Mental Health Status of Adolescent Students of Government Schools of Kamrup (Metro), Assam

Evidence for Action Plan

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Abstract

Child and adolescent mental health is a crucial issue worldwide in the present times. This study is aimed at assessing the prevalence of mental health issues and its determinants among the adolescents studying in government schools of Kamrup (Metro) district of Assam, a north eastern state of India. The data collected from 1839 randomly chosen students from 101 government schools have been assessed on the basis of scores obtained in the standard GHQ-28 study tool and subsequent statistical analysis. The results suggest an overwhelming presence of psychological distresses among the adolescents, the proportion being more in girls than boys. Academic proficiency of students and occupations of fathers showed significant association with the levels of mental health problems (p-value<0.05). Categorical analysis of manifested symptoms revealed that more than 80% of the adolescents suffered from somatic symptoms followed by anxiety and insomnia (66%). As unaddressed adolescent mental problems continue onto adulthood, hence it is of utmost importance that due cognizance is given to this problem by the concerned authorities. Some triggering factors have been identified and remedial measures suggested, in this study.

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Introduction

Adolescence, a period of transition from childhood to adulthood is defined by World Health Organization (WHO) as the age group spanning from 10 to 19 years. Many biological, psychological and social changes take place during this period (Cuhadaroglu, 2018). This proves to be heavy on their mental well-being and several important public health and social behavioural problems either start or peak during these years due to stress and strain. The risk factors for adolescents' psychological problems include the task of acquiring a sense of identity, perplexity during the development of gender identity, low self-esteem and inability to develop social skills, problems with peers, struggles in academic achievement, sexual abuse and unprotected sexual relations, unacceptable behaviour in the family, intrafamilial violence and confusions arising due to immigration, discrimination and globalisation (Cuhadaroglu, 2018). The developmental transition makes teenagers vulnerable to environmental, contextual or surrounding influences and leads to increasing prevalence of mental or psychiatric disorders as evident in available literature (Kuppili and Nebhinani, 2020; Nebhinani and Jain, 2019; Thakur et al, 2018; Kaplan et al, 1984; Graham et al, 1973).

Mental health is an important determinant of one's integrated personality and balanced behaviour and enables an individual to use one's cognitive and emotional capabilities to meet the ordinary demands of everyday life. In this regard, family and school are the primary social environments where the children fulfil their physical, mental and cultural needs. Thus, an urgent need of the hour is to address adolescent mental health in our country not only to form policies and programmes but also to generate public awareness of mental health issues and mobilise social support. Moreover, in countries where the adolescents form a large part of the population as in India (Cuhadaroglu, 2018), it is extremely important that their overall well-being is given cognizance to secure a better future for the entire country.

World Health Organization (WHO) in 1977 recommended that every country should have a National Plan for Child Mental Health. However, Shatkin and Belfer (2004) reported that only 18% countries (35 of 191) had mental health policies, which might have some beneficial impact on children and adolescents (Zhou et al, 2020). In India, the National Health Policy (2002, 2016) and the National Mental Health Policy (2014) provided little emphasis on the mental illness among the young population. Some programs, such as the National Mental Health Program and District Mental Health Program, are providing basic psychiatric care to the population in general without special emphasis on CAMH (Murthy, 2007; Hossain and Purohit, 2019). In India, various schemes, models

and programs have been initiated by NIMHANS and other institutions under School Mental Health Services (SMHS) which have been successfully adopted by the states of Kerala, Karnataka and Goa. However, SMHS is still at an infantile state in India (Kuppili and Nebhinani, 2020).

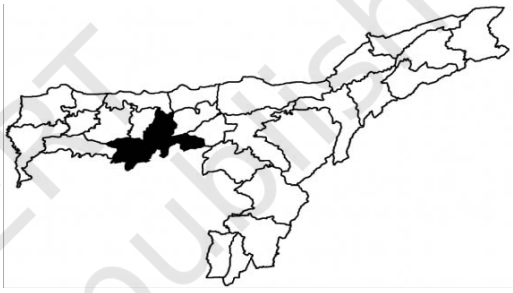
Hence, the present study has been undertaken to assess the scenario of mental health status of the school going adolescents of the Government Schools of Kamrup (Metro) district in Assam as attention to adolescents' risk behaviour can help in facilitating prevention and early intervention in the state. The prevalence of mental health issues among adolescents, the demographic factors associated, the trigger points and the measures that can be taken to assuage the situation and strengthen the future generation have been considered in this paper.

Objectives of the Study

1. To assess the state of mental health among the school going adolescents in the study area.
2. To determine the variation in the mental health status among the adolescent girls and boys in the selected schools and understand the causes responsible for these mental health problems and disorders.
3. To determine the roles of education and health departments, educational institutions and family in dealing with the mental health related problems in our study area.
4. To suggest remedial measures for the identified problems.

Area of Study

This study was conducted in the Kamrup (Metro) District of the State of Assam in north-east India covering an area of 1527.84 sq km, with its headquarters at Guwahati and a population of 1,253,938 (2011 census). The location of the district within the state of Assam is shown below.



Methodology

1. Study design

The study was conducted in all the 101 (one hundred and one) government schools situated in Kamrup (Metro) district of Assam. The Principals of the schools were approached and proper permission was taken to conduct the study. In each school, at least 5 students were selected from each of the Classes VIII, IX and X of age spanned from 11–19 years by the method of random selection to make a group of 15, with the cooperation of the class teachers. Primary information was collected from 1839 students, both

boys and girls, through structured questionnaire method. A team of field investigators were trained for this purpose with the help of professional psychologists.

2. Study tools

The study tools used were the standard General Health Questionnaire 28 (GHQ 28) along with a specially designed questionnaire on demographic profile including basic information on age, gender, religion and community, educational level and proficiency of the student along with information on the family type and occupation of parents. These questionnaires were translated into the local Assamese language to increase the scope and reliability of the study.

The GHQ 28 is considered appropriate for research purposes for evaluating the effect of the psychosocial interventions on well-being as it is an appropriate tool to capture emotional stress (Goldberg and Williams, 1991). The GHQ 28 requests participants to indicate how their health in general has been over the past few weeks, using behavioural items with a 4 point scale indicating the following frequencies of experience: "not at all", "no more than usual", "rather more than usual" and "much more than usual". (Goldberg and Hillier, 1979) The scoring system applied in this study is the Likert scale 0, 1, 2, 3 (Likert, 1932). The minimum score for the 28 version is 0, and the maximum is 84. Higher GHQ 28 scores indicate higher levels of distress. Items were selected to cover four main areas: somatic symptoms (Sadock et al, 2015; Goldman, 1984), anxiety and insomnia (Sadock et al, 2015), social dysfunction (Sadock et al, 2015) and severe depression (Goldberg and Hillier, 1979).

3. Statistical methods

The Statistical Analysis of the information collected through the submitted General Health Questionnaires 28 (GHQ 28) and Demographic Profile questionnaires was executed with SPSS (Statistical Package for the Social Sciences) version 20.

The scores obtained in our study were compared with respect to age, gender, class, religion, caste, and academic performance of the students.

The Chi-square test for independence of attributes (Gupta and Kapoor, 2011) was applied to determine the association of the status of mental illness with the factors viz. gender, caste, religion, class of study and academic proficiency of students. The significance of the effect of the fathers' occupations on the mental state of students was also considered. In all cases, P-value ($p<0.05$) is considered as statistically significant at 5% level of significance.

Results

Out of 1839 students of 101 government schools under our study area, 993 (54%) were boys and 846

(46%) were girls of ages from 11 to 19 years as distribution shown in Table 1 below.

Table 1: Distribution of Students According to Class and Sex

Class	Males (%)	Females (%)	Total (%)
VIII	325 (52)	300 (48)	625 (34)
IX	344 (55)	281 (45)	625 (34)
X	324 (55)	265 (45)	589 (32)
Total	993 (54)	846 (46)	1839 (100)

The GHQ 28 records a minimum score of 0 and a maximum score of 84. In our study, the students secured scores from 0 to 70. With consultations with psychologists, we have further divided the scores between 24 to 84 in three levels viz.

Scores 24 – 40: mild psychiatric ailment

Scores 41 – 60: moderate psychiatric ailment

Scores 61 – 80: severe psychiatric ailment

Study of Demographic Characteristics and Status of Mental Health

The collected data revealed that 715 boys and 660 girls reported to have some elements of mental illness as per the GHQ 28 as they had scores above 23. This marks the prevalence of psychological distress of adolescents in the study area at an alarming 75%.

Subsequent statistical analysis, we came to the following results—

Table 2: Demographic Characteristics and Status of Mental Health

Demographic characteristic		% of students				Chi-square value	p-value (5%)
		No mental illness	*Mild mental illness*	*Moderate mental illness*	*Severe mental illness*		
Gender	Males	28	55	16	1	13.01	0.005
	Females	22	54	23	1		
Caste	Unreserved	26	56	17	1	11.362	0.252
	OBC/ MOBC	20	56	23	1		
	SC	23	56	20	1		
	ST	24	53	22	1		
Religion	Hinduism	25	54	20	1	5.768	0.45
	Islam	22	58	19	1		
	Christian	08	66	26	0		
Occupation of father	Farmer	36	56	08	0	21.544	0.043
	Carpenter	30	47	22	1		
	Driver	28	51	20	1		
	Job	34	50	16	0		
	Business	16	58	25	1		

Gender

It was observed that only 28% of male students and 22% of female students had scores below 24 in the GHQ-28 test. This infers that 72% of male students and 78% of female students have some degree of mental imbalances and can be termed as psychiatric patients according to Goldberg, which is quite alarming. As per the classification shown above, 55% boys and 54% girls fell in the mildly psychiatric category, 16% boys and 23% girls belonged to the moderately psychiatric category while only 1% each of boys and girls had severe psychiatric ailment.

Our analysis showed significant difference between boys and girls with respect to the status of mental health (p-value < 0.05). Class wise analysis revealed that though the difference of mental status with respect to gender was not significant for Class VIII (p-value = 0.782 > 0.05), there was significant variation between the status of mental health amongst boys and girls for Class IX (p-value = 0.000 < 0.05) and Class X (p-value = 0.032 < 0.05).

Caste

In the study sample, 51% of the students belonged to the General (unreserved) category, 24% belonged to Other Backward Classes (OBC/ MOBC) category, 11% were Scheduled Castes (SC) and 14% were from the Scheduled Tribes (ST) category. Of these, on an average 25% of the students in each category were completely free of mental disorders while 54% on the average had mild psychiatric illness, 20% had moderate psychiatric illness while 1% of students of each category showed severe symptoms. It could be seen that the scores were almost uniform over the different castes thus showing that the effect of mental illness among school going adolescents is independent of their castes.

Religion

Of the surveyed students, 84% were Hindus, 14% were Muslims and only 2% were Christians. 25% of Hindu and 22% of Muslim students were free from mental problems whereas only 8% of Christians were in this safe zone. However, it was observed that religion had no affect on the status of mental health of the students (p-value > 0.05).

Mother tongue

Majority of the students (70%) were Assamese followed by Bengali (19%), Hindi (4%). Boro and Nepali students each constituted 2% of the students while there were 1% each of Garo, Karbi and Manipuri students.

Occupation of father— Our study revealed that the students belonged to households where the fathers were mostly farmers, carpenters, drivers, businessmen or those with salaried jobs. The mothers were primarily housewives. The majority of students showing no mental illness were children of farmers and salaried persons while

the highest percentage of children with mild to severe mental illness were found to belong to households in business. The states of mental health of the students belonging to various occupational backgrounds of the fathers were found to be statistically significantly different (p-value < 0.05).

On the other hand, academically bright students who were placed in Division I showed better states of mental health while the proportion of students securing Divisions II and III were more prone to having mild to moderate psychiatric illness. This disparity was found to be statistically significant (p-value < 0.05).

Study of Academic Characteristics and Status of Mental Health

Mental status with respect to class and academic proficiency of the students are mentioned in Table 3.

Study of Mental Health of Adolescents with Respect to the Categories of Anomalies

In the GHQ 28, under every area mentioned in study tools, there are 7 questions with scores ranging from 0 to 3 for each question. Hence, under every symptom, scores ranged from 0 to 21, and with consultations with psychologists, the scores could again be subdivided into intervals in accordance with the severity of the condition. A score greater than 6 revealed the presence of the particular symptom in a student. The results obtained can be summarised as follows—

Table 3: Academic Characteristics and Status of Mental Health

Academic characteristic		% of students				Chi-square value	p-value (5%)
		No mental illness	*Mild mental illness*	*Moderate mental illness*	*Severe mental illness*		
Class	VIII	27	56	16	1	11.387	0.077
	IX	26	54	19	1		
	X	22	54	23	1		
Proficiency	Div I	45	38	17	0	18.578	0.005
	Div II	33	58	8	1		
	Div III	20	50	29	1		

It is observed that the students of Classes VIII, IX and X were more or less equally distributed over the different stages of mental state. Though the percentage of students free from psychiatric illness was lower among Class X students, the difference was statistically not significant at 5% probability level on performing the Chi-square test (p-value > 0.05).

Table 4: Presence of the Different Categories of Mental Anomalies According to Class and Gender

Categories of symptoms	% of students showing the presence of the symptoms								
	Class VIII			*Class IX*			*Class X*		
	M	F	T	M	F	T	M	F	T
Somatic symptoms	80	84	82	78	92	85	83	90	86
Anxiety and Insomnia	81	67	74	59	74	67	51	62	57
Social dysfunction	42	47	45	43	50	47	54	47	51
Depression	36	35	36	34	39	37	37	38	38

* M = Male, F = Female

The presence of somatic symptoms is extremely marked (> 80%) followed by anxiety and insomnia (66%). Social dysfunction has been reported in approximately 50% students in all the classes while the presence of depression is comparatively lower. A greater percentage of Class X students reported having somatic symptoms, social dysfunction and depression as compared to Classes VIII and IX while a higher percentage of Class VIII students reported suffering from anxiety and insomnia.

In all the classes, girls reported presence of more somatic symptoms than boys. Though in Classes IX and X, more girls reported having anxiety and insomnia, the case was reverse in Class VIII. In case of social dysfunction, though a higher percentage of girls reported presence of symptoms in Class VIII, the picture reversed in Classes IX and X when such symptoms became less prominent among girls. Depression was observed in fewer students, the proportion being more or less uniform in both the sexes.

Discussions

Mental Health Perspectives of Adolescents in the Study Area

The crucial issue of mental health of school going adolescents has not received its due importance in most of the Indian States. This is especially true in case of the Government schools in India. This has been corroborated by several studies in different Indian states (Nebhinani and Jain, 2019; Malhotra and Chakraborty, 2015; Patel et al, 2008). The situation is no different in Assam. The 101 government schools included in this study were also lacking in providing adequate mental health care to the students.

It has been reported that globally, 10-20% of adolescents suffer from psychiatric illness, and about half of the psychiatric illnesses have their onset before fourteen years of age (Kuppili and Nebhinani, 2020; Nebhinani and Jain, 2019). Even the World Health Organization has said that one in six (i.e., 17%) adolescents suffer from mental illness in their

report on Adolescent Mental Health, 2019. In our study, as per the GHQ 28 score criteria, a whopping 75% of adolescent children fell under the category of mental illness. However, if we consider the students under "mild mental illness" to be non psychiatric, the percentage of students falling under the moderate and severe categories would be 371 i.e., 20%. This would be more in conformity with contemporary studies. This point could be considered as the students might have over emphasised their psychological conditions while answering certain questions of the GHQ 28. But, the proportion is still at the upper limit of the accepted prevalence rate thus confirming an alarming situation as regards the mental health status of the school going children of the government schools of Kamrup (Metro) district in Assam. However, in a study by Malhotra and Patra, (2014), the prevalence of psychiatric illness was found to be 23.3% in the school setting in India and of 33.7% among urban school children in Tamil Nadu, in particular.

Gender and Mental Health

Our study showed girls to be at a greater risk of mental illness, the difference in manifestations of symptoms between girls and boys being statistically significant. Such observations have also been expressed in studies by Chauhan et al (2014) and Chakraborty et al (2016) conducted in Uttar Pradesh and Mangalore respectively. However, in the study by Costello et al (2003), the prevalence was more among adolescent boys while Hanspal et al (2019) found no difference in the occurrence of mental disorders with respect to gender. Our result clearly shows the presence of stereotypical mental frame among the people even in urban areas of Kamrup district of Assam. Males are always fortunate to enjoy the prime attention and this would definitely have an effect on the female psyche. This obviously affects the girls, even though some of them are very brilliant and sincere in their studies. This is in tune with a study conducted in Madhya Pradesh by Behera (2019).

It is expected that girls would show more of somatic symptoms, anxiety and depression while boys would manifest behavioural anomalies resulting in social dysfunction. However, the presence of somatic symptoms is markedly high for both girls and boys in our study. It is accepted in literature that adolescents are more conscious of their bodies and bodily reactions, whereby their emotional distress manifests as physical ailments. Somatic symptoms are also highly correlated with anxiety and depression (Poikolainen et al, 1995; Jansens et al, 2014). The levels of anxiety of the students in our study seemed to decrease as they reached Class X. Maybe the increase in age and academic standard might help

in bringing a sense of confidence in some of the students. Nevertheless, the presence of symptoms of anxiety and depression was apparent in our study sample. So was the presence of social dysfunction which is very much expected as social withdrawal is an aftermath of having somatic symptoms, anxiety or depression. While girls have a tendency to be social, adolescent boys are more prone to withdraw into their own cocoons.

The Causes Affecting Mental Health in Adolescents

There was significant difference between the mental health states with respect to the academic proficiency of the students. The brighter students were more stable mentally and relatively free from psychological problems.

It was seen that the home environment and inter relationships within the family were important factors. A disciplined household with simple yet strong values nurtured balanced children as in the cases of farmers and salaried parents. Business has its ups and downs and the inherent uncertainty and subsequent discord within the household percolates to the children making them anxious.

The more distressing fact was that the parents were unaware of the turmoil their adolescent children were experiencing. Nor were the teachers aware of the inhibitions, the behaviour problems or the confusions and distress of the students, especially those with mild symptoms. Even if some teachers did notice behavioural oddities in students manifesting moderate to severe symptoms, they were not adequately equipped to address the problems. Their inadequate responses could sometimes aggravate the conditions of stress in the adolescents. Even when they live in perfect conditions, they might face unexplained confusions which might get exponentially multiplied in the presence of stressors at home or in school. In our study too, students complained of pressures due to peer rivalry, sibling rivalry, conceived favouritism by teachers and parents, neglect or over protection by parents and teachers, lack of congeniality among parents, illness and injury in the family, financial problems, alcoholism and domestic violence. There were instances of students being hurt in romantic relationships or being obsessed with their appearance and desirability that may destabilise their equilibrium. These symptoms are in line with the study by Poikolainen et al (1995). Students also reported a feeling of "hopelessness" due to inability to perform as expected in academics or sports. Whatever the situation, instability in mental well-being sets in, and can persist in the adolescents, to pose bigger challenges in their adulthood, if not addressed timely.

Remedial Measures and Roles of the Different Catalytic Agents

From the above discussion, it is apparent that family members of the adolescents, the teachers and educational institutions, the conscious public and the Departments of Health and of Education of the Government of Assam all have their parts to play in alleviating the mental health situation of the future of our state.

Initiatives on SMHS such as school health program, teachers' orientation program, student enrichment program, and school-based campaigns which are being conducted by NIMHANS, Bengaluru and other SMHS schemes as reported by Kuppili and Nebhinani (2020) could be taken as examples and tailored to suit the adolescents of Assam.

Some suggestions on measures that can be taken by the school, family and the society, in cooperation with the Government, are as follows—

- The Heads of the Educational Institutions should be made aware and motivated to give due credence to the crucial issue of mental health of the students.
- Awareness on concept and issues of mental health could be incorporated in the school curriculum, as a course or as a topic in the syllabus.
- The schools should arrange for periodic assessment of physical and mental health of the students by professionals.
- Teachers are required to be given awareness on psychology of children and adolescents and the ways to observe them and deal with them on a regular basis.
- Teachers could be given training to observe irregularities and to address the milder symptoms in the students so that their problems do not aggravate.
- Counselling sessions by professional psychologists on a regular basis.
- Awareness programs could be made mandatory for the parents where they are given the adequate knowledge for assessing and dealing with their adolescent children's emotional and other needs through a positive environment at home. There should be interactions between teachers and parents on a one to one basis at regular intervals to discuss about an adolescent's behaviour, interests and activities.
- Local NGOs and conscious citizens can take the initiative in addressing this vital issue and help out the schools in this endeavour.

Conclusion

There has been an alarming rise in mental disorders all over the world during the last few decades. To attend to this problem, it is imperative to assess the state of mental health in the

different sections of the population. Child and Adolescent Mental Health (CAMH) is a major concern which the World Health Organization (WHO) is trying to address by giving a clarion call to all nations of the world. The awareness on the need to save our future generation from mental instability is slowly rising and many studies have been conducted on the status of mental health of children and adolescents and policies have been framed accordingly. The Indian situation has also been found to be quite disquieting and several School Mental Health Services (SMHS) models are being floated for adoption. However, only the States of Kerala, Karnataka and Goa have been reported to have actively adopted SMHS schemes till date.

In view of the above, an endeavour has been made in this paper to assess the mental health scenario of the school going adolescents of Kamrup (Metro) district of the state of Assam. The school and family environments are playing pivotal roles in addressing this issue of mental health in adolescents. Manifestations in the form of somatic symptoms, anxiety and insomnia, social dysfunction and depression could also be gauged from the study. However, it is to be noted that the GHQ-28 primarily gives us an indication of the presence or absence of psychiatric illness in an individual. It is necessary to supplement it with further study tools to understand the exact nature and severity of the conditions. The authors propose to carry out further relevant tests in the study group in the near future.

Nonetheless, it is essential that the issue of mental health of adolescents, in the study area, is considered with extreme seriousness by the Government, the authorities of the educational institutions, the teachers, family members and the conscious citizens. The study recommends remedial measures such as spreading awareness on the issue, training educators and parents to understand and deal with the situation, urging socially conscious citizens to lend support and cooperation to this cause over and above the particularly crucial Government interventions, policies, and adoption and execution of SMHS schemes. It is the need of the hour to help create a healthy environment now for our younger generation to grow up into mentally sound, balanced and capable adults and thereby build a healthy society in the future.

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