Original Research Paper

Community Medicine

"PREVALENCE OF STRESS, ANXIETY AND DEPRESSION DUE TO COVID-19 AMONGST THE STUDENTS OF CLASS 10-12 OF KAMRUP (METROPOLITAN) DISTRICT,ASSAM"

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INTRODUCTION

Today the world is facing an unprecedented situation owing to the effects of Coronavirus disease (COVID-19), an infectious disease caused by SARS-COV2. First identified in December 2019 in the Wuhan city of China, it has spread far and wide all over the globe affecting almost every country in the world, making it a global pandemic. As of now, approximately 20.8 million people have been affected across 213 countries and territories, leading to loss of lives and as there is no treatment for the novel coronavirus till date, lockdown and social distancing is the only practical and safe option to slow down the spread of the virus [1]. Stress in adolescents and young adults has emerged as a significant mental problem in recent years. It has been estimated that 10% to 30% of students experience stress due to various aetiologies that affect their academic performance, cause anxiety and also affect their overall emotional and physical well-being [2]. Information load, high expectations of parents and teachers, academic pressures, unrealistic ambitions coupled with limited employment opportunities and high competitiveness are some of the important sources of stress which create tension, fear, anger and anxiety. However, this lockdown has imposed a new order of life on the residents of the world. Educational institutes are closed, malls are shuttered down, social gatherings are a thing of past with everybody stuck inside their homes. While this is crucial for the betterment of public health, it has led to a different stratum of challenge for the people, namely the mental health aspect. School students have emerged as one of the most affected groups. The ones who were promoted to Class 10th and 12th this year were unable to start their classes as the lockdown commenced. The anticipation of writing their respective board exams next year has led to growing concerns for their academics.

Although many educational instituted have launched online classes, adapting to the sudden transition to the new method of education is cumbersome and stressful for both the students and teachers. Pupils who just passed 10th or 12th are particularly concerned about the future of their career. They were in different phases of their academic year prior to the lockdown; some were writing their final exams while some were about to take admissions in their desired colleges. The pandemic has led them in the midst of an unknown darkness with no clear ideas about when and how their exams will be conducted or whether it will even be conducted or not. This is one of the prime reasons that is causing intense anxiety among the students. Moreover, even if the exams are going to be held, on the back of their mind students are also fearful of getting infected by the virus. A situation like this when students have to gamble between their health safety and academics has put students under a massive amount of stress and anxiety. A large number of students are susceptible to depressive mental status because of social matters as well. They are unable to relax or meet their friends after studies, and a significant number of them are having issues in their families which is further deteriorating their mental health. Disturbances in mental health not only harms a particular student but also has a negative impact on the community. Thus, this study was done in an attempt to understand the incidence and impact of COVID-19 on the mental health of students so that effective mental health management can be planned

MATERIAL AND METHODS

Study Design: -
It is an institution based cross-sectional study on students from class 10th to 12th.

Study Area: -
The study was conducted in different government and private schools of Kamrup(Metropolitan) district of Assam.

Study Periods: -The study is conducted between July and September 2020.

Study Population: -
Students from class 10th to 12th of different schools across Kamrup(M) district.

Sampling Technique: -
5 government schools and 4 private schools were selected randomly, out of which 270 students of class 10, 11 and 12 were randomly selected.

Inclusion Criteria: -
i)   Students studying in class 10, 11 and 12 in Schools located in Kamrup (M).
ii) Voluntary informed consent from selected schools.

Exclusion Criteria: -
i)   Students diagnosed with any psychological disease before COVID-19 Pandemic.
ii) Students not willing to participate in the study.

Sample Size: -
Base on a previous study "Depression, Anxiety and Stress among higher secondary school students of Imphal, Manipur, published in INDIAN JOURNAL OF COMMUNITY MEDICINE, 2017, VOL. 42, ISSUE 2, PAGE94-96, conducted by regional institute of medical sciences Imphal, the prevalence of stress among school students is 21%. [3]

The sample size will be calculated based on the following formula
$Z = 4PQ/L^2$ Here,
Z = Sample Size
P = Prevalence = 21%
Q = 1 – Prevalence = 79%
L = Relative Error = 5%
After doing the calculation, Z will be 265.44, rounding off to 270. The sample size for the study will be 270.

Data Collection Tool: -
The data will be collected using a pretested, predesigned questionnaire based on DASS21. The online interview method will be used to collect data from students.

Data Collection Technique: -
To obtain the target sample size, 135 students each from government and private school will be selected. For this, 9

private schools and 9 government schools will be selected randomly. In each school, 5 students from class 10th, 11th and 12th will be selected randomly. Now, for each class, a section will be selected randomly, and stratified random sampling will be done, every 5th student will be chosen for this study, e.g. roll no. 5, 10, 15, 20, 25. To carry out the study, the qualitative way is to be used for sampling. Selected students will be interviewed using questionnaire through google forms. The questions of questionnaire were close-ended and self-explanatory which was shared on various social network groups like WhatsApp, Telegram etc. Incomplete and random responses were deleted, the valid response are assessed and the final number of responses are analysed for the study. Before the study, informed verbal consent will be taken by the project group.

Statistical Analysis: -
Computer applications like Microsoft Word and Microsoft Excel were used for typing, tabulating and for making a graphical presentation of the data collected

RESULTS
The study was conducted among the students of class 10th, 11th and 12th of Kamrup (M) city. There were total of 270 students. Out of total 270 students 55.5% were from Government school and 45.5% were from Private schools. The finding shows that 7.4% were of age 15 years, 29.6% were of age 16 years, 33.3% were of age 17 years, 24.4% were of age 18 years and rest 5.2% were above 18 years of age.

Among the 270 respondents 73.3% were found normal, 6.3% had mild stress, 11.1% had moderate stress. 7.4% had severe stress and 1.4% had extremely severe stress. Among the 270 respondents 66.6% were found normal, 5.1% had mild anxiety, 11.1% had moderate anxiety. 8.8% had severe anxiety and 8.1% had extremely severe anxiety.

Table 1

Depression amongst the student due to Covid 19			
Sl no	Types	Nos	Percentage
1	Normal	192	71.1
2	Mild	24	8.8
3	Moderate	30	11.1
4	Severe	16	5.9
5	Extremely Severe	8	2.9

Out of 270 students, 192(71.1%) doesn't suffer from depression, 24 (8.8%) suffering from mild depression, 30 (11.1%) suffering from moderate depression, 16 (5.9%) suffering from severe depression and 8 (2.9%) are suffering from extremely severe depression

Table 1

School wise Stress amongst the student due to Covid 19			
Sl no	Types	Private School	Govt School
1	Normal	79(65.8%)	116(77.3%)
2	Mild	10(.83%)	10(6.6%)
3	Moderate	14(11.6%)	16(10.6%)
4	Severe	15(12.5%)	6(4%)
5	Extremely Severe	2(1.6%)	2(1.3%)

Among private school students, 79(65.8%) doesn't suffer from stress, 10(.83%) suffering from mild stress, 14911.6%) suffering from moderate stress, 15(12.5%) suffering from severe stress, 2(1.3%)suffering from extremely severe stress. Among government school students, 116(77.3%) doesn't suffer from stress, 10(6.6%) suffering from mild stress, 16(10.6%) suffering from moderate stress, 6(4%) suffering from severe stress and 2(1.3%) suffering from extremely severe stress

According to our study,5.9% of our study population have been tested positive for COVID-19 disease 91.9% have been tested

negative and the rest 2.2% are unaware. Among the students, 15.5% are diagnosed with psychological disorder of which 3% students were receiving psychiatric counselling before the pandemic came into being. Due to the pandemic, 12.7% students were barred from receiving psychotherapy whereas the remaining didn't receive any psychotherapy treatment.

There is prevalence of anxiety in 43.4% of the study population. According to DAS Scoring scale, 5.1% has scored in the range of 8-9 which indicates mild anxiety, 11.1% has scarred in the range 10-14 which indicates moderate anxiety 8.8% has scarred in the range of 15-19 which indicates score anxiety and about 8.1% has scored above 20 which states having extremely severe anxiety. There is prevalence of depression in 28.9% of the study population.

According to DAS scoring Scale, 8.8% has scored in the range of 10-13 which indicates mild depression, 11.1% has scored in the range of 14-20 which indicates moderate depression,5.9% has scored in range 21-27 which indicates severe depression and about 2.9% has scored above 28 which states about extremely severe depression. There is prevalence of stress in 26.7% of population according to DAS scoring scale, 6.6% of students has scored in the range of 15-18 which indicates mild stress, 11.1% of students has scored in the range of 19-25 which indicates moderate stress, 7.4% of students has scored in the range of 26-33 which indicates severe stress and 1.4% has scored above 34 which indicates having extreme severe stress.

DISCUSSION
The study was conducted among the students of class 10th, 11th and 12th of Kamrup (M) city. There were total of 270 students. Out of total 270 students 55.5% were from Government school and 45.5% were from Private schools. The finding shows that 7.4% were of age 15 years, 29.6% were of age 16 years, 33.3% were of age 17 years, 24.4% were of age 18 years and rest 5.2% were above 18 years of age. In our study majority of students were Hindus accounting about 83.6%, 11.8% were Muslims and 4.4% were Christians.

In the study out of total 270 students, 59.3% were Females and 40.7% were Males. Among the females 42 respondents showed some amount of depression, 38 showed some amount of stress and 54 showed some amount of anxiety whereas among males 26 showed some amount of depression 22 showed some amount of stress and 22 showed some amount of anxiety.

According to our study, the occupation of the head of the family of 31.1% was Business, 15.9% was Private job, 42.4% was Service, 5.3% was Self employment. On being asked about COVID 19 symptoms 3.7% were showing symptoms 94.1% were not showing symptoms 2.2% were unaware of any symptoms. 5.9% of the students have been tested positive for COVID 19 disease,91.9% were tested negative and 2.2% were unaware. Out of 270 respondents 37.8% had someone in close infected from COVID 19 disease and 14.8% had someone in close died due to COVID 19 disease According to our study it was found that 6.7% students came into direct contact with someone infected from the disease. During the time of the study none of the students were under quarantine.

Among the students 15.6% were diagnosed with psychological disorder and 3% were receiving psychiatric counselling before pandemic came into being. But due to pandemic 12.7% were barred from receiving psychotherapy. Regarding the socio economic impact of pandemic it was found under our study that 13.4% students' parents lost their jobs Out of all the respondents 56% were found to be lagging behind in studies due to pandemic. Before pandemic 38.8% students were receiving private tuitions which decreased to

27% during the course of our study. It was found that 58.2 percent students did exercise during lockdown while 41.8 percent did not perform exercise during lockdown In the study it was found that 34.8% students marked their mental health to be great before lockdown which came to 15.6% after 3 months of lockdown which is similar to the study conducted by Mathilde M. Husky, Viviane Kovess- Masfety, Joel D. Swendsen in France(2020)[4]. In our study 24.4% students felt low due to lack of face to face interaction among peers also 32.6% found excessive screen time to have negative impact on their mental health. According to our study 55% students faced issues related with technological accessibility which hampered their academics and 45% did not face issues related to technological accessibility. In our study 37% students were found to have problem in understanding of topic covered in online classes due to lack of face to face interaction. In our study 46.7% students were found to be concerned about future academics due to uncertainity of upcoming exams which is found to be similar to study conducted by Usama Rehman And Collegues in Aligarh Muslim University.(2020) [5]

Among the 270 respondents 71% were found normal, 8.8% had mild depression, 11.1% had moderate depression. 5.9% had severe depression and 2.9 had extremely severe depression which is in correspondence to the conducted by Usama Rehman And Collegues in Aligarh Muslim University(2020)

Among the 270 respondents 73.3% were found normal, 6.3% had mild stress, 11.1% had moderate stress. 7.4% had severe stress and 1.4% had extremely severe stress. Among the 270 respondents 66.6% were found normal, 5.1% had mild anxiety, 11.1% had moderate anxiety. 8.8% had severe anxiety and 8.1% had extremely severe anxiety. Findings of another study on "Prevalence of Stress, Anxiety and Anger among school children" conducted by Taroor in South India (2011) found empirical evidence that there are a higher number of students with above average levels of Stress (47.5%), Anxiety (43.5%) and Anger (9.3%) among school children.[6]

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