



## A STUDY ON THE RELATION BETWEEN THE VALUE BEHAVIOUR AND PROBLEM SOLVING SKILLS OF THE PRE-SCHOOL CHILDREN

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### Abstract:

The study was designed to examine the value behaviour and interpersonal problem solving skills of the preschool children according to variables like their age, sex and the type of the schools they attend and to determine the relation between their value behaviour and their problem solving skills. The sample of the study consists of 321 children who were selected by random sampling method among the children of 48-72 months who attend to public and private kindergartens in the districts of Keçiören and Yenimahalle in Ankara. Relational survey method was used in the study. “Personal Information Form”, “Scale of Values in Behaviour” and “Interpersonal Problem Solving Scale” were used in the study as data collection instrument. The study found significant difference in value behaviour and problem solving skills in favour of children of 60-72 months according to age and in favour of girls according to sex ( $p < 0.01$ ).

**Keywords:** preschool, value in behaviour, problem solving, child

### 1. Introduction

Values are defined as “*the total of material and moral elements covering the social, cultural, economic and scientific values of a nation*” (TDK, 2016). The values are found within the social, cultural, art, economic and political fields. The said values can be differentiated as universal and local. Universal values have importance as a piece of globalization and people unite with universal values to understand each other. Local values are useful to become one’s self against globalization, to protect one’s self and cultural properties

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(İnan, 2016). The value concept is closely related with morals and reflected in the human aspects of feeling, thought and behaviour. Values are the beliefs of individuals towards the purpose of life and the ways of behaviours they prefer individually and socially (Gülay Ogelman and Erten Sarıkaya, 2015).

The studies on value behaviours date back to the philosophers of the first age. Aristoteles and Plato concentrated on the basics of development of healthy personality. Plato suggested that there are virtuous and unvirtuous pleasures that made people happy and that the spirit had four virtues including justice, wisdom, tolerance and courage. An individual can recognize the said virtues and convert them into behaviour only through values education. The fact that the individuals are ignored regarding the emotional and behavioural aspect caused different problems in modern societies. Various studies determined that the decrease in moral values underlay the social divisions and conflicts taking place in countries. It was revealed that people may lack the values that would guide them before the difficulties of life, or in other words may be weak in character development even if they are equipped with information and skills. This condition may contribute to the growth of bigger problems in the society and to the growth of individuals who are insufficient to solve problems (Sırrı and Mehmedoğlu, 2015).

Indigenizing value behaviours makes people gain the knowledge, skill and insight to become happy in life. Socrates states that human happiness is possible with the proper use of reason and conscience. He adds that happiness contains the value concepts including courage, virtue and justice (Özbey, 2014b). Socrates argues that human is present in a world dominated by social values and shared by others and that he would have an unhappy and value less life if he doesn't think about the question of how he should live (Cevizci, 2011).

Values are the most important factors that constitute the attitudes and acknowledgements of individuals and they develop through being fed from various sources. Therefore, there are important roles for the school, family and environment to acquire value behaviours since early ages (Gülay Ogelman and Erten Sarıkaya, 2015). There are several lists of the values that the preschool children should acquire, however, the generally accepted values are responsibility, affection, respect, cooperation, courage, communication, integrity, patience, tolerance, brotherhood and self-control (İnan, 2016).

Early childhood is an important period of development when the foundations of value behaviours are laid. Although value behaviours are learned throughout life, the enhanced acquisitions of good behaviours started to be gained during the early childhood periods. Providing values systematically in the preschool period provide important contributions to the development of personality. Acquiring value behaviours in early ages bring special qualities including self-confidence, high self-respect, respect

to the rights of others and success in solving interpersonal problems. Having the values not acquired may cause disharmony within society (Neslitürk and Çeliköz, 2015). Individuals who can use reason, heart and conscience in the best manner and who can lead in social advances are those who indigenised value behaviours since their childhood. The values education given from early ages is important to grow individuals who have a happier and more successful life, with a healthy personality feeling stronger in problem solving (Neslitürk, Özkal and Dal, 2015).

A child maintains life in a cultural environment and by developing healthy social relations. In the process of a healthy social development, a child attempts to gain harmony with the environment by gaining behaviours related to both universal and cultural values. The problem solving skill of a child for the problems he may face in social environments will develop in parallel to his healthy development with the possibilities offered. Problem solving skill is considered to be a significant skill to minimize the stress situations. Individuals with improved problem solving skills can anticipate problems without they emerge yet and prevent their emergence. On the other hand, they can minimize the effect of the psychological pressure to the individual that may be caused by the problems. It is essential that the social problem solving skills are acquired from early ages (Özmen, 2013).

Problem is the conflict condition of individuals they face when obstructed in their path to their goals. It is the difficulty felt related to a condition or incident and an undesired condition that needs to be solved by concentrating on it (Özen, 2015). During pre-school period, children may experience conflicts even in social environments where they get along the best. The said condition presents important opportunities to improve the social problem solving skills of children (Kesicioğlu, 2015; Tozduman Yaralı and Özkan, 2016). The social problem solving skill is defined as *the ability of children to produce solutions to overcome the problems they may face anytime in their lives and to discover effective coping methods* (Yılmaz and Tepeli, 2013). On the other hand, problem solving is also defined as *the cognitive, sensory and behavioural processes that are sources for selecting one of the methods which an individual believe to be the most effective one to cope problematic conditions in daily life*. Problem solving skill is generally considered to be a psychological therapy under the cognitive and behavioural umbrella. The said therapy develops the coping ability of an individual against the big and small problems and traumas and protects the individual from both the physical and psychological effects of the problem faced (Nezu, Nezu and D'Zurilla, 2013).

The studies indicate that the acquisition of value behaviours is important in developing the problem solving skills of individuals. Individuals with low problem skills can exhibit anti-social behaviours. The ability of an individual to develop social relations compliant with the universal values and the values of his society and to solve

problems in his adulthood is closely related with the value behaviours acquired in the preschool period (Naylor and Diem 1987; Hong, 2005).

The acquisition of value behaviours provide contribution to the development of responsibility, affection, respect, observation of the rights of others, integrity, empathy etc. Empathy and anger, however, have significant consequences on pro-social behaviours and aggressive behaviours in children. It was found in studies through observations in natural environments towards aggressive behaviours that children with prosocial behaviours exhibit less aggressive behaviours and that there are strong relations between empathy and aggressive behaviours (Strayer, Robert, 2004). An individual may resort to antisocial solutions in problem solving if he doesn't have the personal qualities that may assist to the sufficient development of problem solving skills (Dereli-İman, 2013). The lack of acquisition of values including self-control, respect to the rights of others, affection may cause children to use aggression as a method to solve a problem.

Values are important to ensure that children gain different points of views that contribute to the distinction of what behaviours are right and wrong. When we look at the qualities of the individuals with improved problem solving skills, it is possible to see individuals who can see situations from different points of views. Therefore, values contribute to the problem solving skill bringing points of views to individuals (Koutsoukis, 2006; Özbey, 2014). Values shape the personality of individuals. Arnold (1992) states that, in addition to several factors, the own personalities of children also play role in the unnoticed development of problem solving skills (cited by Kesicioğlu, 2015).

In a successful social problem solving process, the following steps should be followed: Recognizing and defining the social problem, finding solution to social problem, producing alternative solutions for social problems, evaluating the results of the solutions, selecting the best solution, considering the practicality of the selected solution and evaluating whether the solution is useful (Adams and Wittmer, 2001; Crick and Dodge, 1994; Erwin, 1994; Shure, 2001; WebsterStratton and Reid, 2003). Any deficiency in any step of social problem solution causes an antisocial solution (Ireland, 2001).

When we consider the literature information on problem solving skills, one can consider that the values including affection, respect, responsibility, empathy, justice and integrity play important role in the development of constructive problem solving skill. Therefore, this study was designed to examine the value behaviour and interpersonal problem solving skills of the preschool children according to variables like their age, sex and the type of the schools they attend and to determine the relation between their value behaviour and their problem solving skills. The study is significant for being the first study conducted with the preschool children on this matter.

## **2. Method**

### **2.1 The Model of the Study**

The study was planned in the relational survey model and as a quantitative survey model. General survey models are conducted in a population consisting of several elements and on one group of sample of population or on all of population to reach a general judgement on the population. General survey models can be conducted in a single manner or in a relational manner. The relational survey models intend to determine the existence and/or level of change among two or numerous variables (Karasar, 2014).

### **2.2 Population and Sample**

The population of the study consists of the children in the age group of 48-72 months attending to the kindergartens of the public primary schools, public independent preschools and private independent preschools of the Ministry of National Education in the districts of Yenimahalle and Keçiören in the education year of 2015-2016.

The sample of the study consists of 321 children who were determined by using the simple random sampling method from the population. 36.1% of the children in the sample (N=116) are in the age group of 48-72 months, 63.9 % (N=205) are in the age group of 60-72 months. 50.5% (N=162) are girls, 49.5 % (N=159) are boys. 53 % (N=170) attend to the kindergartens of public primary schools, 11.5% (N=37) attend to public independent preschools, 35.5% (N=114) attend to private independent preschools.

### **2.3 Data Collection Tools**

“Personal Information Form”, “Scale for Value in Behaviour” and “Scale for Solving Interpersonal Problems” were used in the study as data collection tool. The Personal Information Form includes demographic qualities on children.

#### **2.3.1 Scale of values in behaviour**

The Scale of Values in Behaviour is a Likert type scale with 5 grades and consisting of 42 articles developed by Gür (2013) to determine value behaviours of the children in the age group of 5-6 years. Both exploratory and confirmatory factor analyses were done for the scale. The load values of the items in the exploratory factor analyses are intended to be more than .30. The load values of the items vary between .862 and .448. As a result of factor analysis, the scale was found to have single factor. The variance explained by the factor is 51.83%. The fact that the scale has single factor in the confirmatory factor analysis was confirmed. The Cronbach Alpha reliability coefficient of the scale is .98. The Cronbach Alpha reliability coefficient of the “Scale of Values in Behaviour” is .96 for this study.

The scoring of the scale: 1: Never, 2: Rarely, 3: Sometimes, 4: Frequent, 5: Always. The total score to be obtained from the scale varies between 42 and 210. The high score is considered to be positive and low value is considered to be negative for the value behaviours (Gür, 2013).

### **2.3.2 Scale for solving interpersonal problems**

The Scale for Solving Interpersonal Problems was developed by Özdil (2008) to measure the interpersonal problem solving behaviours of preschool children. The scale consists of two sub dimensions: destructive problem solving and constructive problem solving. As a result of the factor analysis carried out for the validity study of the scale, it was found that the “Constructive Problem Solving” subdimension consists of 16 items. The load values of items vary between 0.902 and 0.556 and this sub dimension explains 42% of the total variance. The Constructive Problem Solving dimension of the scale consists of 8 items and the load values of the items vary between 0.749 and 0.584 and explains 15% of total variance.

The score of the scale is 1: Never, 2: Sometimes, 3: Usually, 4: Never. The scale is filled separately for each child by observing the children behaviour in the classroom by the teacher. The high scores in the subdimension of Destructive Problem Solving indicate that the child solves the problems by a destructive, i.e. negative method. The high scores in the subdimension of Constructive Problem Solving indicate that the child solves the problems by a constructive, i.e. positive method.

The Cronbach Alpha internal consistency of the scale was found to be .95 in the subdimension of Destructive Problem Solving and to be .83 in the Constructive Problem Solving method. The Cronbach Alpha reliability coefficients of the Problem Solving Scale is .93 for the Destructive Problem Solving and .88 for the Constructive Problem Solving method (Koruklu and Yılmaz, 2010).

The data was analysed in the SPSS22 program. As the data distribution is normal, T Test, One Way Variance Analysis and Pearson Correlation test were used.

## **3. Findings**

This chapter of this study includes the findings on whether the scores of the children from the “Scale of Values in Behaviour” and “Interpersonal Problem Solving Scale” vary by the variables like age, sex and the school type they attend. On the other hand, the correlation tests between the scores of the children from the “Scale of Values in Behaviour” and “Interpersonal Problem Solving Scale” were given.

### 3.1. Age

Table 1 includes the results of the Independent Sample t Test regarding the distribution of the scores of the children from the “Scale of Values in Behaviour” and “Interpersonal Problem Solving Scale” by their *age*.

**Table 1:** Independent Sample t Test regarding the distribution of the scores of the children from the “Scale of Values in Behaviour” and “Interpersonal Problem Solving Scale” by their *age*

Scales	Age	N	X	S	sd	t	p
Scale of Values in Behaviour	48-60 Months	116	165.50	31.81320	319	-3.125	,002*
	60-72 Months	205	175.80	26.21947			
	Total	321					
Interpersonal Problem Solving Scale <i>Subdimension for Destructive Problem Solving</i>	48-60 Months	116	24,36	10,21028	319	-.073	.942
	60-72 Months	205	24,44	9,69919			
	Total	321					
Interpersonal Problem Solving Scale <i>Subdimension for Constructive Problem Solving</i>	48-60 Months	116	20,84	6,25645	319	-3.237	,001*
	60-72 Months	205	23,15	6,07401			
	Total	321					

\*p<0,05

When we looked at the Table 1, we found a significant difference in the scores of children from the “Scale of Values in Behaviour” in favour of children in the age group of 60-72 months ( $p < 0.05$ ). The average of the children in age group of 48-60 months in the Scale of Values in Behaviour is =165.50; while the average of the children in the age group of 60-72 months is=175.80.

There was no significant difference between the scores of children from the Destructive Problem Solving subdimension of the “Interpersonal Problem Solving Scale” by their age ( $p > 0.05$ ). A significant difference was found in the scores of children from the Constructive Problem Solving subdimension of the “Interpersonal Problem Solving Scale” in favour of the children in the age group of 60-72 months ( $p < 0.05$ ). In this subdimension, the average of the children in the age group of 48-60 months is =20,8460 while the average of the children in the age group of 60-72 months is =23,3016.

### 3.2 Sex

Table 2 includes the results of the Independent Sample t Test regarding the distribution of the scores of the children from the “Scale of Values in Behaviour” and “Interpersonal Problem Solving Scale” by their *sex*.

**Table 2:** Independent Sample t Test regarding the distribution of the scores of the children from the “Scale of Values in Behaviour” and “Interpersonal Problem Solving Scale” by their sex

Scales	Sex	N	X	S	sd	t	P
<b>Scale of Values in Behaviour</b>	Girls	162	179.02	22.66	318	4.541	<b>.000*</b>
	Boys	159	164.84	32.45			
<b>Interpersonal Problem Solving Scale</b> <i>Subdimension for Destructive Problem Solving</i>	Girls	162	22.44	8, 35	318	-3, 675	<b>.000*</b>
	Boys	159	26.43	10, 90			
<b>Interpersonal Problem Solving Scale</b> <i>Subdimension for Constructive Problem Solving</i>	Girls	162	23.26	6.94	318	2.840	<b>.005*</b>
	Boys	159	21.30	6.36			

\*p<0,05

When we looked at the Table 2, we found a significant difference in the scores of children from the “Scale of Values in Behaviour” in favour of the girls (p<0.05). The average of the girls in the Scale of Values in Behaviour is =179.02; and the average of the boys is=164.84.

There was a significant difference in favour of the girls between the scores of children from the Destructive Problem Solving subdimension of the “Interpersonal Problem Solving Scale” by their sex (p<0.05). In the subdimension of the Destructive Problem Solving, the average of girls is =22.56, and the average of boys is=26.55. There was a significant difference in favour of the girls between the scores of children from the Constructive Problem Solving subdimension of the “Interpersonal Problem Solving Scale” by their sex (p<0.05). In this subdimension, the average of girls is =23.44; and the average of boys is=21.36.

### 3.3 School Type

Table 3 includes the results of the One Way Variance Analysis regarding the distribution of the scores of the children from the “Scale of Values in Behaviour” and “Interpersonal Problem Solving Scale” by the type of school they attend.

**Table 3:** One Way Variance Analysis regarding the distribution of the scores of the children from the “Scale of Values in Behaviour” and “Interpersonal Problem Solving Scale” by the type of school they attend

Scales	Source of the Variance	Sum of Squares	df	Average of Squares	F	p	Source of Difference (Scheffe)
<b>Scale of Values in Behaviour</b>	Between Groups	2417, 558	2	1208, 779	1, 467	, 232	
	Among Groups	262067, 556	318	824, 112			
	Total	264485, 114	320				
<b>Interpersonal Problem Solving Scale Subdimension for Destructive Problem Solving</b>	Between Groups	1474, 750	2	737, 375	7, 894	, 000*	2>1
	Among Groups	29705, 654	318	93, 414			2>3
	Total	31180, 403	320				
<b>Interpersonal Problem Solving Scale Subdimension for Constructive Problem Solving</b>	Between Groups	140, 448	2	70, 224	1, 818	, 164	
	Among Groups	12282, 435	318	38, 624			
	Total	12422, 882	320				

\*p<0, 05

1. Primary School Kindergarten 2. Independent Preschool 3. Private Preschool

When we looked at the Table 3, no significant difference was found in the scores of children from the “Scale of Values in Behaviour” and from the subdimension of Constructive Problem Solving of the Interpersonal Problem Solving Scale ( $p>0.05$ ). There was a significant difference in favour of the children in the kindergartens of the primary schools among the children in the kindergartens of primary schools and the children in the independent preschools in the Destructive Problem Solving subdimension of the Interpersonal Problem Solving Scale. And there was significant difference in favour of the children in the private preschools among the children in independent preschools and private preschools ( $p<0,05$ ). The average of the children in the kindergartens of the primary schools in the subdimension of Destructive Problem Solving is =23,34; the average of the children in the independent preschools is =31.66; the average of the children in the private preschools is =24,60. In another words, the children in the independent preschools try to solve their problems by more destructive methods compared to the children in the primary school kindergartens and private preschools.

### 3.4 Value in Behaviour/Destructive Problem Solving

Table 4 includes the results of the Pearson Correlation test related to the scores of the children in the sample from the “Scale of Values in Behaviour” and the Destructive Problem Solving subdimension of “Interpersonal Problem Solving Scale”.

**Table 4:** Pearson Correlation test related to the relation of the scores of the children from the Scale of Values in Behaviour and the scores from the Destructive Problem Solving subdimension of Interpersonal Problem Solving Scale.

		Scale of Values in Behaviour	Destructive Problem Solving
Scale of Values in Behaviour	r	1	-, 511**
	p		, 000
	n	321	321
Destructive Problem Solving subdimension of Interpersonal Problem Solving Scale	r	-, 511**	1
	p	, 000	
	n	321	321

\*\* p<0.01

When we look at the Table 4, we found a medium significant negative relation between the scores of the children from the Scale of Values in Behaviour and the scores from the Destructive Problem Solving subdimension of Interpersonal Problem Solving Scale (p<0.05). In other words, the higher are the scores of children from the “Scale of Values in Behaviour”, the lesser the scores of destructive problem solving and the ratio of applying negative methods in problem solving.

### 3.5 Value in Behaviour / Constructive Problem Solving

Table 5 includes the results of the Pearson Correlation test related to the scores of the children in the sample from the “Scale of Values in Behaviour” and the Constructive Problem Solving subdimension of “Interpersonal Problem Solving Scale”.

**Table 5:** Pearson Correlation test related to the relation of the scores of the children from the Scale of Values in Behaviour and the scores from the Constructive Problem Solving subdimension of Interpersonal Problem Solving Scale

		Scale of Values in Behaviour	Constructive Problem Solving
<b>Scale of Values in Behaviour</b>	<b>r</b>	1	, 508**
	<b>p</b>		, 000
	<b>n</b>	321	321
<b>Constructive Problem Solving subdimension of Interpersonal Problem Solving Scale</b>	<b>r</b>	-, 508**	1
	<b>p</b>	, 000	
	<b>n</b>	321	321

\*\* p<0.01

When we look at the Table 5, we found a medium significant positive relation between the scores of the children from the Scale of Values in Behaviour and the scores from the Constructive Problem Solving subdimension of Interpersonal Problem Solving Scale ( $p<0.05$ ). In other words, the higher are the scores of children from the “Scale of Values in Behaviour”, the higher are the constructive problem solving skills.

#### 4. Discussion and Result

When we looked at the literature, we didn't find a research directly on the relation between the value behaviour and problem solving skills in children. On the other hand, there are studies on the said relation in adults and on the relation between the problem solving skills of children and their each value behaviour including empathy and emotion understanding skills. The results of the study were discussed by considering these researches and those conducted with similar behaviour skills.

According to Table 1, there as significant difference in the value behaviours and constructive problem solving skills of children in favour of the children in the age group of 60-72 months ( $p<0.05$ ). In other words, the children in the age group of 60-72 months have more value behaviours and constructive problem solving skills than the children in the age group of 48-60 months. The study by Yılmaz and Tepeli (2013) supports this finding. In their study on the problem solving skills of the children in the age group of 60-66 months and 67-72 months, Yılmaz and Tepeli (2013) found significant difference in the problem solving skills of the children in the age group of 60-72 months. The reason for the elder age group to be better with respect to both value behaviours and problem solving skills can be attributed to the fact that with the

growing age they indigenize the skills like empathy, responsibility, sharing, solidarity, cooperation, respect etc. and that they can use these skills in social environments.

According to Table 2, there is significant difference in the value behaviours and problem solving skills of children according to sex in favour of girls ( $p < 0.05$ ). Girls exhibit more value behaviours and solve the problems more constructive than boys. Studies on the values and problem solving skills of children according to sex found different solutions. Walker, Irving and Berthelsen (2002) studied the problem solving skills of boys and girls and found that the problem solving skills of girls are better than boys. Akbaş (2005), Yılmaz and Tepeli (2013), Begde and Özyürek (2015) found no significant difference between the boys and girls with respect to problem solving skills. Tozduman Yaralı and Özkan (2016) found that girls have more positive social behaviours and problem solving skills than boys. Özbey (2014b) found that there was no difference by sex in the moral and social rule perceptions of the preschool children. Bierhoff (2002) stated that girls exhibit more value behaviours including assistance, sharing, cooperation and empathy than boys. Özbey (2009) found that girls exhibit more social skill behaviours than boys. Studies on social development frequently find difference in favour of girls regarding the social behaviours. The result of this study also supports the said studies and it is possible to conclude that sex is an important variable for the more positive behaviours of girls.

According to Table 3, the value behaviours and problem solving skills of children by according to the type of school they attend have a significant difference in favour of the children attending to the kindergartens of primary schools and private preschools ( $p < 0.05$ ). In other words, the children attending to independent preschools solve their problems more destructively than the children attending to the schools mentioned earlier. In a study on the perceptions of preschool children on moral and social rules, Özbey (2014) found that the school type didn't have a significant difference in the moral and social rule perceptions of the children.

According to Table 4, the scores of children from the "Scale of Values in Behaviour" and their scores from the subdimension of Constructive Problem Solving of the Problem Solving Scale have a medium, positive and significant relation ( $p < 0.01$ ).

According to Table 5, there is a medium, negative and significant relation between the scores of children from the "Scale of Values in Behaviour" and their scores from the subdimension of Destructive Problem Solving of the Problem Solving Scale ( $p < 0.01$ ). The higher the value behaviours of children the lesser their destructive problem solving skills. This result is supported by the studies in the literature on the relation of different value behaviours and problem solving skills covering different age groups.

Bee and Denise, (2003) and Kail (1998), state that the value behaviours including sharing, comforting, helping, forgiving, cooperation are effective for the preschool

children to find constructive solutions to problems with prosocial behaviours. On the other hand, children who try to solve the problems with antisocial behaviours exhibit destructive problem solving behaviours including aggression, taking objects forcefully, not postponing desires, respecting the rights of friends (cited by Dereli-İman, 2013). Dereli-İman (2013) found a negative significant relation between the problem solving skills and behaviour problems of children. Bear and Rys (1994) had a finding in their study with the primary school children that the moral maturity reduced aggression. Kennedy et al. (1988) found in their study on the adolescent from low socio economic levels that there was a medium positive relation between the moral judgement levels and problem solving skills of the adolescents.

The value behaviours including responsibility, integrity, sharing, respecting the rights of others, cooperation and empathy make children successful in their peer relations. The children with successful peer relations have high problem solving skills among their peers. Likewise, Özmen (2013) stated that children with high problem solving skills share more with their friends, have value behaviours including sharing, use of courtesy words, taking the views and suggestions of friends into consideration, not exhibiting aggressive behaviours against their friends. Miller, Eisenberg, Fabes and Shell (1996) found a high positive relation between the moral judgement levels of children and their prosocial behaviours. Tozduman Yaralı and Özkan (2016) found a positive relation between the social competence behaviours of the children and their problem solving skills.

Warden and MacKinnon (2003) found the children with high prosocial behaviours, empathy and skill use more positive methods in their interpersonal problem solving skills than the children who exhibit bullying behaviours. Pakaslahti and Keltikangas-Järvinen (1996) found a medium relation between the aggressive behaviours of children and the aggressive problem solving methods. In other words, children exhibiting aggressive behaviours solve their problems with destructive and aggressive methods.

Kazdin et al. (1987) found that the children with antisocial behaviours developed positive social behaviours and had less negative behaviours after the training of problem solving skills. Bal and Temel (2014) found a medium positive and significant relation between the skills of preschool children to have a point of view and to solve problems. Fawcet and Garton (2005) conducted an empirical study and concluded that the learning approach based on cooperation with peers had a positive effect on problem solving skills.

Özbey (2014a) found a medium positive significant relation between the value behaviours and problem solving skills of the teacher candidates in a study on the relation of the individual values and problem solving skills of the preschool teacher candidates. Işık and Yıldız (2014) studied the relation between the value perceptions

and problem solving skills of the primary school teachers. As a result of the study, they found a positive relation between the value perceptions of the teachers and their constructive problem solving skills; and a negative relation with the destructive problem solving skills.

Values are gained at three levels, i.e. knowledge, feeling and behaviour. For the value behaviours to emerge, a child has significant progresses in his mind and develops judgement skills by conducting analyses on the negative or positive aspects of the behaviour. The result after mental analyses on why a behaviour right or wrong is not associated only with the behaviour but also helps a child find reasonable justifications when using decision making skills in problem skills and to have a different point of views to events. Values become apparent with behaviours after being analysed in the mind and emotionally indigenized. Therefore, this process provide the children with necessary experiences to solve a problem including the ability to analyse a problem, to find different methods in solution, to decide suitable solution ways or to prevent the occurrence a problem with anticipation before the problem emerges yet. When we evaluate the results of this study with the findings of other studies, it is possible to conclude that the children with values including empathy, cooperation, solidarity, sharing, forgiving, courtesy etc. try to solve their problems more constructively and that their value behaviours have a positive effect on their problem solving skills.

## 5. Suggestions

The children in the elder age group in the study have more value behaviours and solve their problems more constructively. Taking into account the scientific studies emphasizing that the skills including empathy, sharing etc. can be acquired from early ages, it can be suggested to start giving the value behaviours at early ages to the age group with proper activities.

In the study, girls have more value behaviours and solve problems more constructively than boys. Boys use physical and verbal aggression in problem solving than girls. Considering that the value education starts in the family, attention should be paid to value education in family participation events by the cooperation of teachers and families to make particularly boys gain value behaviours.

The researchers in the field may be recommended to plan a family participation values education and to observe and measure the results of education on girls and boys. As a result of the study, it was determined that values in behaviours significantly reduced the problem solving skills by physical and verbal aggression. Therefore, it can be recommended that the contribution of preschool values education to the other development areas of the children should be taken into consideration and to enhance their education programs through values.

The development of preschool problem solving skills has been supported by education programs for years. The content of the said education programs can be enhanced by supporting with the value behaviour themes.

Values education programs can be designed and an empirical study can be used to measure the contribution of the program to the problem solving skills of the children.

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