkut's (2018) study, preschool teachers stated that the primary problem they experienced with refugee children was language, and that the parents of Turkish children objected to education of their children in the same class as refugee children who do not speak Turkish. The language problem in refugees and the challenges it brings have been the subject of much research (Aydın & Kaya, 2017; Ceyhan & Kocabaş, 2011; Oikonomidoy, 2010). In their study with teachers, Kardeş & Akman (2018) also found that the most common problems experienced by refugee children were problems related to language, school adaptation and self-expression. But in general, people need at least five years in the host country to fully learn the local language (Cummins, 1980). All these problems negatively affect the cognitive processes of these children. However, it is thought that if this discriminatory viewpoint among people can be eliminated and refugee children are safely educated with their peers in the school environment at an early age, their cognitive processes will change positively since their adaptation process will be faster. The first institution where children meet the school is preschool education. The way to facilitate the adaptation of these children is through preschool education. The first thing that attracts attention here is the teacher. Beyond volunteering to work with refugee children, the preschool teacher should act without forgetting the fact that he/she has a working group described as sensitive and fragile (Güven, Azkeskin, Yilmaz, 2018) and prepare the curriculum with the principles of flexibility and maximum usefulness in a way to maximize the benefits that these children can derive from it. Use of a teaching method by preschool teacher with variety and intensity level that these children can handle will facilitate their adaptation (Günek, 2020). This will in turn allow them to think deeply about a problem, change perspective, look from different perspectives, adapt to the environment and switch between mental schemes (Diamond, 2012; Garon, Bryson & Smith, 2008), thereby improving their skills and cognitive processes rapidly. The preschool teacher's point of view is important. However, despite Turkey's long and rich history of hosting asylum seekers, teachers' ability to work with asylum seekers is an important topic of discussion (Alpaydin, 2017). It was emphasized in various studies that teachers were not competent in working with refugees, asylum seekers, traumatized children and children with different educational backgrounds, different languages and cultures, and that their knowledge about asylum and refugee issues was limited and they needed vocational training in these subjects (Bourgonje, 2010; Beltekin, 2016; Kovinthan, 2016; Dryden-Peterson, 2015; Ferfolja, 2009; Matthews, 2008; Sidhu & Taylor, 2009; Pastoor, 2015). Supporting refugee children in terms of executive function skills and providing them with quality education is closely related to the development of teachers' ability to teaching in multicultural and multilingual classrooms (Bourgonje, 2010). Preschool teachers in particular may need support in this regard because they are better at improving their executive function skills

and interventions work best in preschool years (Benson, Sabbagh, Carlson & Zelazo, 2013; Kaufman, 2010; Vitiello & Greenfield, 2017; Welsh, Nix, Blair, Bierman & Nelson, 2010; Zelazo et al., 2004). There are studies in the literature mentioning that preschool teachers have critical roles in improving children's executive function skills (Harris, 2016; Isquith, Gioia & Espy, 2004; Jacques & Zelazo, 2001). All these studies reported that the way of communication teachers use towards the children has a crucial impact on the executive functions.

Another result of the present study was that there was no significant difference between the genders for the abstraction scores among Turkish children attending kindergarten and nursery school and refugee children attending nursery school. In contrast, while there was a significant difference in favor of boys for the cognitive flexibility scores of Turkish children attending kindergarten, a significant difference was found in favor of girls for the cognitive flexibility scores among refugee children attending nursery school. There are studies in the literature with conflicting findings on this subject. In a study examining the relationship between the number perception and cognitive flexibility levels of children aged 5-6 years by Gökdag (2020), there was no significant difference in the levels of cognitive flexibility between boys and girls. Similarly, no significant difference was found between the genders for cognitive flexibility in sixth, seventh and eighth graders (Tutuş 2019), in adolescents (Bilgiç & Bilgin 2016), in individuals between the ages of 14 and 18 (Ozcan 2016), in college students (Zong et al. 2011) and in the study by Martin & Rubin (1995). However, there are also studies in the literature reporting that cognitive flexibility levels of boys were better than those of boys (Koç, 2020; Asıcı &İkiz, 2015; Altunkol, 2011), and vice versa (Kömür; 2018; Gürbüz, 2017).

The complexity of everyday life brings with it the need to be cognitively flexible (Martin et al. 1998). Adapting to a new situation or solving a problem requires the person to be aware of different behavioral options in the face of the current situation, to be able to apply these different behavioral options willingly and to feel sufficient in this regard, i.e., cognitive flexibility. This is because cognitive flexibility directly supports the ability of the individual to communicate (Martin, Anderson & Thweatt, 1998), to deal with new and difficult situations (Altunkol, 2011), to solve problems (Stevens, 2009), to tolerate the disagreements (Martin, Anderson & Thewatt, 1998), to generate alternative thoughts and ideas (Altunkol, 2011), to be more positive in interpersonal relations (Hill, 2008), and promotes conscious awareness (Moore & Malinowski, 2009) and self-sufficiency (Martin & Anderson, 1998). Accordingly, the better adaptation ability to new situations in Turkish boys could be due to the higher expectations for men as a result of the patriarchal structure of Turkish culture. Indeed, in some cultures, girls are more protected while boys are given more freedom and allowed to socialize outside the house (Balaguru, 2004). Şafak et al. (2006) found that boys spend more time on activities such as garden care, installment/bill payment and cinema-theater ticket buying than girls do. All these may have had a positive impact on boys' cognitive flexibility skills, i.e., their ability to adapt to new situations. In contrast, girls had higher cognitive flexibility levels than boys among

refugee children. In interviews with the teachers of these children, it was found out that girls' attendance to school was better than that of boys. The children stated that boys often played on the street or went to work with their fathers instead of coming to school, so they little attended school while girls came to school more regularly and attended school for two years in a row. This could be one reason why the level of cognitive flexibility was better in girls.

There was no difference for the abstraction scores between the preschool Turkish children and refugee children. However, the differences between the two age groups in Turkish children attending kindergarten and refugee children attending nursery school for cognitive flexibility scores were significant. Turkish children attending kindergarten who were 61-72 months old ($\overline{X}$ = 9.77) had higher cognitive flexibility scores than 48-60-month-olds ($\overline{X}$ = 7.00). Likewise, refugee children attending nursery school who were 61-72 months old ($\overline{X}$ = 5.80) had higher cognitive flexibility scores than 48-60-month-olds ($\overline{X}$ = 2.63).

Cognitive flexibility, which refers to situations in which young children can succeed in actions with changing rules, begins to develop at the first two or three years of early childhood. Although executive function skills continue to mature through various stages of development from infancy to adulthood, many critical developments occur in early childhood with a course of development directly proportional to age (Buttelmann & Karbach, 2017; Cartwright, 2012). Jacques & Zelazo (2001) conducted a study on children between the ages of 2 and 5 using Flexible Item Selection Task test, and reported that since instructions for tasks began to be understood from the age of 3, three-year age group performed significantly lower than the four- and five-year age groups. They also reported that cognitive flexibility skills developed mainly at the age of 5. Likewise, many studies conducted for Flexible Item Selection Task and similar cognitive flexibility tasks found that cognitive flexibility develops in a way that is directly proportional to age and that while 5-6-year-olds have better performance than 3-4-year-olds (Ahçı, 2016; Blaye & Chevalier, 2011; Bennett & Müller, 2010; Smidts, Jacobs & Anderson, 2004; Blaye & Jacques, 2009; Espy, 1997). Thus, our findings were in parallel with these studies in literature.

It is important to understand the development of executive functions, as they often play a vital role in transforming a child who "acts without thinking" into a mature, responsible adult who can plan and control their behavior (Cragg & Nation, 2007). For this, the children must be taught by teachers who accept them as they are, who are compassionate and understanding, and who enrich educational environment with activities that support executive function skills of children. Indeed, Rutter (2006) emphasized that being accepted by a teacher in a new school, being understood, being happy, making friends and being successful in school make these children feel optimistic about the future and progress, which is an important factor that will allow refugee children to be cognitively strong. The author stated that children, especially the children who have the ease of reaching other people, who can make friends and have support

from their communities, are more resilient and stronger in adapting to school and environment and dealing with difficulties. Therefore, teachers are the ones who will support these children's executive function skills and carry out activities that will bring them to the same level as their peers. In this sense, teachers' perspectives on multicultural education are also important. Turkey's multicultural structure, which is becoming more widespread with its own cultural diversity and phenomena such as migration, etc., make this even more important (Bozkurt, Kıran and Alıcı, 2020). Bulut and Sarıçam (2016) found that attitudes of preschool teachers and teacher candidates towards multicultural education were predicted by the multicultural personality variable, which includes cultural empathy, flexibility, social assertiveness, open-mindedness and emotional balance dimensions.

In their study with teacher candidates, Bozkurt, Kıran and Alıcı (2020), on the other hand, found that as the social distance levels of teachers to the refugees decreased, their positive attitudes towards multicultural education increased. The study also found that cognitive flexibility promoted positive attitude by teacher candidates to multiculturality. The impact of cognitive flexibility on the perspective of life could be found in many areas. In the study, it was especially emphasized that cognitive flexibility of teachers is important. It is clear that teachers with cognitive flexibility are key to organizing more inclusive educational environments (Bozkurt, Kıran and Alıcı, 2020). All these point to the importance of the teacher's point of view. Teachers are the ones who will give the crucial important support to this group affected by war in early childhood. Besides, the greatest support in terms of establishing a universal perspective in education is again expected of them. When teachers act from this point of view, they will understand the vital importance of executive function skills for asylum-seeker children, and will investigate and strive to learn strategies that will make it easier for them to support this vulnerable group. This will help teachers to focus on strong and perceptive potential of children and to rebuild their understanding towards them rather than seeing them as "unmotivated," "lazy", "not studying hard enough" or “discordant” (Tuncer, 2018). With such an understanding, these children will be able to continue their educational lives without being left back from their peers in an educational environment where they feel good because they are understood.

6. Suggestions

Preschool teachers dealing with refugee children can be assisted by teachers who master the language of refugee children. Besides, these children could be supported by visual or audio materials which will provide common meanings between children and teachers in order to create a more qualified communication language and to minimize communication problems within the classroom.

- Work of teachers could be facilitated by preparing a special education program for the refugee children, which can be added to the preschool education program.

- With projects prepared under the leadership of universities, municipalities various foundations and associations, process of learning Turkish language by refugee children can be accelerated by organizing social events and play-based activities that will ensure the participation of Turkish children, volunteer instructors and volunteer mothers.
- In order for these children to be cognitively strong and resilient, teachers can be provided with various educational programs for implementing individualized educational programs for children's needs.
- The most important way to improve the cognitive processes of refugee children is to think them together with their parents. Family education seminars with continuity can be organized for refugee parents. In these seminars, the importance of preschool education can be explained through a teacher in their language and parents can be made aware of the importance of boys' school attendance.
- Preschool teachers and parents of refugee children can be given in-service training on how to implement strategies that support executive function skills.
- In preschool education institutions or public education centers, materials that improve and support children's executive function skills can be prepared with parents.
- "Peer mediation and peer counseling" trainings can be organized and implemented in schools to provide support from classmates for refugee children.
- In order to accept differences as a wealth in the schools where refugee students are educated and to create a peace culture, long-term programs about tolerance, healthy communication, human rights, multicultural education and prevention of prejudice can be prepared and implemented. These programs can be carried out within the scope of social responsibility projects of college students.

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