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Original Research Article

Study of correlation between social determinants on mental health status of adolescent school students of Patna, Bihar, India

Anil Kumar Tiwari*, Anil Kumar Jaiswal

Department of Pediatrics, Patna Medical College, Patna, Bihar, India

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***Correspondence:**
Dr. Anil Kumar Tiwari,
E-mail: tiwarianilkumar383@gmail.com

ABSTRACT

Background: The status of mental well-being is a function of emotional well-being, psychological well-being and social well-being, and includes aspects like cognitive and social skills, emotional capacity, empathy, ability to cope with adverse events, and capability to function within a society. Various studies have found strong correlations between a person's immediate surroundings to how they perceive their well-being as well as their actual status of mental health. On one hand, social determinants affect the causation, severity and outcome of mental well-being, on the other hand the state of mental well-being affects the social determinants by affecting personal freedom, ability to make healthy life choices etc. This makes the study of social determinants of mental health very significant.
Methods: A cross-sectional, exploratory study of qualitative nature was undertaken in Patna among School going students between the ages 13-17. A self-administered peer reviewed questionnaire was used for data collection.
Results: Of 400 participants 19% have features of depression and other mental health problems. Females were more affected. Students of low socioeconomic group (41.6%) and of single parent family (40%) were affected.
Conclusions: Mental health problems are very common in adolescent school students. Active steps must be taken to increase awareness about depression among teachers and parents. Early intervention can help prevent worsening of depression and its impact on life.

Keywords: Adolescemtal mental health, Depression, Socio economic determinants

INTRODUCTION

WHO defines mental health as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. As authors all are aware of the fact that differences across countries in values, cultures and social background may hinder the achievement of a general consensus on the concept of mental health, so the new definition is:

Mental health is a dynamic state of internal equilibrium which enables individuals to use their abilities in harmony with universal values of society. Basic cognitive and social skills; ability to recognize, express and modulate one's own emotions, as well as empathize with others; flexibility and ability to cope with adverse life events and function in social roles; and harmonious relationship between body and mind represent important components of mental health which contribute, to varying degrees, to the state of internal equilibrium.[1]

The status of mental well-being is a function of emotional well-being, psychological well-being and social well-being, and includes aspects like cognitive and social skills, emotional capacity, empathy, ability to cope with adverse events, and capability to function within a

society. Various studies have found strong correlations between a person's immediate surroundings to how they perceive their well-being as well as their actual status of mental health. Social determinants and mental health have a two-way relationship. On one hand, social determinants affect the causation, severity and outcome of mental well-being, on the other hand the state of mental well-being affects the social determinants by affecting personal freedom, ability to make healthy life choices etc. This makes the study of social determinants of mental health, including socio-economic, environmental, emotional and psychological factors, important and more so for vulnerable groups. Children, who have been identified as vulnerable group by the United Nations Convention on the Rights of the Child, if exposed to trauma, are at greater risk from psychological and physical disorders.

WHO estimates that 10-20% of all children around the world experience at least one mental health disorder.[1] WHO also reports that almost half of all mental health problems start developing as early as at 14 years of age. As adolescence is a transition phase from childhood to adulthood with academic, interpersonal, emotional challenges and susceptible to various psychological disorders.[2,3] Positive and promotive mental health in this period ensures a smooth progress to later adult life.[4] The National Mental Health Survey 2015-16 found that 7.3% of all children in India between the ages of 13-17 years suffered from mental health disorders, and nearly 9.8 million of these are in need of active intervention.

Literature review did not present any state wide data for Bihar, particularly adolescent school children. Bihar Government's draft of State Policy on Disability extrapolated WHO's data on mental health disorders and estimated a 93, 335 of people from Bihar to be suffering from mental health disorder.

UDAYA survey found that 9% of 15-19 year old boys shows symptoms of mild depression while 1% showed symptoms of moderate to severe depression.[5]

Objectives was to determine prevalence of common mental health challenges faced by school-going adolescents in Patna, Bihar and to observe any co-relation between socio-economic determinants with mental status of children.

METHODS

This was a cross-sectional, exploratory study of qualitative nature was undertaken in Patna, the capital and biggest city in Bihar.

Study population includes school going students between the ages 13-17 from two private schools situated in 2 parts of Patna city were included in the study. Both of these schools have access to a population mix of lower, lower-middle and upper-middle households.

Of all eligible children between the ages 13-17, a sample size of 400 children were selected through simple random method.

Study tool

A self-administered peer reviewed questionnaire based on the strength and difficulties questionnaire (SDQ) self-report version and parent version was used for data collection. The questionnaire had two parts- one to be filled by students themselves under observation, and the other by their parents. Researchers were available to answer any of the children's questions or to clarify instructions; if someone was unable to comprehend the questions, an interview was taken to complete the study.

Modified Kuppuswamy socioeconomic scale 2019 was used to determine the socioeconomic status of the head of every household through three parameters-educational status, occupational status and aggregate household income.

RESULTS

Table 1 shows 400 participants, 18% of children were 14 years of age, 45% of children were 15 years of age, 23% were 16 years of age and 14% were 17 years of age. 34% students were male and 66% female.

Table 1: Age of participants.

Age of participants	Sex of babies	
	Male	**Female**
14 Yrs (N=72) (18%)	24	48
15 Yrs (N=180) (45%)	62	118
16 Yrs (N=92) (23%)	30	62
17 Yrs (N=56) (14%)	20	36
Total = 400	136 (34%)	264 (66%)

Table 2: Socio economic status of families.

Socio economic scale	Number of children with mental health problems	Sex of students	
		Male	**Female**
Lower middle 84 (21%)	35 (41.6%)	11 (31.4%)	24 (68.6%)
Upper middle 286 (71.5%)	37 (12.9%)	14 (37.8%)	23 (62.2%)
Upper class 30 (7.5%)	04 (13.3%)	01 (25%)	03 (75%)

Table 2 shows 41.6% students from lower middle income group had mental health problems, while 12.9% and 13.3% from upper middle and upper class had mental health problems. Girls from all socio economic groups had more mental health problems than boys. 75% girls from upper class, although the only 3 students, hence insignificant data statistically, 62.2% from upper middle

and 68.6% from lower middle class had mental health problems. Children of professionals had lowest (12%) mental health problems, while children of parents having education up to 12thstandard have highest number of cases (24.4%) (Table 3).

Table 3: Educational level of parents of children with mental health problems.

Educational level	No. of parents	No. of children with mental health problem
Up to 12th standard	90 (22.5%)	22 (24.4%)
Graduate	220 (55%)	40 (18.18%)
Post graduate	40 (10%)	08 (20%)
Professionals	50 (12.5%)	06 (12%)
Total	400	76 (19%)

Although insignificant in number, 40% children from families having single parent had mental health problems, while 28.6% children of joint families had mental health problems. Children of nuclear family had least (12.8%) mental health problems (Table 4). Familial harmony is an important factor for mental health of students; as 79% of children having history of family quarrel have mental health problem (Table 5).

Table 4: Type of families of children with mental health problems.

Type of family	Family percentage	No. of children with mental health problem
Nuclear (250)	62.5%	32 (12.8%)
Joint (140)	35%	40 (28.6%)
Single parent (10)	2.5%	04 (40%)

Table 5: Families with quarrels of children with mental health problems.

Families with quarrel history	No. of children with mental health problems
58	46 (79.3%)

Table 6: Different types of mental disorder in children.

Type of mental disorder	No. of children	
	Male	Female
Depression 21(27.6%)	09 (42.9%)	12 (57.1%)
Anxiety symptoms 25 (32.9%)	10 (40%)	15 (60%)
Lack of concentration 35 (46.05%)	18 (51.4%)	17 (48.6%)
Irritable mood 21 (27.6%)	12 (57.1%)	09 (42.9%)
ADHD like features 18 (23.7%)	11 (61.1%)	07 (38.9%)

Many symptoms were common in many students. Out of 76 (19%) students with complain of mental health symptoms, lack of concentration (46%) was the most common mental health problem, anxiety symptoms in 32.9%, depressive symptoms and irritable mood in 27.6%. Features of ADHD were seen in 23.7%.Symptoms suggestive of Depression (57.1%), anxiety (60%) and lack of concentration (48.6%) were more common in girls, while irritable mood (57.1%) and ADHD like symptoms (61.1%) were more common in boys (Table 6).

DISCUSSION

Out of 400 students 45% were of 15 years age, 23% of 16 years, 18% of 14 years and 14% of 17 years age. 34% students were boys and 66% girls (Table 1). In this study girls participants were 66%. In various other studies male and female candidates varied.[6]

As per Kuppuswamy scale, 21% of households belonged to lower middle income group, 71.5% of households to the upper middle income group and 7.5% to the upper class income group.

About 47.6% from lower middle income group children had mental health problems, while 39.2% upper middle class and 2.7% children of upper class had mental health problems. Girls predominated in each socio economic groups (68.6%, 62.2% and 75% respectively in lower middle, upper middle and upper class) (Table 2).

As this study was an urban based study conducted in two private schools, hence socio economic conditions varies from other studies, as most of them incorporates children from mixed rural and urban population.

Data wise 22.5% parents education was =/< 12th standard, 55% were graduates, 10% had a postgraduate degree and 12.5% had a professional degree like MBBS, MD, B. Tech, LLB, MBA etc. Children of professionals had lowest (12%) mental health problems, while children of parents having education up to 12thstandard have highest number of cases (24.4%). Students of parents having graduate and post graduate degree have their children with mental health problem almost similar (18;2 and 20%) (Table 3).

In this study single parent emerged as an important factor for mental illness in adolescents, as 40% children had mental health problems in such families, but due to less number of cases, it is difficult to attach importance. 28.6% participants from joint family and 12.8% from nuclear family had mental health problems. Contrary to this observation Jha KK et al, have observed 61.5% cases from nuclear family with depression (Table 4).[6]

In a study by Katie A. McLaughlin in USA, although a totally different country on socio economical status, living conditions and parental education, had almost

similar observation.[7] Only 14.5% families of which 78% belonging to lower middle income group have history of family quarrels with 79.3% children having symptoms of mental health problems (Table 5). In a similar study Jha KK et al, have observation that high incidence of depression in the selected population with discord in familial relationships and economic difficulties.[6]

Overall mental health problem in this study was 19%. Symptoms suggestive of lack of concentration (46.05%), anxiety symptoms (32.9%) and depression (27.6%) were the most common mental health problems. Irritable mood (27.6%) and ADHD like features (23.7%) were other mental problems (Table 6).

In this study symptoms suggestive of Depression (27.6%), anxiety (32.9%) and irritable mood (27.6%) were more common in girls, while lack of concentration (46.05%) and ADHD like symptoms (23.7%) were more common in boys. Contrary to this study, a similar study by Jha KK et al, have found 49.2% cases with depression, while Nagendra et al, and Malik et al, have this figure as 50%.[6,8,9] However various other Indian studies conducted in adolescence have found a prevalence of depression ranging from 10 to 27%, which is similar to this study.[10-12] As per the National Mental Health Survey of India (2015-2016), the prevalence of psychiatric disorders among adolescents (13-17 years) has been reported around 7.3%.[13] Malhotra S had observation of depressive disorders as 10%-20% by late adolescence.[14] As per a study published in Lancet depressive disorder was found in 33.8%.[15] In another study 10.3% depression prevalence was found in Delhi school students, 16.1% in Trivendrum, 18.4% in Pune, 60.8% in Chennai and 59.9% in Raipur.[16-20] In a study in Saudi Arabia by Asal AR et al, the prevalence of depression was 33.4% and 1.5 times more common in girls.[21]

Limitations of the study was that it is an urban school based study. A comparison with rural school and more number of participants needed.

CONCLUSION

Mental health problems are very common in adolescent school students ranging from mild to severe forms. Girls of low socio economic family with family history of discord are worse sufferer. Active steps must be taken with the help of school counsellors to increase awareness about depression among teachers and parents, to identify and help depressed adolescents in the school. Active, early intervention can help prevent worsening of depression and its impact on life.

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