



## RESEARCH ARTICLE

### MENTAL HEALTH OF ADOLESCENTS IN SELECTED CITIES OF PUNJAB -A COMPARATIVE ANALYSIS OF BOYS AND GIRLS

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#### ABSTRACT

'Mental Health' of adolescents in a nation has rightly been called the Mental Wealth of the nation. This investigation was carried out with a view to assess the mental health of adolescents in selected cities of Punjab. Such studies have been rare in this part of the country. The Analysis of Variance shows that the mean level of mental health was found to vary significantly with city of residence. Mental health was found to be higher in smaller cities while it was comparatively lower in larger cities. One encouraging finding of the present study was that no gender differences existed in mental health in an area which is known for its skewed sex ratio and discrimination against girls. Moreover, t- ratios also revealed that females were better adjusted, more autonomous and felt more secure than the males though males showed better status on emotional stability and intelligence in some cases. The gender differences revealed by this investigation can give the parents, teachers and social custodians of mental health of adolescents, a basis to understand and help improve the mental health of girls and boys in this region. While it is reassuring to know about the sizable percentage of adolescents falling in average to high mental health, yet it also probes us to awaken to the needs of the adolescents falling in the low mental health status.

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#### INTRODUCTION

When we invest in adolescents, then we improve their health and well being. We also invest in social and economic development. For today's adolescents are the people who will drive forward achievement of the Sustainable Development Goals and the future we want." This concern of Anthony Costello (2016), WHO Director for Maternity, Newborn, Child and Adolescent Health, is thought provoking indeed. Mental Health is of primary importance to all normal human beings and more so to the adolescents as they are at a stage when maximum bodily and intellectual developments take place, as well as the stage with proneness to multiple risks to health and well-being (Singhal, 2007). There are 1.2 billion adolescents in the world. According to Mental Health Atlas (2005), the proportion of population in India under the age of 15 years is 32 percent. In fact some studies show this proportion to be much more.

Thus about one quarter of India's population are estimated to be adolescents. "Children under 16 years of age constitute over 40 percent of India's population and information about their mental health needs is a national imperative." (Srinath *et al.*, 2005). This is a sizeable proportion that definitely needs special attention. Carson *et al.* (2009) has highlighted the apprehension of the World Health Organization in this regard, "the WHO has always been keenly aware of close interrelationship among physical, psychosocial and socio cultural factors in context to mental health of adolescents." Not only this, it is alarming to note that the UNICEF Report of 2011 estimates that around 20 percent of the world's adolescents have mental health or behavioral problems.

Adolescence typically represents a 'transit' between childhood and adulthood. This phase of life is highly vulnerable period because of simultaneous interaction of Bio-psycho-social factors. Hence, as in the words of Chandrashekar *et al.*, (2007), "young persons form a 'risk group' in the community. Ability to cope and perform in the expected roles in this age group depends on a good "homeostasis" in family, environmental and personality aspects of the young person."

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Kalaiyarasan and Solomon(2014) reiterate the vital role of sound mental health during adolescence. This mental maturity is important as mental health is linked with physical health, social health, emotional health and functioning in daily lives. According to Manikam (2002), "the immature adolescent may not be able to cope and adjust to the emerging new demands and, roles of his life leading to frustrating consequences and a constant feeling of aggression vented towards him or others. Thus proper mental health policies should be adopted by the government to cultivate the potential of the youth".

Gender differences have always emerged as an important aspect of Mental Health. Pre-adolescent girls and boys differ in the distribution of temperamental traits, in that girls have higher levels of fearfulness and lower levels of frustration (Oldehinkel *et al.*, 2004). Furthermore, boys and girls may respond differently to similar parenting practices. Girls tend to react more strongly to stressful life-events, particularly to interpersonal events (Patton *et al.*, 2003; Silberg *et al.*, 2001). Compared to boys, girls have a greater preference for close emotional communication, intimacy and responsiveness with interpersonal relationships. The female focus of affiliation may make girls more vulnerable to the interpersonal stress that often accompanies dysfunctional parenting practices (Cyranowski *et al.*, 2000). Boys tend to foster independent activity over affiliation (Leadbeater *et al.*, 1999), which was hypothesized to make them less sensitive to parental rejection and lack of emotional warmth than girls. Malhotra (2016) in a study of adolescents' adjustment on the basis of gender and locale found significant influence of gender on adolescent adjustment. Basically, girls were found to be higher on overall adjustment and emotional adjustment. Thus, a number of factors from multiple domains contribute to poor mental health of children. There is a need for programs and services to adequately address these factors and domains. Programs should be planned, coordinated and integrated. Properly designed and executed mental health programs can reduce the percentage of children with poor mental health (Manikam, 2002).

### Data and Methodology

**Design:** The aim of the present investigation was to study the Mental Health of adolescent boys and girls in four cities of Punjab.

**Sample:** A random sample of one thousand adolescents was drawn from schools and colleges of four districts of Punjab, namely, Moga, Ludhiana, Jalandhar and Hoshiarpur. The sample was between the ages of 13-19 years. The mean age of the total sample was 16 years. The sample was evenly distributed among adolescent boys and girls.

**Tools:** Mental Health Battery (A.K. Singh and Alpana Sen Gupta, 2000). This battery intends to assess the status of mental health of persons in the age range of 13 to 22 years. The set of 130 items is divided into the six tests based on six popular indices of mental health finally selected by the authors:-

Emotional Stability refers to experiencing subjective stable feelings which have positive or negative values for the individual.

Adjustment refers to individual's achieving an overall harmonious balance between the demands of various aspects of environment, such as home, health, social, emotional and school on the one hand and cognition on the other. Autonomy refers to a stage of independence and self-determination in thinking. Security-Insecurity refers to a high (or low) sense of safety, confidence, and freedom from fear, apprehension or anxiety particularly with respect to fulfilling a person's present or future needs. Self-Concept refers to the sum total of a person's attitudes and knowledge towards himself and evaluation of his achievements. Intelligence refers to general mental ability which helps person in thinking rationally, and in behaving purposefully in his environment.

## RESULTS AND DISCUSSION

The aim of the present investigation was to study the Mental Health of adolescents in selected cities of Punjab. Mental health and its various dimensions were studied by Mental Health Battery by A.K. Singh and Alpana Sen Gupta (2000). The raw data consisted of scores on various indices of Mental Health i.e. Emotional Stability, Adjustment, Autonomy, Security - Insecurity, Self-Concept and Intelligence. The total sample in the study was further divided into four groups on the basis of the city of residence i.e., Ludhiana, Moga, Jalandhar and Hoshiarpur. Descriptive Statistics were used to know about the nature of distribution of scores. The means and standard deviations for the total sample as well as four cities were tabulated (Table 1).t-ratios were calculated to get a clear picture of gender differentials for total sample (Table 2) as well as in the four selected cities (Table 3).

### Difference in mean scores of respondents of total sample as well as four cities on Mental Health

Table 1 presents the mean scores of the respondents of total sample as well as four cities on various variables. Table 1.1, which shows the extent of different variables for the total sample and four cities reveals that adolescents of Hoshiarpur were found to be the highest in their level of Mental Health. The mean scores of Total Mental Health for Hoshiarpur was  $74.92 \pm 10.70$ , whereas the same for the total sample was  $71.97 \pm 11.32$ . The adolescents of Jalandhar were found to be the lowest in their level of Mental Health in the comparison of four cities ( $67.65 \pm 11.12$ ). Besides Total Mental Health, the Hoshiarpur adolescents also scored the highest on Mental Health dimensions of Emotional Stability, Overall Adjustment and Autonomy. The adolescents in Moga were least on level of Emotional Stability and Overall Adjustment while adolescents in Jalandhar scored the lowest on Autonomy Dimension. For the dimension of Self Concept, adolescents in Moga scored the most while adolescents in Ludhiana scored the least. The adolescents in Moga were also highest on Intelligence dimension while adolescents in Jalandhar scored the lowest on this dimension. For the dimension of s Security-Insecurity, adolescents in Jalandhar had the highest means while those in Moga had the lowest. Therefore, as far as the level of Mental Health was concerned, the adolescents of Hoshiarpur were found to be the most mentally healthy while the adolescents of Jalandhar were found to be the least mentally healthy out of the four cities under study.

**Table 1. Means and SDs (Total Sample and four cities on all the variables)**

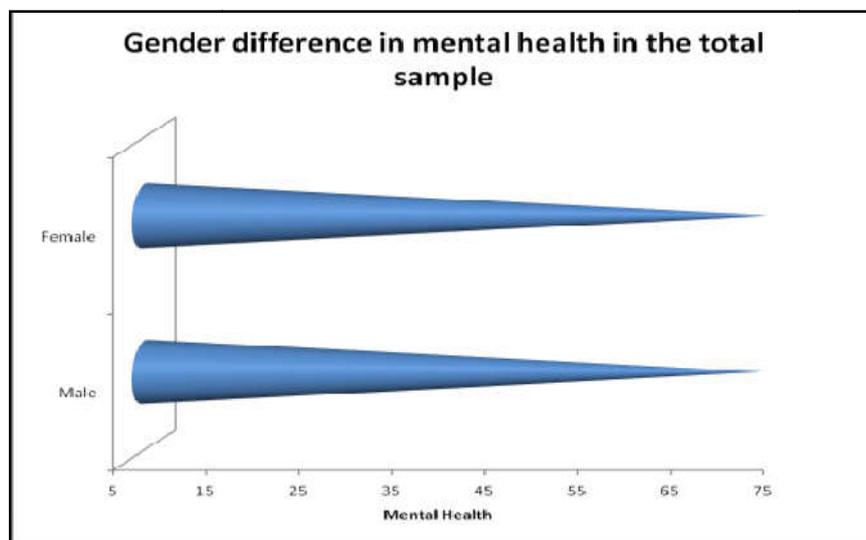
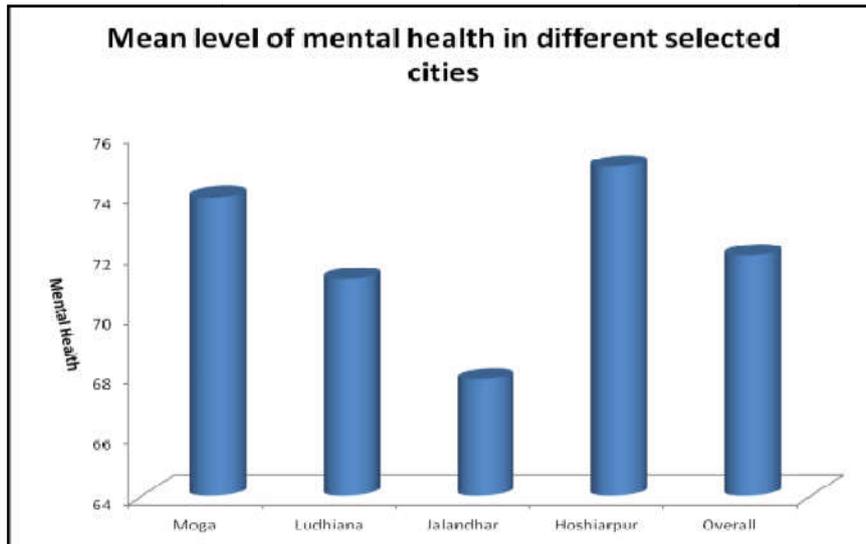
V Variables	Moga		Ludhiana		Jalandhar		Hoshiarpur		Total sample	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Mental Health										
Em. St.	7.18	2.97	8.05	2.19	7.46	2.87	8.09	2.30	7.70	2.63
O Ov. Adj.	19.78	6.00	21.90	6.14	21.51	5.88	23.64	5.57	21.72	6.03
A Aut.	8.59	2.86	9.21	2.84	8.55	2.77	9.83	2.69	9.04	2.84
S Sec-Insec	7.85	1.86	7.94	2.55	8.04	2.10	7.87	1.94	7.92	2.13
S S -Con	8.78	2.92	8.17	2.96	8.67	2.65	8.28	2.22	8.48	2.71
Int	21.70	5.73	15.93	5.88	13.62	5.82	17.22	5.09	17.11	6.36
T MH	73.90	10.23	71.19	11.96	67.85	11.12	74.92	10.70	71.97	11.32

**Table 1.1. Extent of different variables for total and 4 cities**

	Moga	Ludhiana	Jalandhar	Hoshiarpur
Total Mental Health			Lowest	Highest
Em. St.	Lowest			Highest
Ov. Adj.	Lowest			Highest
Aut.			Lowest	Highest
S-Insc	Lowest		Highest	
S-Con	Highest	Lowest		
Int.	Highest		Lowest	

**Table 1.2. Percentage distribution of respondents according to level of Mental Health**

	Moga	Ludhiana	Jalandhar	Hoshiarpur	Total
Mental Health					
Low	31.60	33.20	36.80	28.00	32.40
Average	26.00	27.20	33.60	28.80	28.90
High	42.40	39.60	29.60	43.20	38.70



**Table 2. Gender differentials in total sample**

Variable	Male		Female		t-value
	Mean	SD	Mean	SD	
Em. St.	7.74	2.73	7.66	2.52	0.48
Ov. Adj.	21.66	5.91	21.78	6.16	0.31
Aut.	8.65	2.74	9.43	2.88	4.39**
Sec-Insec	7.66	1.94	8.17	2.27	3.82**
S-Con	8.42	2.66	8.53	2.77	0.64
Int	17.54	6.67	16.70	6.01	2.09*
TMH	71.67	11.49	72.26	11.16	0.82

\* t-ratio is significant at the 0.05 level

\*\* at 0.01 level

**Table 3. Significant t-ratios between males and females on various variables in total sample and four cities**

	Total		Moga		Ludhiana		Jalandhar		Hoshiarpur	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1. Em. St.	0.48			0.93	3.8**			1.52	1.03	
2 Ov. Adj.		0.31		2.56*	0.51			0.16	0.81	
3. Aut.		4.39**		4.3**		1.64		2.39*		0.85
4. Sec.-Insec		3.82**		2.53*		3.5**		1.39	0.08	
5. S-Con		0.64		0.41		1.33		0.09		0.25
6. Int.	2.09*		7.3**			1.23	1.25			1.37
TMH		0.82	0.24			1.10				0.27

\* t-ratio is significant at 0.05 level

\*\* t-ratio is significant at 0.01 level

### Percentage distribution of respondents across different levels of Mental Health in total sample as well as four cities

Results presented in Table 1.2 show the percentage distribution of respondents across different levels of Mental Health in total sample as well as four cities. As indicated by the results, in the total sample, 29 per cent respondents had average status of mental health and 39 percent had high level of Mental Health.

Thus, majority of adolescents (68%) had average to high Mental Health. Out of the four cities, Hoshiarpur had the maximum adolescents falling in average to high Mental Health (72%) followed by Moga (68%), Ludhiana (67%) and Jalandhar (63%). In total sample, 32.40 percent of adolescents had low status of Mental Health.

Out of the four cities, this number was the highest in Jalandhar (36.80%) followed by Ludhiana (33.20%), Moga (31.60%) and Hoshiarpur (28.00%). It was observed that a comparison of mental health status in four cities showed that majority of adolescents enjoyed average to high level of mental health. The percentage of adolescents with high status of Mental Health was the most in Hoshiarpur and least in Jalandhar.

Analysis of Variance (Table 3) shows that for dependent variable of mental health, variation was significant for city (F-ratio 21.38) This substantiates the variation in mean scores for mental health of adolescents in various cities under investigation. Interestingly, mean level of mental health in bigger cities of Ludhiana and Jalandhar was found to be lower than the mean level of mental health in Moga and Hoshiarpur-which are comparatively smaller cities than the former. Such variation in mental health status in relation to the city of residence was reported by Vega *et al.* (1998) According to them, prevalence of mental disorders was higher in urban areas (37.5%) as compared with town (32.1%) or rural (29.8%) areas.

### Gender Differentials - Level of Mental Health

Mental health across gender: For the variable of Total Mental Health for the total sample, the mean score was 71.97±11.32. The mean score for females was slightly higher than males but the means were statistically at par. In the various cities also, the pattern was similar. Thus as far as total mental health was concerned, no gender differences were observed. Though the mean scores of females was higher in some cases (Total sample, Ludhiana and Jalandhar) and in Hoshiarpur, mean score of males were higher. However, t-values showed no significant difference in means, between males and females in their total mental health levels.

For the dimension of *Emotional Stability*, males were significantly higher than females in the city of Ludhiana. In the total sample as well as city of Hoshiarpur also, males scored a higher mean though the difference in means was not statistically significant. No significant gender differences were found in the cities of Moga and Hoshiarpur, and the females scored higher means than males in this case. There is clear evidence of gender stereotypes regarding proneness of females to emotional problems. Moreover, many mental disorders such as mood, anxiety and eating disorders affect a larger number of women (Afifi2007). However, in this particular study, significant differences in emotional stability dimension were found only in city of Ludhiana which was just one of the four cities under study. The dimension of *Overall Adjustment* was found to be significantly higher in females in the city of Moga. In Jalandhar as well as total sample, means for female adolescents were higher, though differences were not significant. However, in Hoshiarpur and Ludhiana, means of males for Overall Adjustment were higher than females but again, these means were statistically at par. Malhotra (2016) also reported girls in Rohtak city of Haryana to be higher than boys on overall adjustment. Kaur (2012) also found similar results. The *Autonomy* dimension of Mental Health was found

to be significantly higher in females for the total sample as well as cities of Moga and Jalandhar.

For the cities of Ludhiana and Hoshiarpur, though no significant gender differences were found, yet, it was observed that means of females were higher than males on the dimension of autonomy. Thus, females, in general were found to be more autonomous than males. They reflected a higher stage of independence and self determination in thinking. Results for *Security-Insecurity* dimension showed that there were significant gender differences in the total sample as well as cities of Moga and Ludhiana. In the city of Jalandhar, though t-ratios between males and females were not significant, yet means of females were found to be higher. Thus, on the whole, female adolescents not only showed autonomy in their behavior and thought, but also felt higher sense of safety, confidence, and freedom from fear, apprehension or anxiety, particularly with respect to fulfilling their present or future needs. Thus the boys were more apprehensive & more insecure about their future than the girls. There were no significant gender differences in the dimension of *Self-Concept*. Though the means of females on this dimension were higher in all cases, but the differences in means were not significant. The male and female adolescents of this sample were equal on the sum total of their attitudes and knowledge towards themselves and evaluation of their achievements. In the dimension of *Intelligence*, males were significantly higher than females for the total sample as well as Moga. In other cities, difference between males and females were not significant though the means for males were higher in Jalandhar and means for females were higher in Ludhiana and Hoshiarpur.

*On the whole, it can be observed that no gender differences were found in total mental health of adolescents in these four cities. However, females were found to be more autonomous (Total sample, Moga and Jalandhar) and higher in their sense of security and safety (Total sample, Moga and Ludhiana). Females of Moga were found to be higher in their Overall Adjustment too. However, males were found to be more intelligent (Total sample and Moga) and more emotionally stable (Ludhiana) than females in these four cities.*

Sharma and Lata (2014) observed no significant differences between Mental Health of girls and boys. Bartwal (2014) in a study of senior secondary students also found no significant difference in rural and urban male and female students. Similarly, Aaliya and Iqbal (2011) in a study on mental health of adolescents in Kashmir found no significant differences in the level of Mental Health across gender. Srividhya V. (2007) also reported no influence of gender on mental health of students in the age range of 14-19 years.

However, some studies have reported a gender based disparity in the mental health of adolescents with girls showing significant lower scores on various dimensions of Mental Health (Saima and Sharma, 2011; Islam, 2010). It is worth mentioning that though present study revealed no gender differences on Total Mental Health, yet, some significant gender differences did exist on some of the dimensions of Mental Health. In a few cases, female adolescents were found to be scoring higher on Mental Health dimensions of Overall

Adjustment, Autonomy and Security-Insecurity. Kumar (2015) also found significant gender differences in certain dimensions of Mental Health with girls scoring higher on the dimensions of autonomy, security –insecurity and self-concept. However he reported no significant gender differences in emotional stability, overall adjustment and intelligence component of Mental Health. The Analysis of Variance with Mental Health as the dependent variable in the present investigation found F-ratios of sex(1.82) and city\*sex(0.29) as not significant. Mental health of adolescents did not show any variation as a function of gender. Moreover, being a particular gender in a particular city also did not play any role in variation in adolescents' mental health status.

## Conclusion

This study provides an in-depth analysis of mental health of adolescents in this area of Punjab. One encouraging finding of the present study was that no gender differences existed in mental health in an area which is known for its skewed sex ratio and discrimination against girls. Moreover, t-ratios also revealed that females were better adjusted, more autonomous and felt more secure than the males through males showed better status on emotional stability and intelligence in some cases. The nature of gender differences revealed by this investigation can give the parents, teachers and social custodians of mental health of adolescents, a basis to understand and help improve the mental health of girls and boys in this region.

This study also informs in that while it is reassuring to know about the sizable percentage of adolescents falling in average to high mental health, yet it also probes us to awaken to the needs of the adolescents falling in the low mental health status. City wise analysis of data has also revealed that certain cities have displayed better mental health status of their residents than others. This information can provide further inputs to improve the quality of life and mental health in these areas.

Finally, though mental health is an important determiner of overall health of adolescents, yet this has been largely ignored by the policy makers of this country where even today no definite mental health policy exists. This study can provide basis for further studies in this area and also provide inputs for providing counseling services and improving the mental health status of our youth.

The fact that adolescents in bigger cities had comparatively lower level of Mental Health than the ones in smaller cities raises concern about effect of size of city on mental health of its residents and warrants the need for further research in this context.

## REFERENCES

- Aaliya, L., Iqbal, M.Z. 2011. A study of mental health of adolescents with special reference to Kashmir. *Indian Journal of Health and Well being* 2011, 2(2), 458-459.
- Afifi, M. 2007. *Gender Differences in Mental Health. Singapore Med Journal*, 48(5): 385

- Bartwal, R.S. 2014. To study the mental health of senior secondary students in relation to their social Intelligence. *IOSR Journal of Humanities and Social Sciences*. vol 19, Issue 2, Ver. 1PP06-10.
- Carson, C.R., Butcher, N.J. 2009. *Abnormal psychology*. New Delhi: Pearson Education.
- Chandra Shekar, C.R., Suresh, B.M., Kumar, K.V., Moily, S., Raghuram, A., Parthasarathy, R.J., Sekar, K., John, R. 2007. *Manual on students' counseling for college teachers*. 3rd, Bangalore: *National Institute of Mental Health and Neuro Sciences*.
- Costello, A. 2016, May 10. The time is right to invest in adolescents. Retrieved from <http://www.who.int/entity/mediacentre/commentaries/investing-in-adolescents/en/-37k>
- Cyranowski, J.M., Frank, E., Young, E. and Shear, K. 2000. Adolescent onset of gender differences in lifetime rates of major depression. A theoretical model. *Archives of General Psychiatry*, 57: 21-27.
- Islam, N. 2010. Gender disparities in mental health status among the school – going adolescents of Dhaka, Bangladesh. *Bangladesh Journal of Medical Science*, 16(2):151-158.
- Kalaiyaran, M and Solomon, D. 2014. Mental Health Among Adolescence, *International Journal of Research in Applied, Natural and Social Sciences*, Vol. 2, Issue 8, 27-32.
- Kaur, S. 2012. A Study of Adjustment of High School students in Relation to Their Achievement, Sex and Locality, *International Journal of Research in Education, Methodology Council For Innovative Research*, 1(2), 18-21.
- Kumar, S. 2015. A Study of Mental Health of Adolescents, *International Journal of Education and Psychological Research*, Vol.4 Issue 1.
- Leadbeater, B.J., Kuperminc, G.P., Blatt, S.J., and Hertzog, C. 1999. A multivariate model of gender differences in adolescents' internalizing and externalizing problems. *Developmental Psychology*, 35: 1268-1982.
- Malhotra, T. 2016. Adolescents' Adjustment on The Basis of Gender and Locale, *International Journal of Humanities and Social Sciences*, Vol.5, Issue 1 201-210.
- Manikam, R. 2002. Mental health of children and adolescents. *International Perspectives on Child and Adolescent Mental Health*, Vol.2, 2002, Pg 1-36.
- Mental Health Atlas 2005. Mental Health: Evidence and Research Department of Mental Health and Substance Abuse. World Health Organization Geneva.
- Oldehinkel, A.J., Hartman, C.A., de Winter, A.F., Veenstra, R. and Ormel, J. 2004. Temperament profile associated with internalizing and externalizing problems in preadolescence. Development and Silberg, J., Rutter, M., Neale, M. and Eaves, L. 2001. Genetic moderation of environmental risk for depression and anxiety in adolescent girls. *British Journal of Psychiatry*, 179: 116-121.
- Patel, V., Flisher, A.J., Hetrick, S. and McGorry, 2007. Mental health of young people: A global public-health challenge. *The Lancet*, Volume 369, Issue 9569, 14-20 April, 2007, pp. 1302-1313.
- Patton, G.C., Coffeey, C., Posterino, M., Carlin, J.B. and Bowes, G. 2003. Life events and early onset of depression: Cause or consequence? *Psychological Medicine*, 33, 1203-1210.
- Saima and Sharma, N. 2011. Mental Health Status of Children of Kashmir: A Study from Anantnag District, *Journal of Psychology*, 2(2): 109-113.
- Sharma, S.K. and Suman L. 2014. Mental Health of Adolescents in relation to Type of School and School Environment. *International Journal of Education and Psychological Research*, Vol. 3 Issue 1, pp 123-127.
- Silberg, J., Rutter, M., Neale, M. and Eaves, L. 2001. Genetic moderation of environmental risk for depression and anxiety in adolescent girls. *British Journal of Psychiatry*, 179: 116-121.
- Singh, A.K., Gupta, A.S. 2000. *Manual for mental health battery*. Lucknow: *Ankur Psychological Gency*.
- Singhal, S., Rao, U.N.B. 2007. *Adolescent concerns through own eyes*. New Delhi: Kanishka Publishers, Distributors.
- Srinath, Shoba, Girimaji C. Satish, Guru Raj, G., Seshadri, Shekar, Subbakrishna, D.K., Bhola, Poonam, Kumar Narender. 2005. Epidemiological study of child and adolescent psychiatric disorders in urban and rural areas of Bangalore, India. *Indian Journal of Medical Research*, 122, July, 2005, 67-79.
- Srividhya, V. 2007. Mental health and adjustment problems of students of Navodhaya Central and State schools. M.S. (Home science), *University of Agricultural Sciences, Dharwad*.
- The World Health Report 2001. *Mental Health: News understanding*, New hope. Geneva: World Health Organization, 2001.
- Unicef Report 2011. *The State of Worlds' Children 2011-Adolescence, An Age of Opportunity*. Retrieved from [www.unicef.org/adolescence/files/SOWC\\_2011\\_Main\\_Report\\_EN\\_02092011.pdf](http://www.unicef.org/adolescence/files/SOWC_2011_Main_Report_EN_02092011.pdf)
- Vega, W.A., Kolody, B., Aguilar-Gaxiola S., Aldrete, E., Catalano, R. and Caraveo-Anduaga, J. 1998. Lifetime prevalence of DSM III-R Psychiatric Disorders among Urban and Rural Mexican Americans in California. *Arch Gen Psychiatry*, 55:771-778.

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