

Examining The Relationship Between Temperament and Social- Emotional Development of Children in Disadvantaged Districts

Mubeccel Gonen, Tulin Guler Yildez, Mefharet
Veziroglu-Celik, Ipek Ozbay

Ipek Ozbay, Presenting



INTRODUCTION

- Each child is different and unique in their reactions. These differences are related to the children's innate features called temperamet (Salley, Miller and Bell; 2013).
- Usually children exhibit difference in their behaviors, emotions and attitudes in their social interaction with others. Temperament is also one of the most important factors in here (Calkins; 2012).

PURPOSE

- The purpose of this study, which is realised within the context of the project named *“Analysis of the Social, Emotional and Health Development of Pre-School Period Children Living in Disadvantaged Districts”*, is the investigation of the relationship between temperament and social development levels of children 48-72 months old.
- This relationship has been analysed depending on the age, gender and parent education levels of children.

METHODOLOGY

- Quantitative research methods were used in this study.
- Descriptive Survey Method, which is a quantitative research method, provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population. It includes cross-sectional and longitudinal studies using questionnaires or structured interviews for data collection, with the intent of generalizing from a sample to a population (Babbie, 1990).

METHODOLOGY

- Participants of the study consist of 406 children who attend the preschool education in a disadvantaged districts and their primary caregivers in Ankara, Turkey.
- Within this context, temperament of children was assessed through “**Children’s Behavior Questionnaire (CBQ)**”, social-emotional development levels on the other hand, were assessed by using “**Ages and Stages Questionnaires (ASQ)**”.

SAMPLE

Table 1. Demographic characteristics of the 406 participants

		f	%
Gender	Girl	203	50,0
	Boy	195	48,0
	Total	398	98,0
Unresponsive		8	2,0
Age (month)	48 monthly (Between 45-50 months)	21	5,2
	54 monthly (Between 51-56 months)	30	7,4
	60 monthly (Between 57-72 months)	346	85,2
	Total	397	97,8
Unresponsive		9	2,2
The education level of children's primary care	Elementary school	197	48,5
	High school	120	29,6
	Higer education	65	16,0
	Total	382	94,1
Unresponsive		24	5,9
Total		406	100,0

406 children whose ages were 4 - 5 years, and also their parents are participants of this study. The distribution of gender among the children in the study was 203 girls (50%) and 195 boys (48%). 21 of them were 48 monthly (5,2%), 30 of them were 54 monthly (7,4%) and 346 of them were 60 monthly (85,2%). Also, 197 of the primary caregivers had graduated from elementary school; 120 of them had high school degree, and 65 of them had university graduation.

FINDINGS and DISCUSSION



Table 2. Results of t-test analysis by gender for CBQ Scale

	Gender	n	\bar{x}	Ss	t	p
Activity Level	Girl	202	4,64	1,09	-2,508	0,013*
	Boy	194	4,92	1,14		
Attentional Focusing	Girl	202	4,75	1,20	2,470	0,014*
	Boy	194	4,45	1,24		
Discomfort	Girl	202	4,57	1,09	3,746	0,000*
	Boy	194	4,15	1,15		
Fear	Girl	202	4,67	1,26	2,767	0,006*
	Boy	194	4,31	1,33		
Inhibitory Control	Girl	202	5,39	0,97	3,053	0,002*
	Boy	194	5,08	1,05		
Low Intensity Pleasure	Girl	202	6,08	0,75	5,909	0,000*
	Boy	194	5,59	0,91		
Perceptual Sensitivity	Girl	202	6,18	0,75	3,111	0,002*
	Boy	194	5,90	1,01		
Sadness	Girl	202	4,84	0,88	3,435	0,001*
	Boy	194	4,54	0,83		
Shyness	Girl	202	4,30	1,37	3,019	0,003*
	Boy	194	3,88	1,41		

p<.05

When the differences in gender on the subscales of the CBQ scale were examined, girls scores on Focusing (M=4.75), Discomfort (M=4.57), Fear (M=4.67), Inhibitory Control (M=5.39), Low Intensity Pleasure (M=6.08), Perceptual Sensitivity (M=6.18) subscales were higher than the boys' but girls' score on Activity Level (M=4.64) subscale were lower than boys' (M=4.92) ($p < .05$).

The relevant literature showed a large difference favoring girls on Perceptual Sensitivity and Inhibitory Control, also, showed a difference favoring boys on Activity Level (Else-Quest, Hyde, Goldsmith & Van Hulle, 2006). The literature findings support the results of research.

Table 3. Results of t-test analysis by gender for ASQ Scale

	Gender	n	\bar{x}	Ss	t	p
Communication	Girl	201	56,69	20,38	1,345	0,179
	Boy	195	53,79	22,42		
Gross Motor	Girl	202	46,64	18,51	1,744	0,082
	Boy	195	43,40	18,46		
Fine Motor	Girl	201	47,87	17,68	2,410	0,016*
	Boy	195	43,41	19,12		
Problem Solving	Girl	202	39,17	13,24	1,242	0,215
	Boy	194	37,28	16,96		
Personal-Social	Girl	200	49,16	16,94	1,406	0,161
	Boy	194	46,65	18,49		

p<.05

When the differences in gender on the subscales of the ASQ scale were examined, girls scores on Fine Motor (M=47.87) subscale were higher than the boys' (p<.05).

The relevant research about children's developmental progress showed that for fine motor skills, girls were better than boys (Filgueiras a, Pires, Maissonette, Fernandez, 2013). The establishment of synaptic connections which is an important part of brain development develops earlier in girls, so, it said that the cognitive and fine motor skills in girls mature faster than boys.

Table 4. Results of ANOVA analysis by Child 's Age in Months for CBQ Scale

	Child 's Age in Months	N	\bar{x}	Ss	F	p	sig. difference
Discomfort	48 month	21	3,71	1,04	3,964	0,020*	*48 mth with 54 mth
	54 month	30	4,52	1,00			
	60 month	344	4,40	1,15			*48 mth with 60mth

$p < .05$

When the differences in age on the subscales of the CBQ scale were examined, 54-month-old ($M=4,52$) and 60-month-old ($m=4,40$) children scores on Discomfort ($M=47.87$) subscale were higher than 48-month-old ($M=3,71$) children' score ($p < .05$). There was no significant difference in other subscales by ages ($p > 0.05$).

When examining the relevant literature, negative affectivity related to sensory qualities of stimulation, including intensity; rate; or complexities of light, movement, sound, and texture increases by ages (Rothbart, Ahadi, Hershey & Fisher, 2001). Thus, the more the child grows up, the more the receptive and expressive language skills develop and also the child can express their emotions more easily (Güler ve Dönmez, 2007).

Table 5. Results of ANOVA analysis by *Child 's Age in Months* for ASQ Scale

	<i>Child 's Age in Months</i>	N	<i>x</i>	Ss	F	p	sig. difference
Communication	48 month	21	65,16	7,56	5,945	0,003*	*60 mth with 48 mth *60 mth with 54 mth
	54 month	30	64,67	13,77			
	60 month	344	53,96	22,12			
Gross Motor	48 month	21	49,76	12,30	3,091	0,047*	*60 mth with 54 mth
	54 month	30	51,83	10,30			
	60 month	345	44,18	19,27			
Fine Motor	48 month	21	49,76	11,78	3,029	0,049*	*60 mth with 54 mth
	54 month	30	52,73	9,53			
	60 month	344	44,91	19,22			
Problem Solving	48 month	21	43,95	6,93	5,687	0,004*	*60 mth with 54 mth
	54 month	30	45,50	20,14			
	60 month	344	37,32	14,83			
Personal-Social	48 month	20	48,65	11,57	2,242	0,108	none
	54 month	30	54,50	8,02			
	60 month	343	47,43	18,42			

p<.05

As seen in Table 5, compared to others, 48-month-old children had higher scores in communication skills and 54-month-old children had higher scores in gross motor skills, fine motor skills and problem solving skills.

Thus, the more he grows up, the number and varieties of words, expressing himself better and communication skills improve; the control of the motor skills increases and the balance is provided easier; more different and creative solutions in the problem solving skills are developed with the effect of cognitive and language development (Mervis & Bertrand, 1994; Aksu-Koç & ark., 2011; Shaffer, 1999; Benard, 1996).

Our research results are different from literature. There are two main possible reasons. The first one is that our data were collected from children who have low social economic levels and are from in disadvantage areas. The second one is the low educational level of primary caregiver of children. Possibly, they cannot give enough support and enough opportunity to their children.

Table 6. Results of ANOVA analysis by education of primary caregiver for CBQ Scale

		N	\bar{x}	Ss	F	p	sig. difference
Attentional Focusing	Elementary and middle school	197	4,42	1,26	4,267	0,015*	*Elementary and middle school with Higer education
	High school	119	4,70	1,16			
	Higer education	65	4,88	1,10			
Perceptual Sensitivity	Elementary and middle school	197	5,96	0,99	4,522	0,011*	*Elementary and middle school with Higer education
	High school	119	6,10	0,78			
	Higer education	65	6,33	0,62			
Sadness	Elementary and middle school	197	4,58	0,91	4,357	0,013*	*Elementary and middle school with Higer education
	High school	119	4,75	0,78			
	Higer education	65	4,93	0,81			

p<.05

When the differences in primary caregiver's education level on the subscales of the CBQ scale were examined, for children of primary caregivers who had university graduation, scores on Attentional Focusing, Perceptual Sensitivity and Sadness subscales were higher than the other children's ($p<0.05$). However, there was no significant difference in other subscales by primary caregiver's education level ($p>0.05$).

Table 7. Results of ANOVA analysis by education of primary caregiver for ASQ Scale

		N	\bar{x}	Ss	F	p	sig. difference
Communication	Elementary and middle school	196	53,35	20,97	4,474	0,012*	* Elementary and middle school with Higer education * High school with Higer education
	High school	119	55,60	21,98			
	Higer education	65	62,40	19,93			
Gross Motor	Elementary and middle school	196	43,21	19,81	6,438	0,002*	* Elementary and middle school with Higer education * High school with Higer education
	High school	120	44,62	17,79			
	Higer education	65	52,52	13,81			
Fine Motor	Elementary and middle school	195	44,09	18,49	4,676	0,010*	* Elementary and middle school with Higer education * High school with Higer education
	High school	120	45,59	19,34			
	Higer education	65	52,07	15,39			
Problem Solving	Elementary and middle school	196	37,51	15,79	2,206	0,112	none
	High school	120	38,34	15,26			
	Higer education	64	42,05	12,11			
Personal-social	Elementary and middle school	196	47,14	18,44	3,567	0,029*	* Elementary and middle school with Higer education * High school with Higer education
	High school	119	46,66	17,54			
	Higer education	64	53,34	14,09			

$p < .05$

On the ASQ, children of parents taking higher education had better developmental level in communication, gross motor skills, fine motor skills and personal- social skills.

Investigations showed that the children of the mother having higher education may be evolutionarily better because the mothers educated at higher levels behaved more consciously in the bringing-up process (Sticht & McDonald, 1990; Benjamin 1993). In this point, it can be thought that because the mothers had higher education, they used different sources effectively in getting information, providing rich stimulus with regard to physical, social, cognitive and language development which had a role in the development of the children.

Table 8. Results of Correlation Analysis Between CBQ Scale and ASQ Scale

	Communication	Gross Motor	Fine Motor	Problem Solving	Personal-social
Activity Level	0,097	,118(*)	,103(*)	,121(*)	,111(*)
Discomfort	0,063	0,018	,114(*)	0,014	0,058
Perceptual Sensitivity	0,162(**)	0,158(**)	0,139(**)	0,106(*)	0,095
Smiling	0,069	,099(*)	0,087	0,075	0,075

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

According to correlational analyses, there was a low positive correlation between CBQ activity level and ASQ gross motor (,118), fine motor (,103), problem solving (,121), personal-social (,111), ($p < .05$). There was a low positive correlation between CBQ discomfort and ASQ fine motor (,114) ($p < .05$). Also there was a low positive correlation between CBQ perceptual sensitivity and ASQ communication (,162), gross motor (,158), fine motor (,139), problem solving (,106) ($p < .05$).

Finally there was a low positive correlation between CBQ smiling and gross motor (,099) ($p < .05$).

In examining the relevant literature, children having positive temperament were more open to social interaction; on the other hand, having negative temperament caused problems in social interaction (Todd & Dixon, 2010). Research has been found to be more relevant to the social skills (Dixon & Smith, 2000; Salley & Dixon, 2007; Todd & Dixon, 2010).

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- As seen in the Table 8, as a feature of temperament, activity level had a low level and meaningful relationship with motor development. This finding was supported with relevant literature.
- In the studies, it was seen that more active children were better in motor development level (Kristal, 2005).
- It was seen that the activity level is also one of the extrovert temperament features and in another study, the children having extrovert temperament features had earlier development in motor movements (Weber, Levitt & Clark, 1986).

Results

- Although girls had higher CBQ attention skills, low intensity pleasure, perceptual sensitivity, and expressed more negative emotions (fear, discomfort), boys had higher activity levels. Girls also had higher ASQ fine motor skills than boys.
- Older children had higher CBQ discomfort scores than younger.
- As education level of the primary caregiver increased, CBQ attention skills, discomfort and perceptual sensitivity of the child increased.
- Children having higher CBQ activity level had a higher development level in ASQ gross motor, fine motor, personal-social, communication and problem solving skills, and children with higher CBQ perceptual sensitivity had higher communication, gross motor, fine motor, and problem solving skills.

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Thank You!

