

## **Impact of Attachment Styles on Internalizing and Externalizing Behavioral Problems among Children and their Academic Achievement**

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The current study examines attachment styles as determinants of internalizing and externalizing behavioral problems among children, and their academic achievement. The convenient sampling technique was used to collect the sample data comprising of (N=201) school children studying in the 9<sup>th</sup> and 10<sup>th</sup> grades; further divided on the basis of gender i.e. boys (n=100) and girls (n=101) with age ranges between 15 to 17 years. Their attachment styles and behavioral problems were measured through the Child Problem Checklist and Attachment Style Scale respectively. Academic achievement was taken from their respective schools. Pearson correlation, multiple regression and independent t-test analyses were computed to verify the hypotheses. Co relational analysis showed that avoidant and anxious attachment styles were negatively correlated and the secure attachment style was positively Co related with academic achievement. Multiple regression analysis demonstrated the secure and anxious attachment styles as significant negative predictors of internalizing behavioral problems whereas the avoidant style was found to be significant positive predictor of internalizing behavior problems. A significant inverse relationship exists between internalizing behavior problems, with externalizing behavior problems and with secure attachment style. Avoidant attachment style predicted externalizing behavioral problems significantly and negatively and non-significantly to internalizing behavior problems. Significant gender differences were demonstrated on the aforementioned constructs except secure attachment style and academic achievement. Further significant school differences were found on all variables except internalizing behavioral problems and the avoidant attachment style.

*Keywords:* Attachment styles, internalizing behavior, externalizing behavior, academic achievement

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Attachment theory has a remarkable impact on the empirical research in understanding the complexities of relations in children with behavioral problems. Children with externalizing behavior problems are also termed as having conduct problems or showing antisocial behavior or are described as having under controlled problems. These include behavior problems that are manifested in the problematic behavior of children in relation to the outer environment (Eisenberg et al., 2001) and internalizing behavioral problems that are intrapersonal in nature and appear in the form of withdrawal, depression, anxiety, and fearfulness; these have a greater probability to affect children and adolescents than others (Campbell, 1995).

Attachment behavior, which is elicited by threatening situations (Rice, 1990) helps a child to maintain proximity to the figure that he/she is attached to. Moreover, it does not cease to exist with the temporary absence of the attachment figure (Ainsworth & Witting, 1969). There are three essential features of attachment (Cicchetti, Cummings, Greenberg & Marvin, 1990) including; (i) its function (i.e. it protects children from danger), (ii) its outcome (i.e. it regulates closeness to the attachment figure), and (iii) its set goal feature, (i.e. it forms a state of security). Quality or security of attachment relationships depends on the responsiveness of the attachment figure (Ainsworth, Blehar, Waters & Wall, 1978). Children treated appropriately by their caretakers develop as securely attached; on the other hand the children with insecurely attached style are generally those whose caretakers are unresponsive (Ainsworth, 1989).

Fraley and Shaver (1997) describe several "central propositions" of attachment in adults. There are four attachment styles which have been identified for adults (Bowlby, 1979): (i) secure, (ii) anxious-preoccupied, (iii) dismissive-avoidant, and (iv) fearful - avoidant. Behavioral problem phenomenon has been described by Easterbrook, Davidson, and Chazan (1993) that there is no single cause of such problems. A very common distinction in the field of child/developmental psychology and psychiatry is the separate description of both "externalizing" and "internalizing" disorders (Achenbach & Edelbrock, 1978). It includes behavior

problems that are manifested in children's problematic behavior to the outer environment (Campbell, Shaw & Gilliom, 2000; Eisenberg et al, 2001). These disorders consist of disruptive, hyperactive, aggressive, and delinquent behaviors (Hinshaw, 1987), attention-deficit hyperactivity disorder, conduct and emotional problems (Achenbach, 1991).

Researchers have been interested in studying externalizing behavior problems for a number of reasons. Richman (1985) found that the most common reason of preschool children for visiting a psychological clinic is due to this kind of disruptive behavior. If externalizing behavior persists for a long period of time, that is, if it is present at age three or four years, it is expected to continue into elementary school, late childhood and early adolescence (Campbell, 1995). Moffitt (1993) recognized this stability specifically over the lifespan in serious antisocial behavior and noted that it is persistent over the years in the same fashion. There are basically two parallel education systems on the basis of ownership; (i) Government and (ii) Private. In Pakistan, the quality of education has a declining trend as shown by the shortage of teachers and poorly equipped laboratories that has resulted in the out-dated curriculum with little relevance to our present day needs (Rasool, 2007). Secondary education in Pakistan begins from grade 9 and lasts for four years. After the end of each of the four school years, students are required to pass a national examination administered by a regional Board of Intermediate and Secondary Education (or BISE) (Rasool, 2007).

The present study is aimed at investigating the impact of attachment styles in the development of behavioral problems, internalizing as well as externalizing and its effect on academic achievement, among children. Such factors provide strong bases to carry out a research to take a scientific and psychological view point on these issues from a Pakistani perspective.

### **Hypotheses**

1. There would be a significant relationship between attachment styles and internalizing and externalizing behavior problems in children.

2. There would be gender differences on internalizing and externalizing behavioral problems, attachment styles and academic achievement.
3. Children from private and government schools will have differences on internalizing behavior problems, externalizing behavior problems, attachment styles and academic achievement.

## **Method**

### **Participants**

Using the convenient sampling technique, a sample of ( $N = 200$ ) school children of 9<sup>th</sup> and 10<sup>th</sup> grades was obtained: 100 boys were obtained from both government ( $n = 50$ ) and private ( $n = 50$ ) sectors; and 101 girls were obtained from both government ( $n = 50$ ) and private ( $n = 51$ ) sectors of Multan.

### **Measures**

An Urdu version of the **Attachment Style Scale** originally developed by Collins and Reed (1990) was developed by the author, utilizing the translation and back translation method. This scale consists of 18 items to measure three dimensions of attachment. The Cronbach Alphas for translated subscales ranged from 0.78 to 0.87.

**Child Problem Checklist (CPCL)** comprising of 80 items developed by Tariq and Hanif (2007) has been used for the identification of children's problems. The Cronbach Alphas for CPLC range from 0.79 to 0.85.

Academic achievement of the respondents was taken from their respective school records.

### **Procedure**

The sample was chosen by using the convenient sampling technique. Respondents were approached directly at their respective schools. Prior to the test administration, informed consent of the participants and administration was obtained. They were briefed about the purpose of the study. Both scales were administered on the same day and in one sitting but with a rest interval of one hour.

## Results

Table 1

*Alpha Reliabilities of All the Scales (N = 201)*

Variables	No of items	A
Internalizing Behavior Problems	33	.61
Externalizing Behavior Problems	36	.66
Secure Attachment Style	6	.71
Anxious Attachment Style	6	.67
Avoidant Attachment Style	6	.74

All the scales used in the study secured satisfactory alpha coefficients of reliability. It ranged from .61 minimum for Internalizing Behavior Problems, to .74 highest for the Avoidant Attachment Style.

Table 2

*Correlation Matrix among the Variables (N = 201)*

Scales	1	2	3	4	5	6
1	--	.19**	-.04	-.05	.07	-.27**
2	--	--	-.02	.41**	-.24**	-.03
3	--	--	--	.22**	.15*	.28
4	--	--	--	--	.00	-.03
5	--	--	--	--	--	-.04
6	--	--	--	--	--	--

Note: Internalizing Behavior Problems; 2 = Externalizing Behavior Problems; 3 = Secure Attachment Style; 4 = Anxious Attachment Style; 5 = Avoidant Attachment Style; 6 = Academic Achievement (taken from respective school records).

\* $p < .01$ , \*\* $p < .05$

Significant inverse relationship exists between internalizing behavioral problems with values .19 and -.27, externalizing behavior problems by .41 and -.24, and secure attachment style .22 and .15. However, externalizing behavior problems show a significant negative correlation with avoidant attachment style and with academic achievement as per the result: -.27. Academic achievement also showed a negative relationship with the anxious and avoidant attachment styles.

Table 3

*Multiple Regression Analysis of Secure, Anxious, and Avoidant Attachment Styles for Internalizing Behavior Problems (N = 201)*

Predictor Variable	$\beta$	$\Delta R^2$	F (Model)
Secure Attachment Style	-.04		
Anxious Attachment Style	-.05	-.004	.75
Avoidant Attachment Style	.08		

$df = 198$

The results of multiple regression analysis show the effects of three independent variables i.e., secure, anxious, and avoidant attachment styles on internalizing behavior problems. This model of multiple regression analysis is found to be non-significant ( $F=.75$ ) and explains only 1% variance in internalizing behavior problems that could be attributed to secure, anxious, and avoidant attachment styles ( $R^2 = .01$ ).

Table 4

*Multiple Regression Analysis of Secure, Anxious and Avoidant Attachment Styles for Externalizing Behavior Problems (N = 201)*

Predictor Variable	$\beta$	$\Delta R^2$	F (Model)
Secure Attachment Style	-.08		
Anxious Attachment Style	.43	.24	20.65***
Avoidant Attachment Style	-.22		

\*\*\* $p < .001$ ,  $df = 198$

The results of multiple regression analysis show that among all the independent variables the anxious style was the only construct that was found to be a positive predictor. The secure style was low in magnitude, yet significant in magnitude among all regressed attachment styles. This model was found to be significant at ( $F=20.65$ ,  $p<.001$ ) and explains 24% variance in

externalizing behavior problems that could be attributed to secure, anxious, and avoidant ( $R^2 = .24$ ).

Results also suggested that the secure attachment style was negatively related to the externalizing behavior problems showing the beta value ( $\beta = -.08$ ,  $t = .09$ ,  $p = < .05$ ). There was a positive relationship between anxious attachment style and externalizing behavior problems showing the beta value ( $\beta = .43$ ,  $p < .001$ ). The relationship between avoidant and externalizing behavior problems turned out to be negative showing the beta value of ( $\beta = -.22$ ,  $p < .001$ ). The most important factors in the prediction of externalizing behavior problems turned out to be anxious ( $\beta = .43$ ), and avoidant ( $\beta = -.22$ ).

Table 5

*Comparison of Males and Females on Internalizing Behavior Problems, Externalizing Behavior Problems, Secure, Anxious, Avoidant Attachment Styles, and Academic Achievement (N = 201)*

Variables	Males (n = 100)		Females (n = 101)		t	p
	M	SD	M	SD		
Intrlze	63.45	17.50	67.21	14.07	1.66	.05
Extrnize	74.48	23.58	50.80	10.88	9.91	.00
Secure	18.08	3.28	18.63	3.45	1.44	.25
Anxious	21.72	4.05	19.53	3.97	3.85	.00
Avoidant	18.50	2.30	20.18	2.67	4.76	.00
Academic Achievement	64.56	15.34	63.00	10.46	.84	.04

$df = 199$

*Note:* Intrlze = Internalizing Behavior Problems; Extrnize = Externalizing Behavior Problems; Secure = Secure Attachment Style; Anxious = Anxious Attachment Style; Avoidant = Avoidant Attachment Style; A.A = Academic Achievement.

The mean difference is found to be significant on internalizing behavior problems { $t(199) = 1.66, p < .05$ }, externalizing behavior problems { $t(199) = 9.91, p < .001$ } It implies that boys have more externalizing behavior problems and girls are high on internalizing behavior problems as compared to their counterparts.

Table 6

*Comparison of Private and Government Schools on Internalizing Behavior Problems, Externalizing Behavior Problems, Secure, Anxious, Avoidant Attachment Style, and Academic Achievement (N = 201)*

Variables	Private ( $n = 100$ )		Government ( $n = 101$ )		$t$	$p$
	$M$	$SD$	$M$	$SD$		
Intize	63.56	14.97	67.50	16.88	1.57	.11
Extnize	67.37	22.74	57.94	19.91	3.12	.002
Secure	19.17	3.32	17.56	3.24	3.46	.001
Anxioue	22.28	3.69	18.98	3.93	6.12	.00
Avoidant	19.23	2.83	19.46	2.41	.60	.54
Academic Achievement	69.96	7.95	57.65	14.31	7.53	.00

$df = 199$

*Note:* Intrlze = Internalizing Behavior Problems; Extnize = Externalizing Behavior Problems; Secure = Secure Attachment Style; Anxious = Anxious Attachment Style; Avoidant = Avoidant Attachment Style; A.A = Academic Achievement.

The mean difference is found to be significant on externalizing behavior problems  $t = 3.12, p < .05$ , secure attachment style  $t = 3.46, p < .01$ , anxious  $t = 6.12, p < .001$ , academic achievement  $t = 7.53, p < .001$ , It implies that children of private schools have more externalizing behavioral problems, high

on secure and anxious attachment styles and have high academic achievement as compared to their counterparts. While, non-significant differences on type of schools attended were found on internalizing behavioral problems and avoidant attachment style.

### **Discussion**

The research findings indicate that avoidant attachment styles show a negative relationship with externalizing behavior problems. It also suggests that anxious attachment and avoidant attachment styles would predict externalizing behavior problems positively among children. These findings are in line with previous empirical endeavors that have found relationships between inattention problems and anxious attachment (Allen, Moore, Kuperminc & Bell, 1998; Allen, Moore & Kuperminc, 1997; Allen et al., 2002). A negative relationship was assumed between avoidant and internalizing problems but this relationship was not consistent with existing findings (Renekn, Geland, Marvinney, Mangelsdorf & Sroufe, 1989). The study by Finzi, Ram, Har-Even, Shnit and Weizman (2001) is in line with the results and has found a non-significant relationship between avoidant and internalizing problems among children with a low socio economic status.

Multiple regression analysis indicates that the secure style is low in magnitude, yet significant, among all regressed attachment styles. Furthermore it has been suggested in current findings that the secure attachment style is negatively related to the externalizing behavior problems. Findings also showed a positive relationship between the anxious attachment style and externalizing behavior problems. Finally, the third relationship between avoidant and externalizing behavior problems turned out to be negative. The most important factor in the prediction of externalizing behavioral problems turned out to be the anxious attachment style.

Roberts (1992) studied attachment styles and behavioral problems (internalizing and externalizing). Children separately completed demographic, attachment style and behavior problem questionnaires. Research findings supported a positive view of relationship between avoidant and anxious styles and externalizing behavior problems. The current study results also show that boys

have more externalizing behavioral problems as compared to their female counterparts. Previous studies also indicate that externalized behavioral problems are more strongly associated with boys, whereas internalized behavioral problems are associated with girls (Roebkin, 2007).

Couple of studies, Garnezy (1983) and Greenberg and Speltz (1988) are consistent with the results of the present study. Our empirical investigations have found that children studying in private schools are higher on externalizing behavior problems which might be the result of low control on children. Moreover results have been supported by many researchers that socio economic status, background, and cultural values affect the attachment styles and their impact on children (Darling & Steinberg, 1993). The externalizing and internalizing behaviors measured in this study may arise at different points in the life span but could also have precursors in infancy that make the child more difficult to deal with. Attachment theory contends that parenting behavior shapes the development of internal working models in infancy that are expressed as secure or insecure attachment styles (Bowlby, 1969).

On gender, generally it is considered that girls perform better than boys in academic settings (Spence, 1983). Same results have been found by Bruni et al. (2006). They examined the relationship between academic achievement and demographic factors on 380 school students. The findings showed that there are significant differences between the academic achievement of girls and boys. They found that girls have higher academic achievement than that of boys. Yousefi, Mansor, Juhari, Redzuan and Talib (2010) concluded similar results by carrying out a study among 400 students. The sample consisted of 200 girls and 200 boys whose ages ranged from 15 to 19 years. They concluded that there is a significant difference between the academic achievement of girls and boys. Donahue, Voelkl, Campbell and Mazzeo (1999) also carried out a research and found that girls outperformed boys in grade 4, 8, and 12.

Such a difference favoring girls does not remain the same in all academic areas and disciplines. Achievement of girls is usually higher in learning tasks. McKenna, Kear and Ellsworth (1995) investigated that girls possess more positive attitudes than

boys toward recreational as well as academic reading in all grades. The reason for this difference is stated by Eccles, Wigfield, Harold and Blumenfeld (1993) as girls value reading more than boys, and they are found to be more competent as readers than boys. Additionally, female children appear to receive more supportive care than male children (Baharudin & Luster, 1998).

Male students perform better than girls, on Mathematics. NAEP 2000 Mathematics Assessment investigated that higher percentage of boys performed better than girls at grades 4, 8, and 12 whereas the older two grades were higher but the difference was not significant (U.S. Department of Education, 2001).

### **Conclusion**

Results showed that avoidant and anxious attachment styles were negatively and secure attachment style was positively correlated with academic achievement. Secure and anxious attachment styles emerged as significant negative predictor of internalizing behavioral problems whereas avoidant style was found to be significant positive predictors of internalizing behavior problems. Significant inverse relationship exists between internalizing behavior problems, externalizing behavior problems, and secure attachment style. Avoidant attachment style predicted externalizing behavioral problems significantly and negatively and non-significantly to internalizing behavior problems.

Gender has been a focus of research with relevance to academic achievement, therefore, significant gender differences were demonstrated on aforementioned constructs except secure attachment style and academic achievement. Results further yielded a significant school type difference on all variables except internalizing behavioral problems and avoidant attachment style.

### **Limitations and Suggestions**

More extended study would have increased the external validity, if the sample size would have been increased, representing all ethnic groups and geographic areas of the entire province. Use of random sampling technique in place of purposive sampling would have been better to reduce the chances of probability. It would have been more extensive, if variables like age group, birth order, cultural diversity, socio economic status,

and family system were included. Therefore, it is also suggested that a bigger sample should be included in further research representing the entire province.

### **Implications of the Study**

The current findings have some genuine implications for academic and counseling settings. Academic and administration staff may benefit from the results while designing and planning an intervention. The study would help the close family members of adolescents to maintain positive relationships. These findings would help in planning behavioral parent trainings in treating child behavior problems. Early identification of behavior problems of the children would help in educating the parents for prevention and in curing these behavioral problems by changing and modifying their attachment style.

### **References**

- Achenbach, T. M. (1991). *Manual for the child behavior checklist*. Burlington, VT: University of Vermont.
- Achenbach, T. M., & Edelbrock, C. S. (1978). The classification of child psychopathology: A review and analysis of empirical efforts. *Psychological Bulletin*, 7(85), 1275-1301.
- Ainsworth, M. D. S. (1989). Attachment beyond infancy. *American Psychologist*, 44, 709-716.
- Ainsworth, M. D. S., & Wittig, B. A. (1969). Attachment and the exploratory behavior of one-year-olds in a strange situation. In B. M. Foss (Ed.), *Determinants of infant behavior* (pp. 113-136). London: Methuen.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Lawrence Erlbaum.
- Allen, J. P., Marsh, P., McFarland, C., McElhaney, K. B., Land, D., Jodl, K., & Peck, S. (2002). Attachment and autonomy as predictors of the development of social skills and delinquency during midadolescence. *Journal of Consulting & Clinical Psychology*, 70(1), 56-66.
- Allen, J. P., Moore, C. M., & Kuperminc, G. P. (1997). Developmental approaches to understanding adolescent

- deviance. In S. S. Luthar & J. A. Burack (Eds.), *Developmental psychopathology: Perspectives on adjustment, risk, and disorder* (pp. 548–567). New York: Cambridge University Press.
- Allen, J. P., Moore, C., Kuperminc, G., & Bell, K. (1998). Attachment and adolescent psychosocial functioning. *Child Development, 69*, 1406–1419.
- Baharudin, R., & Luster, T. (1998). Factors related to the quality of the home environment and children's achievement. *Journal of Family Issues, 19*, 375–404.
- Bowlby, J. (1969). *Attachment and separation loss*. London: Hogarth.
- Bowlby, J. (1979). *The making and breaking of affectional bonds*. London: Tavistock Governmentations.
- Bruni, O., Ferini-Strambi, L., Russo, P. M., Antignani, M., Innocenzi, M., & Ottaviano, P., (2006). Sleep disturbances and teacher ratings of school achievement and temperament in children. *Sleep Medicine, 7*(1), 43–48.
- Campbell, S. B. (1995). Behavior problems in preschool children: A review of recent research. *Journal of Child Psychology and Allied Disciplines, 36*, 113–149.
- Campbell, S. B., Shaw, D. S., & Gilliom, M. (2000). Early externalizing behavior problems: toddlers and preschoolers at risk for later maladjustment. *Developmental Psychopathology, 12*(3), 467–88.
- Cicchetti, D., Cummings, E. M., Greenberg, M. T., & Marvin, R. S. (1990). An organizational perspective on attachment beyond infancy: Implications for theory, measurement, and research. In M. Greenberg, D. Cicchetti, & E. Cummings (Eds.), *Attachment in the preschool years: Theory, research and intervention* (pp. 3–49). Chicago: University of Chicago Press.
- Collins, N., & Reed, S. J. (1990). Adult attachment, working model, and relationship quality in dating couples. *Journal of Personality and Social Psychology, 58*, 644–663.
- Darling, N., & Steinberg, L. (1993). Parenting style as context: an integrative model. *Psychological Bulletin, 113*, 487–496.
- Donahue, P. L., Voelkl, K. E., Campbell, J. R., & Mazzeo, J. (1999). *NAEP 1998 reading report card for the nation*

- (*NCES Report No. 1999-459*). Washington, DC: National Center for Education.
- Easterbrooks, M. A., Davidson, C. E., & Chazan, R. (1993). Psychosocial risk, attachment, and behavior problems among school-aged children. *Development and Psychopathology*, 5(3), 389-402.
- Eccles, J., Wigfield, A., Harold, R., & Blumenfeld, P. (1993). Age and gender differences in children's self and task perceptions during elementary school. *Child Development*, 64, 830-847.
- Eisenberg, N., Cumberland, A., Spinard, T. L., R. A., Shepard, S. A., Reiser, M., Murphy, B. C., Losoya, S. H., and Guthrie, I. K. (2001). The relations of regulation and emotionality to children's externalizing and internalizing problem behavior. *Child Development*, 72, 1112-1134.
- Finzi, R., Ram, A., Har-Even, D., Shnit, D., & Weizman, A. (2001). Attachment styles and aggression in physically abused and neglected children. *Journal of Youth and Adolescence*, 30(6), 769-786.
- Fraley, R. C., & Shaver, P. R. (1997). Adult attachment and the suppression of unwanted thoughts. *Journal of Personality and Social Psychology*, 73, 1080-1091.
- Garmezy, N. (1983). Stressors of childhood. In N. Garmezy & M. Rutter (Eds.), *Stress, coping and development in children* (pp. 43-84). New York: McGraw-Hill.
- Greenberg, M. T., & Speltz, M. L. (1988). Contributions of attachment theory to the understanding of conduct problems during the preschool years. In J. Belsky & T. Nezworski (Eds.), *Clinical implications of attachment* (pp. 177-218). Hillsdale, NJ: Erlbaum.
- Hinshaw, S. P. (1987). On the distinction between attentional deficits/hyperactivity and conduct problems/aggression in child psychopathology. *Psychological Bulletin*, 101, 443-463.
- McKenna, M. C., Kear, D. J., & Ellsworth, R. A. (1995). Children's attitudes toward reading: A national survey. *Reading Research Quarterly*, 30, 934-956.

- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, 100(4), 674-701.
- Rasool M. G. (2007). Education in Pakistan: The key issues, problems and the new challenges. *Journal of Management and Social Sciences*, 3(1), 47-55.
- Renekn, B., Egeland, B., Marvinney, D., Mangelsdorf, S., & Sroufe, L. A. (1989). Early childhood antecedents of aggression and passive-withdrawal in early elementary school. *Journal of Personality*, 57, 257-281.
- Rice, K. G. (1990). Attachment in adolescence: A narrative and meta-analytic review. *Journal of Youth and Adolescence*, 19(5), 511-538.
- Richman, E. A. (1985). Disorders of preschool children. In M. Rutter & L. Hersov (Eds.), *Child and adolescent psychiatry: Modern approaches*. Boston: Blackwell Scientific Publications.
- Roberts, T. W. (1992). Sexual attraction and romantic love: Forgotten variables in marital therapy. *Journal of Marital and Family Therapy*, 18, 357-364.
- Roebkin, H. (2007). *Multiple goals, satisfaction, and achievement in university undergraduate education: A student experience in the research* (Unpublished doctoral dissertation). University of California, Berkeley.
- Spence, J. T. (1983). Achievement and achievement motives: psychological and sociological approach. San Francisco: Freeman.
- Tariq, N., & Hanif, R. (2007). *Child Problem Checklist* (unpublished manuscript). National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.
- U.S. Department of Education. (2001). *The Nation's Report Card: Mathematics highlights 2000 (NCES 2001-518)*. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement.
- Yousefi, F., Mansoor, M. B., Juhari, R. B., Redzuan, M., & Talib, M. A. (2010). The relationship between gender, age, depression and academic achievement. *Current Research in Psychology*, 6 (1), 61 – 66.