ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, S Iss 3,December 2022

Prediction Behavioural Problems Among The School Going Adolescents In Kashmir, Based On Bio-Ecological Systems Model

[*1]Nissar Ahmad Rather, [2]Gowher Ahmad Wani, [3]Frank Nana Kweku Otoo

[*1]Department of Psychology GDC Uri J&K

[2]Department of Statistics GDC Uri J&K

[3]Department of Secretaryship and Management Koforidua Technical University Ghana

Email: [*1]nisarmphil@gmail.com, [2]gowherwani413@gmail.com

ABSTRACT

The purpose of the current study was to examine the behavioural problems in school going adolescents of Kashmir utilizing Bio-ecological systems model. Participants of the study were 286 adolescents selected purposively from different higher secondary institutions of Srinagar; Baramulla and Sopore. Behavioural problems were defined as measured by Behavioural Problem Monitor (BPM-YF). The study found significant correlation between the age of the adolescents and the behavioural problems. However an insignificant association was found between gender and the adolescent behavioural problems. Results revealed a significant correlation between contextual processes of family and behavioural problems in adolescents. Further the model ANOVA showed that family functioning can significantly predict behavioural problems in adolescents of Kashmir.

Key words: Adolescents, Family Functioning, Behavioural Problems.

1. INTRODUCTION

There is no single event or boundary line that denotes the end of childhood or the beginning of adolescence. Rather, it is thought of as the passage from childhood into and through adolescence as composed of a set of transitions that unfold gradually and that touch upon many aspects of the individual's behavior, development, and relationships. Arnett (1999) considers three domains of potential upheaval during adolescence: (1) conflict with parents, (2) mood disruptions, and (3) risk behavior. There are individual differences among adolescents in the extent to which they exhibit behavioral problems as well as cultural variations in the pervasiveness of adolescent behavioral problems (Arnett, 1999).

Several theories have been developed to explain the development of behavioral problems in adolescents. Some focus on the internal processes and others on external influences related to developmental changes. One of these frameworks is systems theory which states that thrust that development cannot be explored or explained by any one single concept, like biology, but rather by a more multidimensional and complex system (Bronfenbrenner, 1979; Szapocznik & Coatsworth, 1999).

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, S Iss 3,December 2022

Urie Bronfenbrenner (1977; 1979; 1986; 1989) formulated the theory known as the ecological systems theory. According to Bronfenbrenner, an individual's development is gradually shaped by the varied systems of his/her environment and also by the interrelationships among the systems. The relationship between an individual and the environment is reciprocal. Human beings, Bronfenbrenner suggested, cannot develop in isolation, but within a system of relationships that include family and society. The ecological environment, as Bronfenbrenner (1979) put it, is a "set of nested structures, each inside the next like a set of Russian dolls" (p. 3). From a functional perspective, this hierarchically organized system can be better understood within a related framework, the Process, Person, Context, and Time (PPCT) model. Bronfenbrenner's ecological theory has four major components: process, person, context, and time (Wachs & Evans, 2010).

Process includes proximal and distal processes. The proximal or near processes involve all sorts of transactions between an individual and the immediate surroundings that are responsible for his competencies and general well-being. Examples of proximal processes, either protective or preventive, are family environment, authoritative parenting, nutrition, parental involvement, religious or cultural practices, etc. There are also distal processes at work. Distal processes include a family's own ability to support a child as well as interact with other environments, of which, the child is a part of (e.g., access to community resources, resources to enable integration with different people of different ethnic or social classes). *Person* that is the characteristics of an individual itself determine the influence of family, caregivers, or peers. For example, differences between boys and girls in their maturity, coping skills, reasoning etc., contribute to differences in social relationships and healthy functioning in terms of biology. *Context* is the best known component is the ecological framework, and is perhaps, the most important of all four components in conceptualizing and designing studies on developmental outcomes. Context refers to the multiple venues modifying the proximal processes, and they include environments in which an individual is in constant interaction, whether it's physical, social, or economic interaction. The context, according to Bronfenbrenner, constitutes four distinct concentric systems: micro system, mesosystem, exosystem, and macrosystem, each having either direct or indirect influence on the development of an individual (Parrila, Ma, Fleming, & Rinaldi, 2002). A graphic representation of the key features in Bronfenbrenner's bio-ecological model is presented in Figure 1.1.

Microsystem is the innermost level, the one that is closest and directly related to an individual. It consists of such contexts as family, playmates, school, and neighborhood wherein the proximal processes occur. This layer has the most immediate and earliest influence on an individual (Ceci, 1990; Stevenson & Stigler, 1992).

Mesosystem is the second immediate layer which focuses on the connections between two or more systems, essentially different microsystems. For example, what happens in a

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, S Iss 3,December 2022

microsystem, such as the home in which an individual lives, can influence what happens in the school or vice versa (Epstein, 1983).

Exosystem is the third layer although not directly encountered by an individual, it impacts his development. For example, a parent's workplace schedule can influence the proximal processes. Similarly racial and ethnic background can all be considered as exosystem influences on an individual (Cochran, et. al., 1990; Eckenrode & Gore, 1990; Pence, 1998).

Macrosystem is the outermost context layer. This societal blueprint influences all lower layers of the ecosystem. It includes cultural characteristics, political upheaval, language, geography, employment or economic disruptions, all of which can solely or collectively shape development. Problems related to these contribute to an unstable environment where children can be at a greater risk of development (Bronfenbrenner, 1986; 1988; 1989; 1993).

Chronosystem was later added as fifth system to incorporate the dimension of time. A chronosystem encompasses changes or consistency overtime not only in the characteristics of the person but also of the environment in which that person lives e.g., changes in family structure, socioeconomic status, employment, place of residence or the degree of hecticness and ability in everyday life.

The *time* component of Bronfenbrenner's model encompasses various aspects, such as chronological age, duration and nature of periodicity. This may involve internal or external changes, such as the physiological changes or events, such as the loss of a parent, parent's debilitating illness, divorce etc. Time appears not merely as an attribute of the growing human being, but also as a property of the surrounding environment not only over the life course, but across historical time (Clausen, 1986, Elder, 1974, Elder, et. al., 1993).

In summary, the ecological systems theory summarizes that human development outcomes must move beyond examining the biology. The bio-ecological theory is the first theory to embed the context in which an individual lives by biological predispositions. It is based on the thesis that an individual do not develop in isolation, but, develop instead in a variety of contexts or environments in which they interact continuously. Development is not only shaped by the immediate environment, but also by the interaction with the larger environment.

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, S Iss 3,December 2022

Figure 1.1

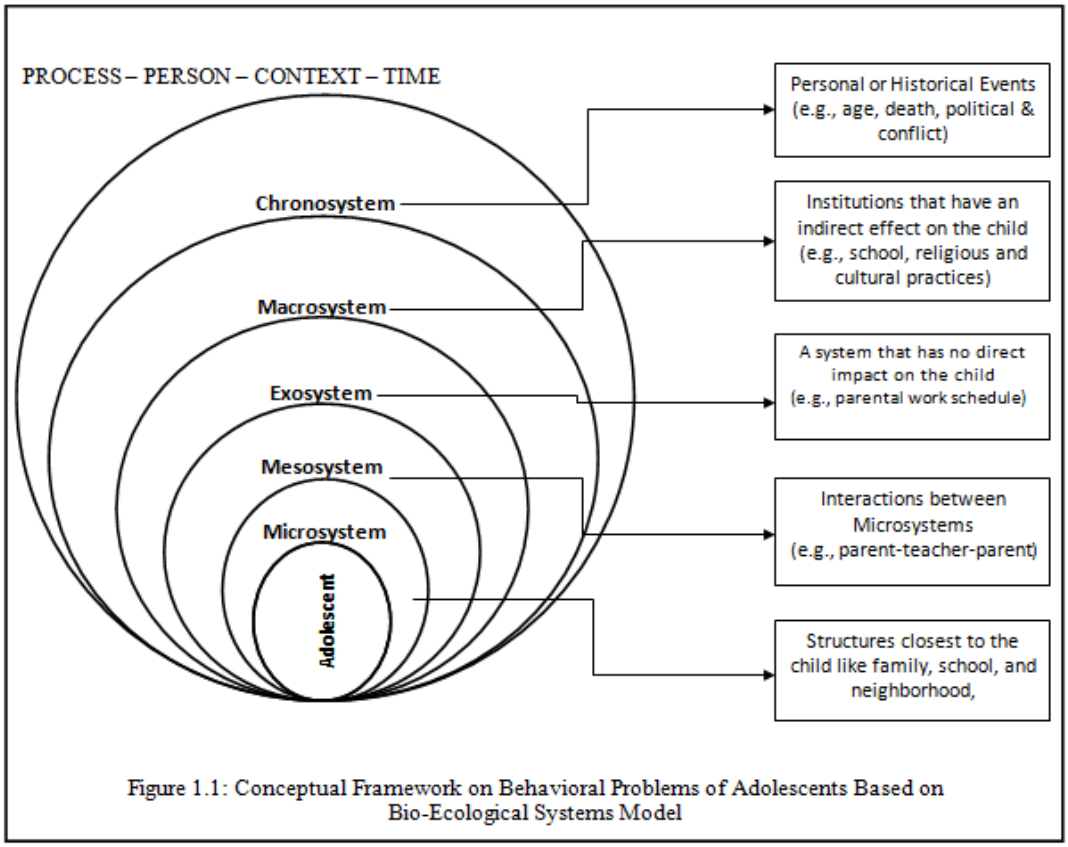

Figure 1.1: Conceptual Framework on Behavioral Problems of Adolescents Based on Bio-Ecological Systems Model

Prevalence and Pattern of Behavioural Problems in Adolescents

World Health Organization (WHO, 2001) estimate shows that up to 20% adolescent have one or more mental or behavioural problems. In India it is in the range of 13.7% to 50% (Mishra & Sharma, 2001). In Chandigarh, in a school based cross-sectional study conducted on 1150 adolescents in 12 to 18 year age group in grades 7 to 12 in 10 co-educational schools (government run and private) utilizing stratified random sampling, Revealed that the prevalence of behavioural and emotional problems in adolescents was found to be 30%, with girls exceeding boys in all age groups. Internalizing syndrome was the most common (28.6%) psychiatric problem (Pathak, Sharma, Parvan, Gupta, Ojha, & Goel, 2011).

There is empirical literature demonstrating that adolescent internalizing and externalizing symptoms are related to contextual factors such as family, school, and peers (e.g., Grills & Ollendick, 2002; Vitaro, Brendgen, & Tremblay, 2000).The findings highlight the need for more effective ways to identify the contextual factors of behavioural problems in adolescents. There is huge complexity as the trajectories of internalizing and externalizing symptoms may be related, although the variables that predict these trajectories are often different (Fergusson & Woodward, 2002; Reitz, Dekovic, & Meijer, 2005). The present study relying on the Bronfenbrenner, (1979) bio-ecological systems model aims to understand the multi-determined behavioural problems in adolescents of Kashmir. The most proximal of

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, S Iss 3,December 2022

these social systems are microsystems, which refer to the specific contexts in which adolescents function (e.g., family).

2. **Objectives**
   1. To assess the levels of behavioural problems in adolescents on the basis of gender.
   2. To find the association between contextual processes of family and adolescent behavioural problems.
3. **Research Design**

   To accomplish the objectives of the study a descriptive correlational research design was adopted for the study.

3.1 Population and Sample

The population in this study comprised of all the adolescents between the age group of 15 to 19 years. In this study, sample comprised of 300 adolescents selected from higher secondary educational institutions of Srinagar, Baramulla, and Sopore.

3.2 Sampling Technique and Criteria

Purposive sampling technique was used to select the sample for the present study from the selected rural and urban areas.

3.3 Research Instruments

Following self-reported instruments were used for the data collection.

Baseline characteristic Questionnaire was constructed to obtain information regarding age, gender, area of living, type of family, and occupation of parents.

Brief Problem Monitor- Youth Form containg 19 items (BPM-Y; Achenbach, Conaughy, Ivanova, & Rescorla, 2011) was used to assess behavioural problems in adolescents.

Thai Family Functioning Scale containing 30 items (TFFS; Suttiamnuaykul, 2002) was used to assess family functioning.

4. **Data Analysis**

Association between familial factors and behavioural problems in adolescents were analyzed using Pearson's Product Movement Correlation (Pearson's r) and Analysis of Variance (ANOVA) tests.

5. **RESULTS**

The findings of the study have been organized as follows:

Assessment of behavioural problems in adolescents

Association between the behavioural problems and contextual processes of family

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, S Iss 3,December 2022

Section 1: Assessment of behavioural problems in adolescents

Table 1. ***Descriptives of the variables***

Variables	*M*	*SD*	*Range*
PS	19.10	4.55	2 – 30
COH	28.73	5.67	5 – 36
COM/FE	15.47	3.35	5 – 24
TFFS	63.28	10.57	17 – 86
ATT	3.71	2.40	0 – 11
EXT	3.01	2.50	0 – 12
INT	3.76	2.30	0 – 10
BPM	10.50	5.63	0 – 30
AGE	17.02	.73	15 – 19

Table 2. ***Level of behavioural problems among male and female adolescents***

Level	Grading	Range	Male		Female		Total			
			f	*%*	*f*	*%*	*f*	*%*	*Cf*	*%*
1	Low	0 – 4	22	16.18	19	12.67	41	14.34	41	14.34
2	Medium low	5 – 10	50	36.76	59	39.33	109	38.11	150	52.45
3	Medium high	11 – 16	45	33.09	50	33.33	95	33.22	245	85.66
4	High	17 & above	19	13.97	22	14.67	41	14.34	286	100

The data in table 2 depicts that the 16.18% of male adolescents were in the low range, 36.76% and 33.76% in the medium range, and13.97% in the high range of behavioural problems. Among the female adolescents, 12.67% of adolescents were in the low range, followed by 39.33% and 33.09% in the medium range, and 14.67% in the high range of behavioural problems. Overall 14.34% fall in the low range, 38.11% and 33.22% in the medium range, and 14.34% fall in the high range of behavioural problems.

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, S Iss 3,December 2022

Section 2: Association between behavioural problems and contextual processes of family

Table 3. ***Intercorrelations between variables***

Variables	PS	COH	COM/FE	TFFS	ATT	EXT	INT	BPM
PS	-	.64* (<.001)	.10 .076	.80* (<.001)	-.198* .001	-.21* (<.001)	-.17* .004	-.25* (<.001)
COH		-	.31* (<.001)	.91* (<.001)	-.36* (<.001)	-.35* (<.001)	-.25* (<.001)	-.41* (<.001)
COM/FE			-	.53* (<.001)	-.24* (<.001)	-.26* (<.001)	-.21* (<.001)	-30* (<.001)
TFFS				-	-.35* (<.001)	-.36* (<.001)	-.27* (<.001)	-.42* (<.001)
ATT					-	.43* (<.001)	.44* (<.001)	.80* (<.001)
EXT						-	.34* (<.001)	.79* (<.001)
INT							-	.76* (<.001)

* $p < 0.05$.

The results of the study revealed a significant negative relationship between family functioning processes and behavioural problems. Overall a medium level of correlation(r = 0.42, $p < 0.05$) was found between family functioning processes and behavioural problems. In order to gain a more accurate indication of this association, a model was created to examine the effect of different levels of family functioning on adolescent behavioural problems as shown in above table. To meet this objective ANOVA test was applied. ANOVA was used to analyze the mean differences among adolescents' behavioural problem categories based on four levels of family functioning. The results are summarized in Table 5.

Table 4: ***Behavioural Problem Score under different levels of Family Functioning***

Levels of Family Functioning	Behavioural Problems			
	N	*M*	*SD*	*95% CI for M*
1 Low	40	14.90	6.67	12.76 – 17.03
2 Medium Low	84	11.18	4.91	10.12 – 12.25
3 Medium High	119	9.35	5.15	8.42 – 10.28
4 High	43	8.18	4.78	6.71 – 9.65
Overall	N=286	10.49	5.63	9.83 – 11.14

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, S Iss 3,December 2022

Table 5: ***Summary of the Model ANOVA showing effects of the family functioning on the adolescent behavioural problems***

	df	*MS*	*F*	*p*	Contrasts	*t*-value (*p*)
Behavioral problems	3	400.84	14.45	<.001	1>2,3,4 2>4	25.81 (<.001)
Linear Term	1	1063.94	38.36	<.001		
Error	282	27.73				

The model analysis revealed that there was a significant effect of family functioning on behavioural problems, $F_{(3, 282)} = 14.45$, $p < .05$ (see table 4.3.3). Further a significant linear trend, $F_{(1, 282)} = 38.36$, $p < .05$ was found, indicating that as the level of family functioning increased, behavioural problems decreased proportionately (see figure 4.3.1). Standard contrasts revealed that having high levels of family functioning significantly decreased behavioural problems compared to having low levels of family functioning, $t_{(282)} = 25.81$, $p < .05$.

6. Discussion

Assessment of the behavioural problems of the adolescents revealed that overall 14.34% fall in the low range, 38.11% and 33.22% in the medium low and medium high range, and 14.34% fall in the high range of behavioural problems. World Health Organization (WHO, 2001) estimate shows that up to 20% adolescent have one or more behavioural problems. In India it is in the range of 13.7% to 50% (Mishra & Sharma, 2001; Belfer, 2005). In Chandigarh, in a school based cross-sectional study conducted on 1150 adolescents in 12 to 18 year age group in grades 7 to 12 in 10 co-educational schools (government run and private) utilizing stratified random sampling, Revealed that the prevalence of behavioural and emotional problems in adolescents was found to be 30%, with girls exceeding boys in all age groups (Pathak, Sharma, Parvan, Gupta, Ojha, & Goel, 2011). The present study found that there is no association between gender and behavioural problems in adolescents which is contrary to the previous findings. The present study found a significant negative relationship between age and behavioural problems of adolescents.

The present study found a significant association between contextual processes of family and adolescent behavioural problems. The study found that as the family functioning improves, there is decrease in behavioural problems in adolescents. These findings are consistent with the empirical literature demonstrating that adolescent behavioural problems are related to contextual factors such as family, school, and peers (e.g., Grills & Ollendick, 2002; Vitaro, Brendgen, & Tremblay, 2000). Another study by Schwartz, et al. (2006) examining the role of ecological context (family functioning) in the behavioural problems revealed a strong bivariate relationship between family function and behavioural problems in adolescents.

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, S Iss 3,December 2022

The present study relying on the Bronfenbrenner, (1979) bio-ecological systems model aimed to understand the multi-determined behavioural problems in adolescents of Kashmir. The most proximal of these social systems are microsystems, which refer to the specific contexts in which adolescents function (e.g., family, school, neighbourhood, etc). The findings of the study support the model. Summarizing the findings, it suggests that human development outcomes must move beyond examining the biology. The bio-ecological theory emphasizes the context in which an individual lives by biological predispositions. It is based on the thesis that an individual do not develop in isolation, but, develop instead in a variety of contexts or environments in which they interact continuously. Development is not only shaped by the immediate environment, but also by the interaction with the larger environment.

The findings of the study have implications not only in the field of mental health but also in the field of community health and also school health. Behavioural problems are very common among adolescents now-a-days, which hampers the overall development of the adolescents. But these problems often go unnoticed and are not treated. Moreover adolescents are being punished for their deviant behavior instead of getting appropriate help and support. So, the present findings supporting the Bio-Ecological Systems Model will be helpful in the formulation of intervention programmes.

7. REFERENCES

Achenbach, T. M., Rescorla, L. A. (2001). *Manual for ASEBA School Age forms and profiles*. Research centre for Children, Youth & families, University of Vermont, Burlington, VT.doi: 10.1177/1363461510382590

Arnett, J. J. (1999). Adolescent storm and stress, reconsidered. *American psychologist*, *54*(5), 317.

Baltes, P. B., Schaie, W. (1973). *Life-span developmental psychology: Personality and socialization*. Academic Press, New York. Available at http//:www.columbia.edu/.

Belfer, M. L. (2005). Child and adolescent mental health around the world: Challenges for progress. *Journal. Indian Assoc. Child Adolesc. Ment. Health, 1*(?) 3-6. Retrieved from http://dx.doi.org/10.4066%2FAMJ.2011.464

Bronfenbrenner, U. (1977). Toward an experimental psychology of human development. *American Psychologist, 32* (?), 513-532. Retrieved from https://www.uncg.edu/hdf/facultystaff/.../Bronfenbrenner%201977.pdf

Bronfenbrenner, U. (1979). *The Ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press. Available at http//:edfa2402resources.yolasite.com/.../Bronfenbrenner_in_%20English_07.

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, S Iss 3,December 2022

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, *22*(6), 723-742. doi: 10.1037/0012-1649.22

Brofenbrenner, U. (1988). Interacting systems in human development: Research paradigms, present and future. In: Bolger, N., Caspi, A,. Downey, G., Moorehouse, M. (eds.) 1988 Persons in context: Developmental Processes. Cambridge University Press, Cambridge.

Bronfenbrenner, U. (1989). Ecological systems theory. In R. Vasta (Ed.), *Annals of Child*

Development: Vol. 6 Six Theories of Child Development: Revised Formulations and Current Issues (pp. 187-249). Greenwich, CT: JAI Press. Retrieved from https://www.scribd.com/.../Imagining-Families-Through-Stories-and-Rituals

Brofenbrenner, U. (1993). The ecology of cognitive development: Research models and fugitive findings. In: Wozniak, R.H., Fischer, K. (eds.) 1993 Thinking in context. Erlbaum, Hillsdale, New Jersey.

Bronfenbrenner, U. (1993). The ecology of cognitive development: Research models and

fugitive findings. In: Wozniak, R. H., Fischer, K. (eds.) 1993. Thinking in Context. Erlbaum, Hillsdale, New Jersey.

Ceci, S.J. (1990). On Intelligence . . . More or Less: A Bioecological Treatise on Intellectual

Development. Prentice-Hall, Englewood Cliffs, New Jersey. doi: 10.1002/acp.2350050611

Clausen, J. A. (1986). The Life Course: A Sociological Perspective. Prentice-Hall, Englewood Cliffs, New Jersey. Retrieved from

Cochran, M., Larner, M., Riley, D., Gunnarsson, L., Henderson, C. R., Jr. (1990). Extending

Families: The Social Networks of Parents and their Children. Cambridge University Press, New York. Retrieved from http//:www.cambridge.org/

Eckenrode, J., Gore, S. (eds.) (1990). Stress between Work and Family. Plenum Press, New

York. *doi*: http://dx.*doi*.org/10.1080/02678378708258479

Elder, G. H., Jr. (1974). Children of the Great Depression: Social Change in the Life Experience.University of Chicago Press, Chicago, Illinois. *doi*: 10.1177/016502547900200101

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, S Iss 3,December 2022

Elder, G. H., Jr., Modell, J., Parker, R. D. (1993). Children in Time and Place: Individual, Historical and Developmental Insights. Cambridge University Press, New York.

doi: 10.1111/*j*.1756-2589.2011.00087.x

Epstein, J. L. (1983a). Effects on Parents of Teacher Practices of Parent Involvement. Center for the Social Organization of Schools, Johns Hopkins University, Baltimore, Maryland.

doi=10.1.1.39.1138

Epstein, J. L. (1983b). Longitudinal effects of family-school-person interactions on student outcomes. Research in Sociology of Education and Socialization 4: 101-27. Retrieved from https://books.google.co.in/books?isbn=1317842758

Fergusson, D.M., & Woodward, L.J. (2002). Mental health, education, and social role outcomes of adolescents with depression. *Archives of General Psychiatry*, *59*, 225–231. *Arch Gen Psychiatry.* 2002;59(3):225-231. doi:10.1001/archpsyc.59.3.225.

Glantz & C.R. Hartel (Eds.), *Drug abuse: Origins and interventions* (pp. 331–366). Washington, DC: American Psychological Association. doi:10.5093/in2011v20n1a6

Grills, A.E., & Ollendick, T.H. (2002). Peer victimization, global self-worth, and anxiety in middle school children. *Journal of Clinical Child and Adolescent Psychology*, *31*, 59 68.*doi*:10.1207/153744202753441675.

Mishra A, Sharma AK. (2001) A clinico-social study of psychiatric disorders in 12-18 years school going girls in urban Delhi. Indian J Community Med; 26(2): 71-75. **doi:** 10.5455/jcer.201323

Pathak R, Sharma RC, Parvan UC, Gupta BP, Ojha RK, Goel NK (2011). Behavioural and emotional problems in school going adolescents. AMJ, 4, 1, 15-21. doi: http//dx.doi.org/10.4066/AMJ.2011.464

Parrila, R. K., Ma, X, Fleming, D., & Rinaldi, C. (2002). *Development of Prosocial Skills* (Final report), Applied Research Branch, Strategic Policy, Human Resources Development Canada.

Pence, A. R. (ed.) (1988). Ecological Research with Children and Families: From Concepts to Methodology. Teachers College, Columbia University, New York. Retrieved from

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, S Iss 3,December 2022

https://www.stolaf.edu/people/huff/classes/.../Bronfenbrenner1994.pdf

Reitz, E., Dekovic, M., & Meijer, A.M. (2005). The structure and stability of externalizing and internalizing problem behavior during adolescence. *Journal of Youth and Adolescence*, *34*, 577–588. doi: 10.1007/s10964-005-8947-z

Schwartz, S.J., Pantin, H., Sullivan, S., Prado, G., & Szapocznik, J. (2006). Nativity and years in the receiving culture as markers of acculturation in ethnic enclaves. *Journal of Cross-cultural Psychology*, *37*, 345–353. doi: 10.1177/0022022106286928

Stevenson, H. W., Stigler, J. W. (1992). The Learning Gap: Why Our Schools are Failing and

What We Can Learn from Japanese and Chinese Education. Summit Books, New York.*doi*: 10.2307/1129005

Suttiamnuaykul, W. P. (2002). *Measuring family functioning in Thailand: Developing the Thai Family Functioning Scale (TFFS) and comparing its psychometric properties to those of Thai version of the Family Assessment Device (FAD).* Doctoral Dissertation. Available at: School of Nursing, State University of New York at Buffalo, pp 167.

Szapocznik, J., & Coatsworth, J.D. (1999). An ecodevelopmental framework for organizing the influences on drug abuse: A developmental model of risk and protection. In M.D.

The World Health Report 2001, Mental Health: New Understanding, New Hope. Geneva, World Health Organization; 2001:39-44. dx.doi.org/10.4066/AMJ.2011.464

Vitaro, F., Brendgen, M., & Tremblay, R.E. (2000). Influence of deviant friends on delinquency: Searching for moderator variables. *Journal of Abnormal Child Psychology*, *28*, 313–325.*doi*: 10.1023/A:1005188108461;

Wachs, T. D. & Evans, G. W. (2010). Chaos in context. In T. D. Wachs & G. W. Evans (Eds.). Chaos and its influence on children's development: An ecological perspective (3-13). Washington, DC: *American Psychological Association*. *doi*: 10.1111/j.1741 3729.2011.00672.x