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Exploring Social Competence, Temperament and School Adjustment in Pakistani Preschool Sample

Abstract: *The study was conducted to assess the social competence, temperament and school adjustment of 3-5 years old preschoolers. The aims of the research were to assess the gender differences in the levels of social competence as well as to study the associations between the various aspects of temperament, social competence and school adjustment. Participants are 227, 3-5 years old preschoolers (N= 227 with boys n = 127 and girls n = 100), their mothers (N= 227) and teachers (N= 100) from various cities of Pakistan. Data was collected using the Social Competence Teacher Version Scale, Child Behavioral Questionnaire very Short Form and Teacher Reported Scale of School Adjustment. The results indicated significant gender differences in the social competence levels, and significant positive and negative associations were found between the subdimensions of temperament, school adjustment and social competence.*

Key Words: Social Competence, Temperament, School Adjustment, Preschoolers

Introduction

Preschool age is quite important as the child is leaving the home environment and is entering the school arena. Children of this age are required to meander the complex world of school life where they are to interact with multiple people, forming individual relationships with them. There are several important factors that are crucial for children of preschool age and temperament is one of them. The umbrella term is used for the individual differences in the emotional displays, motor activation and the attentional reactions to stimuli, is temperament (Rothbart & Bates, 2006). Research illuminates the fact that temperament is pivotal in shaping not only the children's academic outcomes (i.e school adjustment and academic achievement) but also influence the way children respond to and interact with their environment. The Individual differences in the temperament, that are omnipresent can work both as a risk or a protective factor for a child. This is especially true for the children who are already at risk due to presence of one or more risk factors which are impeding their healthy development and negatively effecting other educational outcomes (Buss & Plomin, 2014).

There is a considerable association between a child's temperament, social competence and school adjustment. There is paucity of research on these influences on all of these crucial aspects of a child. Temperamental predispositions and traits activate unidirectional and bidirectional routes of patterns of interactions that are taking place between the children and their environment. Which in turn influence social behaviors and the consequent school adjustment. Rothbart and colleagues constructed a developmental model of temperament, which is being utilized in the current study (Rothbart, 2011; Rothbart et al., 2001) has been used. This model takes into account three broader temperamental dimensions. These are namely Surgency/extraversion, Negative affectivity, and Effortful control. The first aspect of Surgency/extraversion is defined as a tendency to have positive emotionality. Whereas, Negative affect is characterized by a tendency to have a negative emotional reaction to all provoking stimulus. Moreover, individuals children who have a high negative affect are more likely to be sensitive towards negative environmental stimuli, they also more likely to have intense negative feelings. Research also illuminates that these children dwell on these negative feelings (Chen, Deater-Deckard, & Bell, 2014).

Temperament and Social Competence

In the period of infancy and early childhood the construct of social competence encompasses the ability of children to have successful and meaningful social interaction with significant others. It also includes social goals achievement, good peer relationship and acceptance (Brophy-Herb, Lee, Nievar, & Stollak, 2007; Chen

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[& French, 2008](#); Rubin, Bukowski, & Parker, 2006]. [Katz and McClellan \(1991\)](#) defined social competence as generally involving the ability to initiate communication and maintenance of satisfactory peer relationships. The importance of social competence can't be overstated as it is considered as one of the developmental milestones ([Thomas & Chess, 1980](#)). It is also highlighted in research that the development of the social competence is dependent upon the positive feedback that is received by the individual from his/her environment. This feedback in turn is dependent upon the display of the appropriate social skills display, which are according to the context of the situation of ([Nelson, 1992](#)). This peer-based social competence is gained by the children during the preschool period. Any problem or even sometimes failures faced in this time period will prone a child to have difficulties in terms of behaviour and social adjustment in future ([Brown, Odom, & Conroy, 2001](#)). Display of more positive interactions and collaborative play behaviour as opposed to the more aggressive behaviour, is more likely to earn children acceptance from their peers ([Sette, 2012](#)). Peer relationships are ruined by displaying aggressive behaviours ([Merrell et al., 2001](#)).

Relationship between Temperament and School Adjustment

The construct of school adjustment has multidimensional components namely personal and social. These components include both the demands and requirement of the school ([Bouffard, Roy, & Vezeau, 2005](#)). Research also highlights that both temperament and school adjustment are closely associated. School adjustment significantly impacts both academic achievement and social competence. For instance, children with high levels of negative affect are more likely to face problems in adjusting to schools. Similarly children having high level of persistence are likely to be well adjusted to schools ([Lavin-Loucks, 2006](#); [Martin et al., 1999](#)). This is largely due to the fact that children with high negative affect are easily frustrated which is manifested through intense crying (Yagmurlu & Atlan, 2010). Thus, behavioral problems are also closely associated with negative emotionality ([Brendgen, Wanner, Morin, & Vitaro, 2005](#); [Hagekull et al., 1997](#)).

Studies in Pakistan

This study was conceived bearing in mind the cultural mores of social competence as well as the other study variables. The moral and ethical make up of Pakistani culture as well as the school system is quite different from that of western societies, where most of the research on these variables have been conducted ([Shujia & Malik, 2011](#)). Furthermore, there is dearth of research regarding the temperament, and the consequent social and school adjustment in Pakistan. This is especially so for the preschool sample. Although researchers have investigated the complex relations among children's temperament, social and school adjustment. But most of this research was carried out in Western cultures. In comparison there is dearth of research in non-Western cultures and low and middle-income countries like Pakistan (e.g., [McCoy et al., 2016](#)); and no research has examined this constellation of factors in Pakistani samples. Where similar research on Pakistani children does exist, it is concerned primarily with quantifying the presence of emotional and behavior problems in older children (e.g., [Hussein, 2010](#); [Malik et al., 2019](#); [Syed & Hussein, 2009](#); for exception, see Finch et al., 2018) interventions (e.g., [Inam et al., 2015](#); Zainulabdin, 2020). Country wide statistics indicate that more than a quarter of Pakistani preschoolers' social-emotional skills are at a low level, this is indexed by high level of aggression, distraction and low or poor social competence on ECDI (Early Childhood Development Index) (Flinch et al, 2018)

As Pakistani parents and the broader society observe that children's refusal to go to school, absenteeism, and school dropout are on the rise ([Malik et al., 2019](#)), research on the importance of temperament and its consequent social and school adjustment is both timely and important.

Method

Research Design

The general survey model called relational survey model, was used in the study. The basic premise behind this model is that it attempts to ascertain the covariance between two or more variables. Furthermore, it also aims to assess the degree of any aforementioned covariances.

Sample

227 preschool children ($N=227$, Boys $n = 127$; Girls $n = 100$) were taken from different schools from the cities of Pakistan; Rawalpindi, Islamabad, Quetta and Gujranwala, using purposive convenience sampling technique. The age range of the sample was from 3 to 5 years, and mothers of the preschoolers ($N= 227$)

and their teachers ($N= 100$) also participated in the research. Demographic details of the sample are depicted in table no 1 below.

Table 1. Demographic Profile of the Study Sample ($N=227$)

Variables	Categories	f	%
Gender	Male	127	56
	Female	100	44
Mother's work status	Working	78	34
	Nonworking	149	66
Birth order	First born	39	17
	Middle born	147	65
	Last born	37	16
	Only child	4	2

Note. f= Frequency, %= Percentage

Measures

4 measure were used in the current research. After acquiring permissions from the authors, two measures, Social Competence Teacher Version and Teacher Rating Scale of School adjustment were translated in the first phase of the research using guidelines provided by Brislin (1970) in following steps;

- Step 1. Forward translation
- Step 2. Selection of the most suitable items through committee approach,
- Step 3. Back translation into the source language.
- Step 4. Committee approach.

Authors of the scale holds the copy rights of the instruments, therefore authors were contacted and their consent was sought regarding the use and translation of the instruments. After their permission the process of translation was initiated. Translation of the instruments was carried out in the light of the guidelines provided by Brislin (1970), which included ensuring that there was maximum similarity of the content between target and source language. In the next step a team of translators was selected. The criteria for the selection of the members of the team is that the members' education level was at least MS/MPhil. They were all bilinguals, proficient in both source and target language. Translators with technical expertise in the field of Psychology were preferred. Three forward translations were obtained.

A committee comprising of expert judges was formed, who were asked to choose the best translated items. This choice was made from the three translated versions of the instruments. The judges' committee consisted of one professor in psychology, and two PhD scholars. They were proficient in both target (Urdu) and source (English) languages, as well as having expertise in the subject area of psychology. All the translations were reviewed carefully by the committee, and the best compatible option was selected. Authors of the scales were sent the back translations of the instruments. Once the author approved the suggested changes and the back translations the psychometric properties of all translated versions were established. The evidence of the divergent validity was also obtained. All translated versions had good reliabilities (TRSSA $\alpha=.79$, SCTV $\alpha=.81$,). Whereas, CBQ was already available in Urdu with reported reliability of $\alpha=.84$.

Social Competence Teacher Version Scale (SCTV)

The *Social Competence Scale - Teacher Version* has 25-items. It is a part of the Fast Track Project. The scale has good reported reliability ($\alpha=.74$) and validity. There are three subscales of Prosocial Behavior, Self-Regulation of Emotions and Academic Skills ($\alpha=.84$). Translated version of SCTV was used in the current research with $\alpha=.81$. (Inam, 2016)

The Children's Behavioral Questionnaire (CBQ-VSF)

The CBQ-VSF has 36 items. The age range of the sample is from three to eight years (Rothbart, Ahadi, Hershey & Fisher, 2001). There are three subscales: surgency/extraversion, negative affectivity, and effortful control. It is a 7 point Likert scale ranging from 1 to 7. Alphas are .75, .72 and .74 for surgency, negative affect and effortful control. For the purpose of the current study the translated version of the instrument was used with a reported reliability of $\alpha=.84$.

Teacher Rating Scale of School Adjustment - Short Version

A short version of TRSSA [Betts & Rottenberg, 2007], was used in the current study. Its original version consists of 52 items with 5 subscales. There are 16 items in TRSSA shorter version. There are three subscales namely on task classroom involvement, maturity and positive orientation. It basically assess children’s adjustment during early school years. It has three point Likert- type scoring, ranging from doesn’t apply [0] to certainly applies [2]. The reliability estimate of TRSSA is $\alpha=0.86$. For purpose of the current research the translated version of the scale was used with $\alpha =.79$.

Results

Findings of the current study are being presented in the following section.

Table 2. The Arithmetic Mean Scores in the of the Sub Scales of Social Competence Teacher Version Scale and Child Behavioral Questionnaire (N= 227)

Sub Scales	N	X
Pro Com	8	19.30
Em Reg	10	21.86
Aca Ach	7	17.72
Surgency	12	53.58
Neg Aff	12	54.39
Eff Cont	12	61.40
On task Class Inv	6	7.76
Maturity	5	5.91
Pos Ori	5	6.12

Note: Pro Com= Prosocial Communication, Em Reg= Emotional Regulation, Aca Ach= Academic Achievement, Neg Aff= Negative Affect, Eff Cont= Effortful Control, On Task Class Inv= On Task Classroom Involvement, Pos Ori= Positive Orientation

Table 2 represents The arithmetic mean scores of the sub-scales of the Social Competence Teacher Version, Teacher Rating Scale of School Adjustment, and Child Behavioral Questionnaire. The mean scores of the subscales Prosocial Communication, Emotional Regulation and Academic Achievement of Teacher Rating Scale of school adjustment are X= 19.30, X= 21.86 and X= 17.72 respectively. Whereas, for Child Behavioral Questionnaire the mean scores are X= 53.58, X=54.39 and X= 61.40, for the subscales Surgency, Negative Affect and Effortful Control respectively. Similarly for Social Competence Teacher Version Scale mean scores for the subscales On Task Classroom Involvement, Maturity and Positive Orientation are X=,7.76 X= 5.91, X= 6.1.

Table 3. The t-Test Results of the Sub-Scales of Child Behavioral Questionnaire, Teacher Rating Scale of School Adjustment and Social Competence Teacher Version Scale (n=227)

		n	M	SD	t	p	Cohen's d
Neg aff	Females	100	27.12	9.86	-.09	.000	-2.75
	Males	127	54.31	9.86			
Surg	Females	100	53.21	10.07	.48	.001	0.87
	Males	127	44.10	10.83			
Eff Cont	Females	100	61.98	11.20	.75	.452	0.15
	Males	127	60.65	13.86			
TRSSA	Females	100	20.45	7.45	-.60	.541	-.08
	Males	127	21.04	6.16			
SCTVS	Females	100	56.12	17.05	-1.5	.123	-.47
	Males	127	59.97	16.47			

Note: Neg Aff= Negative Affect, Surg= Surgency, Eff Cont= Effortful Control, TRSSA=Teacher Rating Scale of School Adjustment, SCTVS= Social Competence Teacher Version Scale

As it can be seen in the Table 3, there are significant differences between the scores obtained by the female and male children in the Negative affect and Surgency subscale of Child Behavioral Questionnaires ($p<.05$).

Table 4. The Results of Analysis of Correlation between the Children's Social Competence (SCTVS), Teacher Rating Scale of School Adjustment, and the Sub Scales of Child Behavioral Questionnaire; Surgency(Sur), Effortful Control(Eff Control), and Negative Affect (Neg Aff)

	1	2	3	4	5
Sur	-	.59**	-.57**	.07	.26**
Eff Cont	-	-	-.65**	.29**	.22**
Neg Aff	-	-	-	-.28**	-.24**
TRSSA	-	-	-	-	.54**
SCTVS	-	-	-	-	-

** $p < .01$

It is evident that the subscale Surgency of Child Behavioral Questionnaire(CBQ) has a significant positive relationship between with Effortful Control ($p < .01$, $r = .59$,) as well as with Social Competence Teacher Version Scale (SCTV) ($p < .01$, $r = .26$). Furthermore it has no significant relationship with Teacher Rating Scale of School Adjustment (TRSSA) and a significant negative correlation with Negative Affect ($p < .01$, $r = .57$). Similarly Effortful control subscale of CBQ has a significant positive correlation with TRSSA ($p < .01$, $r = .29$) and SCTVS ($p < .05$, $r = .22$). It also demonstrated a significant negative correlation ($p < .01$, $r = .65$) with subscale Negative Affect of CBQ. Similarly TRSSA has a significant positive correlation with SCTV ($p < .01$, $r = .54$).

Discussion

Temperament, school adjustment, and social competence are all crucial and related aspects of children's lives. Where temperament plays crucial role of determining the consequent social competence and school adjustment. The main objectives of the current research were the assessment of gender differences in the temperament, as well as the associations among the different aspect of school adjustment, temperament and social competence of preschoolers. The findings of the research are discussed in detail in the following section.

Results obtained on the subscales of Social competence scale and the Temperament measure both indicated significant differences. Boys scores higher on negative emotionality whereas there were significantly higher score for girls on the surgency subscale of the Child Behavioral Questionnaire. This is supported by the previous research which highlights that the behavioral display rules are different for both genders. Boys are expected to show anger and frustration (externalizing emotions) more often than girls. Similar trends have been seen in Pakistani cultures as display of anger is considered more "manly" (Azam & Aftab, 2012). Aggressive behaviour is an acceptable attribute in boys whereas it is highly discouraged for girl (Mushtaq et al., 2017). Whereas, girls are expected to display emotions of happiness and internalize negative emotions (Brody & Fischer, 2000). They are also expected to be more empathetic and sympathetic in both facial expressions as well as emphatic behaviors (Zahn-Waxler, Cole, & Barrett, 1991; Zahn-Waxler, 2001). These emotional expressions rules are also consistent with the gender roles of females being more relational-oriented and nurturing as compared to males (Barrett & Campos, 1987; Izard & Ackerman, 2000; Zahn-Waxler & Robinson, 1995). The studies conducted on the anger aggression behaviors among 4-5 years old preschoolers also confirm that boys score higher than girls on the negative emotionality (Estrem, 2005; Casas et al. 2006; Green et al., 2010). Brody (2009) highlighted that these gender differences in emotions have their basis in both the temperamental predispositions as well as the socialization by the significant others including parents, teachers and peers (see also McCoy et al., 2016).

Results of the study also confirmed that different temperament characteristics have significant positive or negative correlation with social competence. Surgency and Effortful control have significant positive correlations with social competence. Negative affect has a significant negative correlation with social competence. Research also support this finding that temperament plays a vital role in the social emotional relations children establish with the significant others (Denham et al., 2003; Garner & Spears, 2000; Mendez, Fantuzzo, & Cicchetti, 2002). Bates (1989) also confirms that both temperament and social competence have a significant relationship with one another. This is especially so for the negative emotional display. Children who are lower in the negative emotionality are better equipped at controlling or inhibiting the negative emotional outbursts. Such children are therefore liked by their peers and score higher on the social competence measures (Eisenberg & Fabes, 1998). Similarly, research highlights that the children who are

higher on the positive temperamental dimensions (for instance surgency and effortful control) are likely to have positive social relations ([Goldsmith, 1996](#); [Raver et al. 2009](#) & [Eisenberg et al. 1994](#)).

This study also indicated a significant positive correlation between effortful control and school adjustment. A significant negative correlation was also established between Negative Affect and school adjustment. Empirical evidence suggest a strong correlation between the school adjustment and temperament. However, different dimensions of temperament do not equally contribute in explaining the relationship between temperament and school adjustment. Our findings are in line with the previous research which emphasizes that both negative emotionality and low levels of effortful control are strongly associated with poor school adjustment ([Blair and Razza, 2007](#); [Valiente et al., 2008](#); [Zhou et al., 2010](#); [Hintsanen et al., 2012](#)).

Limitation and Suggestions

This research supports the fact there is need to formulate curricula aimed at improving social competence. This study utilized cross sectional research design, longitudinal and experimental studies conducted in future, might be helpful to understand the impact of educational programs on temperament. This study is one of the very few studies conducted on Pakistani preschoolers, especially in the context of the relationship between temperament, school adjustment and social competence. The construct of social-emotional competence has been largely ignored in the Pakistani educational set up. Finding of the research can have practical implications for policy making, especially in the educational settings.

However, this study utilized cross sectional research design. Findings can prove to be very fruitful and the associations could be more meaningful if a longitudinal study was conducted. This stands especially true for the school outcomes for preschoolers.

Conclusion

Leaving the secure home environment and entering school life can prove to be quite complex and taxing for a young child. Children with difficult temperament are additionally at risk for maladjustment and poor social competence in this context. Hence, understanding the underlying mechanisms of temperament and its relationship with social and school adjustment can help in setting the trajectory of their social, emotional and the consequent school adjustment in the right direction.

References

- Rothbart, M. K., & Bates, J. E. (2006). Temperament. In W. Damon, & N. Eisenberg (Eds.), *Handbook of Child Psychology. Vol. 3. Social, Emotional and Personality Development* (5th ed., pp. 105-176). New York: Wiley.
- Bates, & Rothbart, M. K. (Eds.), Temperament in childhood [pp. 321-356]. New York: John Wiley and Sons.
- Bates, J. E. (1989). Application of temperament concepts. In G. A. Kohnstamm, J. E.
- Blair, C., & Razza, R. P. (2007). Relating effortful control, executive function, and false belief understanding to emerging math and literacy ability in kindergarten. *Child development, 78*(2), 647-663.
- Bouffard, T., Roy, M., & Vezeau, C. (2005). Self-perceptions, temperament, socioemotional adjustment and the perceptions of parental support of chronically underachieving children. *International Journal of Educational Research, 43*(4-5), 215-235.
- Brendgen, M., Wanner, B., Morin, A. J., & Vitaro, F. (2005). Relations with parents and with peers, temperament, and trajectories of depressed mood during early adolescence. *Journal of abnormal child psychology, 33*(5), 579-594.
- Brody, L. R., & Hall, J. A. (2010). Gender, emotion, and socialization. In *Handbook of gender research in psychology* (pp. 429-454). Springer, New York, NY.
- Brophy-Herb, H. E., Lee, R. E., Nievar, M. A., & Stollak, G. (2007). Preschoolers' social competence: Relations to family characteristics, teacher behaviors and classroom climate. *Journal of Applied Developmental Psychology, 28*(2), 134-148.
- Brown, W. H., Odom, S. L., & Conroy, M. A. (2001). An intervention hierarchy for promoting young children's peer interactions in natural environments. *Topics in early childhood special education, 21*(3), 162-175.
- Buss, A. H., & Plomin, R. (2014). *Temperament (PLE: Emotion): Early developing traits*. Psychology Press.
- Casas, J. F., Weigel, S. M., Crick, N. R., Ostrov, J. M., Woods, K. E., Jansen Yeh, E. A., & Huddleston-Casas, C. A. (2006). Early Parenting and Children's Relational and Physical Aggression in the Preschool and Home Contexts. *Applied Developmental Psychology, 27*, 209-227. <http://dx.doi.org/10.1016/j.appdev.2006.02.003>.
- Chen, N., Deater-Deckard, K., & Bell, M. A. (2014). The role of temperament by family environment interactions in child maladjustment. *Journal of Abnormal Child Psychology, 42*(8), 1251-1262. doi: 10.1007/s10802-014-9872-y
- Chen, X., & French, D. C. (2008). Children's social competence in cultural context. *Annu. Rev. Psychol., 59*, 591-616.
- Denham, S. A., Blair, K. A., DeMulder, E., Levitas, J., Sawyer, K., Auerbach-Major, S., & Queenan, P. (2003). Preschool emotional competence: Pathway to social competence? *Child Development, 74*, 238-256. <http://dx.doi.org/10.1111/1467-8624.00533>
- Eisenberg, N. et al. (1994). The relations of problem behavior status to children's negative emotionality, effortful control, and impulsivity: Concurrent relations and prediction of change. *Developmental Psychology, 41*, 193-211. <http://dx.doi.org/10.1037/0012-1649.41.1.193>
- Eisenberg, N., & Fabes, R. A. (1998). Prosocial development. In W. Damon (Series Ed.), & N. Eisenberg (Vol. Ed.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (5th ed., pp.701-778). New York: Wiley.
- Estrem, T. L. (2005). Relational and physical aggression among preschoolers: The effect of language skills and gender. *Early Education & Development, 16*(2), 207-232.
- Garner, P. W., & Spears, F. M. (2000). Emotion regulation in low-income preschoolers. *Social Development, 9*, 246-264. <http://dx.doi.org/10.1111/1467-9507.00122>
- Geçten, E. (2008). *Psikanaliz ve sonrasi*. Ankara: Hür.138
- Goldsmith, H. H. (1996). Studying temperament via construction of the Toddler Behavior Assessment Questionnaire. *Child Development, 67*, 218-235. <http://dx.doi.org/10.2307/1131697>
- Green, R., Collingwood, R., & Ross, A. (2010). *Characteristics of bullying victims in schools*. London: Department for Education. Retrieved from <http://www.education.gov.uk/research/data/uploads/files/DFE-RR001.pdf>
- Hagekull, B., Bohlin, G., & Rydell, A. M. (1997). Maternal sensitivity, infant temperament, and the development of early feeding problems. *Infant Mental Health Journal, 18*, 92-106. [http://dx.doi.org/10.1002/\(SICI\)1097-0355\(199721\)18:1%3C92::AID-IMHJ7%3E3.0.CO;2-2](http://dx.doi.org/10.1002/(SICI)1097-0355(199721)18:1%3C92::AID-IMHJ7%3E3.0.CO;2-2)

- Hintsanen, M., Alatupa, S., Jokela, M., Lipsanen, J., Hintsala, T., & Leino, M. (2012). Associations of temperament traits and mathematics grades in adolescents are dependent on the rater but independent of motivation and cognitive ability. *Learning and Individual Differences, 22*(4), 490-497.
- Hussein, H. (2010). Using the sensory garden as a tool to enhance the educational development and social interaction of children with special needs. *Support for Learning, 25*(1), 25-31.
- Inam, A. (2016). Effectiveness of Preschool PATHS (Promoting Alternative Thinking Strategies) Curriculum to Enhance Social-Emotional Competence. [Doctoral dissertation, National Institute of Psychology, Quaid-i-Azam University Islamabad].
- Inam, A., Tariq, P. N., & Zaman, S. (2015). Cultural adaptation of preschool PATHS (Promoting Alternative Thinking Strategies) curriculum for Pakistani children. *International Journal of Psychology, 50*(3), 232-2
- Izard, C. E. (2007). Basic emotions, natural kinds, emotion schemas, and a new paradigm. *Perspectives on psychological science, 2*(3), 260-280.
- Katz, L. G., & McClellan, D. E. (1997). *Fostering children's social competence: The teacher's role*. Washington, DC: National Association for the Education of Young Children.
- Koçyiğit, S., Sezer, T., & Yilmaz, E. (2015). 60-72 aylık çocukların, sosyal yetkinlik ve
- Lavin-Loucks, D. (2006). The academic achievement gap. *Williams Institute Research Brief, July*.
- Malik, T. A., Siddiqui, S., & Mahmood, A. (2019). Behavioral and emotional problems among school children in Pakistan: A telephonic survey of prevalence and risk factors. *Journal of Paediatrics and Child Health, 55*(12), 1414-1423.
- Martin, C., Cabrol, S., Bouvard, M. P., Lepine, J. P., & Mouren-Simeoni, M. C. (1999). Anxiety and depressive disorders in fathers and mothers of anxious school-refusing children. *Journal of the American Academy of Child & Adolescent Psychiatry, 38*(7), 916-922.
- McCoy, D. C., Peet, E. D., Ezzati, M., Danaei, G., Black, M. M., Sudfeld, C. R., ... & Fink, G. (2016). Early childhood developmental status in low-and middle-income countries: national, regional, and global prevalence estimates using predictive modeling. *PLoS Medicine, 13*(6), e1002034.
- Mendez, J. L., Fantuzzo, J., & Cicchetti, D. (2002). Profiles of social competence among low-income African American preschool children. *Child Development, 73*(4), 1085-1100. <http://dx.doi.org/10.1111/1467-8624.00459>
- Merrell, C., & Tymms, P. B. (2001). Inattention, hyperactivity and impulsiveness: Their impact on academic achievement and progress. *British Journal of Educational Psychology, 71*(1), 43-56.
- Mushtaq, A., Lochman, J. E., Tariq, P. N., & Sabih, F. (2017). Preliminary effectiveness study of Coping Power program for aggressive children in Pakistan. *Prevention science, 18*(7), 762-771.
- Nelson, C. M. (1992). Searching for meaning in the behavior of antisocial pupils, public school educators, and lawmakers. *School Psychology Review, 21*(1), 35-39.
- Raver, C. C., Jones, S. T., Li-Grining, C., Zhai, F., Metzger, M., & Solomon, B. (2009).
- Rothbard, M. K., Ahadi, S. A., & Hershey, K. (2001). Temperament and the development of personality. *Journal of Abnormal Psychology, 110*(3), 55-66. <http://dx.doi.org/10.1037/0021-843X.110.3.55>
- Rothbart, M. K. (2011). *Becoming who we are: Temperament and personality in development*. Guilford Press.
- SETTE, S. (2012). The social adjustment in preschool age. The role of socio-emotional competence and teacher-child relationship quality on peer acceptance.
- Shujja, S., & Malik, F. (2011). Cultural Perspective on Social Competence in Children: Development and Validation of an Indigenous Scale for Children in Pakistan. *Journal of Behavioural Sciences, 21*(1), 13.
- Syed, E. U., & Hussein, S. A. (2009). Prevalence of emotional and behavioural problems among primary school children in Karachi, Pakistan—multi informant survey. *The Indian Journal of Pediatrics, 76*(6), 623-627.
- Syed, E. U., & Hussein, S. A. (2009). Prevalence of emotional and behavioural problems among primary school children in Karachi, Pakistan—multi informant survey. *The Indian Journal of Pediatrics, 76*(6), 623-627.
- Targeting children's behavior problems in preschool classrooms: A cluster-randomized controlled trial. *Journal of Consulting and Clinical Psychology, 77*, 302-316. <http://dx.doi.org/10.1037/a0015302>
- Thomas, A., & Chess, S. (1980). *The dynamics of psychological development*. Brunner/Mazel.
- Valiente, C., Lemery-Chalfant, K., Swanson, J., & Reiser, M. (2008). Prediction of children's academic competence from their effortful control, relationships, and classroom participation. *Journal of educational psychology, 100*(1), 67.

- Yağmurlu, B., & Altan, O. (2010). Maternal socialization and child temperament as predictors of emotion regulation in Turkish preschoolers. *Infant and Child Development, 19*, 275-296.
- Yağmurlu, B., & Sanson, A. (2009). Parenting and temperament as predictors of prosocial behavior in Australian and Turkish-Australian children. *Australian Journal of Psychology, 61*(2), 77-88. <http://dx.doi.org/10.1080/00049530802001338>.
- Zahn-Waxler, C. (2001). The development of empathy, guilt, and internalization of distress. *Artery, Depression and Evolution, 22*-265. Pakistan: a quasi-experimental study.
- Zahn-Waxler, C., & Robinson, J. (1995). Empathy and guilt: Early origins of feelings of responsibility.
- Zahn-Waxler, C., Cole, P. M., & Barrett, K. C. (1991). Guilt and empathy: Sex differences and implications for the development of depression.