



Prevalence of Depression and Its' Risk Factors among Higher Secondary School Students

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

As adolescence is a transitional stage in which a person's physical and psychological development and transformation are limited to the time between puberty and legal adulthood. It is commonly associated with the onset of a variety of mental health or adjustment problems. This study was to find out the incidence of depression and the factors that contribute to it among higher secondary school students. A descriptive, cross-sectional study was conducted among 100 adolescents who were selected by simple random sampling technique. The socio-demographic information, Perceived Social Support scale and Patient Health Questionnaire (PHQ-9) were adopted to collect the data. Descriptive and Inferential statistics was used to analyse the collected data. In this study, 52% of the adolescents did not have depression, whereas 18% had moderate, 8% had moderate to severe depression and 2% of them had severe depression. Nearly 68% of students had a higher social support perception. The type of family and living status of parents had

significant relationship with the level of depression among adolescents at $p = 0.01$. The study concludes that depression and mental distress among these adolescents may be alleviated by boosting their perceived degree of social support and self-esteem through a variety of methods such as family support, counselling at schools and workshops on self – management skills etc.

Keywords: Prevalence; depression; risk factors; higher secondary school students; adolescents; perceived social support scale; health questionnaire (PHQ-9).

1. INTRODUCTION

Adolescence (10-19 years) is a distinct and formative period in one's life. Adolescents might be vulnerable to mental impairments due to a variety of physical, emotional, and social changes such as poverty, abuse, or violence. Promoting psychological well-being and safeguarding adolescents from unpleasant experiences and risk factors that may restrict their ability to thrive are crucial for adolescence well-being as well as their physical and mental health during adulthood [1]. If a caring and supportive environment provided in the home, school, as well as in the community, adolescents will be empowered to maintain excellent mental health and wellbeing.

Depression is a widespread mental illness that is one of the leading causes of disability around the world and it frequently begins in childhood. In all teenagers, depression is the tenth largest cause of illness and disability (WHO, 2020). Depression affects an estimated 300 million people worldwide [2]. Depression is thought to be a substantial risk factor for teenage premature death, according to evidence [3]. Adolescent depressive symptoms are becoming more prevalent as a public health issue, both in high and low - middle income nations [2].

Depressive disorders are one of the most common health issues among teenagers with prevalence rates ranging from 5–6% [4] and a lifetime incidence rate of 20% by late adolescence [5]. Girls have twice the prevalence of males, and youth with a large number of psychosocial vulnerability have a higher symptom load [6]. In individuals aged 10 to 19, mental health disorders account for 16% of the worldwide burden of disease and injury [7]. In addition, it can disrupt family ties, social functioning, and academic success in adolescents and may lead to emotional disorders, poor eating habits, violent behaviour, drugs, and other substance abuse [7].

Depression is distinct from normal mood swings and short-term emotional responses to everyday challenges. Depression can be dangerous to one's health, especially if it lasts for a long time and has a moderate or severe intensity. It can make the individual who is affected suffer severely and perform poorly at job, school, and in the family. Depression can lead to suicide in the worst-case scenario which is the fourth highest cause of mortality among teenagers aged 15 to 19 [8]. Every year, almost 800,000 people die by suicide [9].

Failure to address adolescent mental health issues has long-term effects, affecting both physical and mental health and hampering prospects to live productive lives as adults. Though half of all mental health disorders begin before the age of 14, the majority of instances go unnoticed and untreated [8].

Despite the fact that there are effective therapies for psychiatric illnesses, between 76% and 85% of persons in low- and middle-income nations do not receive therapy [10]. Lack of funding, a shortage of skilled health-care practitioners, and the societal stigma associated with mental illnesses are all obstacles to effective treatment. Inaccurate assessment is another obstacle to successful care. People who are depressed are frequently misdiagnosed in countries of all financial levels [11].

Depression has been proven to be reduced through prevention programs and it is one of the priority conditions covered by WHO's mental health Gap Action Programme (mhGAP). A resolution endorsed by the World Health Assembly in May 2013 called for a comprehensive and coordinated approach to mental disorders at the national level. School-based programs to improve a habit of positive thinking in children and adolescents are effective community methods to prevent depression. Interventions for parents of children with behavioural issues may help to lessen parental depression and enhance their children's outcomes [11].

The World Health Organization (WHO, 2020) has published brief psychological intervention manuals for depression that may be provided by common people. Problem Management Plus, for example, describes the application of behavioural activation, relaxation training, problem-solving treatment, and social support reinforcement. Although these opportunities to prevent the mental illnesses among adolescents are prevalent and it can be executed by lay workers, no such activities are taken care in the schools [11]. The teachers will be the best resource persons who can easily identify their students with mild symptoms are those who are vulnerable for depression and can give preventive strategies or refer them for professional consultation in case of moderate to severe symptoms. This may go a long way to reduce the incidence of depression among adolescents and also reduce the morbidity and mortality related to it.

Hence, the study on depression in higher secondary school students is important because this is where the majority of lifetime mental illnesses begin. Identifying the prevalence of depression and the factors that contribute to it can aid in the development of evidence-based preventative strategies. The goal of this study was to determine the prevalence of depression and the factors that contribute to it among higher secondary school students. It will also help to enlighten the school authorities about their social responsibility towards their students and prevent mental illnesses among the adolescents.

2. METHODOLOGY

Design: It is quantitative approach with descriptive design. A cross-sectional study was done among students in selected higher secondary schools, Tamilnadu, India

Sample: The target population of the study was the adolescents aged 16 – 18 years of age studying in the higher secondary schools. Power analysis was used to determine the sample size with 95% confident and 5% of precision. The calculated sample size was 180 students. Two hundred adolescents aged 16 – 18 years of age were selected by simple random sampling technique from 4 schools.

Tools/instruments: A standardized self-administered questionnaire was used to collect the data with three sections. Section A: The socio-demographic characteristics of the participants Section B: The perceived social

support of the participants and their help-seeking behaviour which was assessed using the multidimensional Scale of Perceived Social Support [12]. Section C: a tool for detecting depressed symptoms called the Patient Health Questionnaire (PHQ-9). The Patient Health Questionnaire (PHQ-9) is a self-administered edition of the Patient Health Questionnaire that is used to measure level of depression. PHQ-9 has 9 statements with scores ranging from 0 (not at all) to 3 (very, i.e. almost each day). The score of PHQ-9 scale is from 0 to 27, in which high score indicative of severe depressive symptoms. The content validity of the tool was obtained from experts from various nursing specialties, one child psychiatrist and a clinical psychologist. The reliability of the tool was assessed after the pilot study by split – half method. The 'r' value of the tool was 0.73 which is highly reliable.

Procedures of data collection: The tool was self-administered questionnaire which took approximately 30 minutes to complete. The introduction about the questionnaire and instructions about filling the same was given to the participants prior to data collection. The self administered tool was distributed to the participants by what's app/ email as Google docs and completed questionnaire was collected by the investigators. The study was done between Jan.'2021 to April' 2021.

Statistical analysis: Descriptive and Inferential statistics was used to analyze the collected data.

3. RESULTS

Table 1 describes the socio – demographic characteristics of the higher secondary school students. According to the Table 1, 54% of the students who took part in this study were male, while 46 % were girl students. The pupils' mean age was 16.39 years with SD of 0.82, between the ages of 16 to18 years. In this survey, 46% attended government or public schools, whereas 54% attended private schools. Seventy four percent of children were in nuclear family and 88% were living with family were as 12% were in the hostel. Regarding the adolescents' living status of the parents', 70% was living together, 20% were separated or divorced and 10% lost one of their parents. Twenty percent of the children's family had \leq 10,000 INR as their monthly family income while 76% of the fathers had formal education compared to only 54% among mothers. Among the study participants, 14% of them had the family history of depression.

Table 2 depicts the distribution of stages of depression among higher secondary school children according to the Patient Health Questionnaire (PHQ-9). In this study, 52% of the adolescents did not have depression, 20% had mild, 18% moderate, 8% had moderate to severe depression whereas 2% of them had severe depression.

Table 1. Socio - demographic characteristics of the higher secondary school children

Age mean age ± SD (in years)	16.39 (SD ± 0:82)
Male Students	54%
Type of School	
Government	46%
Type of Family	
Nuclear	74%
Living with Family	88%
Place of Residence	
Sub-Urban	76%
Living status of Parents	
Living together	70%
Separated/divorced	20%
Parental loss	10%
Monthly income of family (in INR)	
≤10,000	20%
Father's Education	
Formal Schooling	76%
Mother's Education	
Formal Schooling	54%
Family History of Depression	
Yes	14%

Table 2. Distribution of stages of depression among higher secondary school children

Stages of Depression	%
Minor / No Depression (0 - 4)	52
Mild Depression (5 - 9)	20
Moderate Depression (10 - 14)	18
Moderate to Severe Depression (15 - 19)	8
Severe Depression (20 - 27)	2

Table 3. Level of perceived social support and help-seeking behaviour of the higher secondary school children

Variables	Percentage
Perceived social support	
Low	2
Moderate	30
High	68
Perceived support from a significant other	
Low	14
Moderate	12
High	74
Perceived support from peer	
Low	14
Moderate	20
High	66
Share problems with parents	
Yes	74
No	26
Share problems with friends	
Yes	90
No	10
Consider about solution alone without sharing	
Yes	8
No	92
Self-esteem	
Low self-esteem	32
High self-esteem	68

Table 3 depicts the level of perceived social support and help-seeking behaviour of the higher secondary school children. In terms of perceived social support, nearly 68% of students had a high level of social support perception. However, 74% of the students said they shared their difficulties with their parents, while 90 % of them shared their problems with their peers. Sixty eight percent of the adolescents had high self esteem whereas 8% were thinking to solve their problems by themselves without sharing.

According to the study findings, regarding the association between demographic characteristics of the participants with their level of depression, the chi-square test revealed that the demographic characteristics such as type of family and living status of parents had significant relationship with the level of depression at $p = 0.05$.

4. DISCUSSION

Adolescence is a critical stage for forming and sustaining significant social and emotional behaviours that contribute to mental health. Adopting healthy sleep habits, exercising regularly, learning coping, problem-solving, and interpersonal skills, and learning to control emotions are a few of them. Family, school, and neighbourhood contexts that are supportive are also vital.

In this study, 52% of the adolescents did not have depression, 20% had mild, 18% moderate, 8% had moderate to severe depression whereas 2% of them had severe depression. These findings were in accordance with the findings of a study on incidence and associated factors with depression among higher secondary school adolescents in Nepal. The survey discovered a significant frequency of depression among high school students, with 44.2% of participants suffering with depression. Furthermore, 25.3% were diagnosed with mild depression, while 18.9% were diagnosed with serious depression [13]. Malik et al. found a 52.9% incidence of depression among teenage students in Hariyana, India, and another study in Bihar, India, found a 49.2% prevalence of depression [14,15].

This finding is consistent with the global incidence of depression among adolescents and these study participants did not differ from that. This study finding gives the concern that the adolescents, irrespective of the place where they live or where they study, are prone to get the

depressive episodes and needs to be monitored closely. Effective preventive care to be given to children, to regulate their emotions, enhance alternatives to risk-taking behaviours, build resilience for difficult situations and adversities, and promote supportive social environments and social networks such as self – help groups among peers.

In the present study, in terms of perceived social support, nearly 68% of students had a high level of social support perception. However, 74% of the students said they shared their difficulties with their parents, while 90 % of them shared their problems with their peers. Sixty eight percent of the adolescents had high self esteem whereas 8% were thinking to solve their problems by themselves. Similar findings were reported in few studies [16,17].

Mental health outcomes are influenced by a variety of circumstances. The greater the numbers of risk factors that teenagers are exposed to, the more negative effects on their mental health are likely to occur. A desire for greater autonomy, peer pressure, sexual identity, and increased access to and use of technology are all factors that can contribute to stress during adolescence. The gap between an adolescent's lived reality and their perceptions or goals for the future can be exacerbated by media impact and gender stereotypes. The quality of their home life and their interactions with their peers are also crucial influences.

According to the study findings, the demographic characteristics such as type of family and living status of parents had significant relationship with the level of depression among the participants at $p = 0.01$. In contrast, the study shows that the adolescents who were in joint family showed higher depressive symptoms [13]. According to the relationship found with demographic data of the participants, the type of family and living status of the parents had greater influence with the level of depression. May be children living in the joint family and where both the parents live in harmony, they had adequate support and opportunities to express/share their feelings, emotions and problems. So, it might have given them the sense of support and perception on social support and enhanced their help seeking behavior.

Since the study is conducted among adolescent and in a small area and included only 4 schools of Tamilnadu, it cannot be generalized to the

whole population all over Tamilnadu or India either.

5. CONCLUSION

The incidence of depression among higher secondary school students was significant, with 48% of the participants having depression. This is a public health concern because depression during adolescence may predispose to numerous health problems in their future. Hence, the mental health disorders such as depression among the adolescents may be alleviated by boosting their perceived degree of social support and self-esteem through a variety of methods such as family support, counselling at schools and workshops on self – management skills etc.

CONSENT AND ETHICAL APPROVAL

Official Permission from the Principals of the schools were obtained as well as ethical permission was also obtained. Consent from the participants were collected before starting the study by explaining the purpose of the study, the role of the participants, confidentiality of the information and their right to withdraw from the study. Each student's parent's informed consent was also obtained prior to the study.

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COMPETING INTERESTS

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