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Prevalence and Factors Associated with Depression in School-Going Adolescents of India

Abstract

Background: Various studies on the prevalence and the factors associated with depression among the adolescents have indicated that the individuals known to suffer from depression in any form have increased suicidal tendencies and are also associated with poor academic performance. In this article, a review of literature has been done to provide evidence regarding the magnitude and factors of depression among school-going adolescents.

Methods: The review of literature was done using various sites online such as PubMed and Google Scholar, and various papers from different journals have been searched to find the relevant articles that provide information on magnitude of depression and its associated factors. Various scales such as Patient Health Questionnaire-9 (PHQ-9) and Beck's Depression Inventory-21 (BDI-21) were used to measure depression and identify its contributing factors including the socio-demographic factors.

Results: Depression has been found to range between 18 and 50% among various study populations. The prevalence was high among those study groups who were having both parents working, poor relationship with family members and poor academic performance.

Conclusion: A large proportion of the adolescent population who suffers from depression goes unrecognized either due to poor understanding of the various factors associated with it or due to less efficient screening and treatment opportunities. Therefore, a clear understanding of the various factors is must to identify depression in its earlier course and suitable treatment options to be provided along with the follow-up care.

Keywords: Depression, Adolescents, School-going adolescents, Mental health.

Introduction

Depression is a serious mental health problem that can affect people of all ages, including children and adolescents. It is generally defined as a persistent experience of a sad or irritable mood as well as anhedonia, loss of the ability to experience pleasure in nearly all activities. It also includes a range of other symptoms such as change in appetite, disrupted sleep patterns, increased or diminished activity level, impaired attention and concentration, and markedly decreased feelings of self-worth. It is accepted that depression during adolescence is a highly prevalent yet mostly an under recognized mental health problem.

WHO has included depression as one of the priority mental disorders in childhood and adolescence.¹ Adolescent depression not only interferes with emotional, social, and academic functioning but is also a proven risk factor for school absenteeism, educational underachievement, substance abuse and suicidal behavior. Various studies from India have tried to assess the prevalence of depression among adolescents and prevalence was found to vary from 11 to 15%.^{2-5.}

Depression during adolescence is also associated often with suicide—a phenomenon that is also on the rise among adolescents in India in recent times.⁶ In India, adolescents account for 20% of the population.⁷ Single largest contributor to the global burden of disease in the age group 15–45 years is depression.⁵ By the year 2020, depression is projected to reach second place ranking of Disability-Adjusted Life Year (DALY) calculated for all ages and sex, second only to heart diseases.⁸

Out of the total Indian adolescent population majority of the adolescents reside in the rural setting. These individuals will seek care from the nearby primary healthcare settings. Various studies have shown that the usual care given by primary healthcare physicians fail to recognize 30–50% of depressed patients, indicating the huge magnitude of the problem that remains undetected and undiagnosed.⁹

There are various tools that have been designed to assess the magnitude and severity of depression among adolescents, notably Patient Health Questionnaire (PHQ-9), Becks Depression Inventory–II, Child Depression Inventory, Adolescent Depression Rating Scale and many more. These scales when used judiciously can screen as well as diagnose the adolescents suffering from this mental agony.

Objectives

The review article so undertaken will help in throwing light on the studies conducted in this regard to reflect the mental health status of adolescents. Such studies can help in understanding of the problem and planning the kinds of services and mental health interventions required by identifying the risk factors, prevalence and the socio-demographic factors and their relationship with depression in the adolescent age group, if any.

Methodology

The review was undertaken in multiple ways. Majority of the research done in this regard was done using internet. The major sites accessed for relevant literature were Google Scholar and Pub Med. Various tools used to assess depression include PHQ-9, BDI-21, Adolescent Depression Rating Scale (ADRS), etc. The relevant information regarding the socio-demographic data, such as parental dissatisfaction towards the academic performance, peer pressure, substance abuse and any hobbies, have been taken separately.

The keywords used for this purpose were: depression, adolescents, school-going, mental health.

Results and Discussion

In the studies under taken for review, the prevalence of depression in the South varies from 23 to 57%, while the studies undertaken in the North report the prevalence to vary from 18 to 49%. A number of factors play important role in the development of depression among the adolescents. Almost all of the studies have pointed out on factors, such as nuclear family, poor relationship with parents, academic under-performance, body image dissatisfaction, etc. Substance abuse has a strong association with the development of depression.

A study conducted by Verma et al. in school-going adolescents of class 12th in Raipur city, India, in 2014 over a sample of 321 students found that 40.49% students were mildly depressed and 19% had major depression. Depression was found more in females (59.49%) as compared to males (56.24%). Among various factors examined for association with depression, statistically significant factors identified were working mothers, students staying away from home, poor relationship with family and self or parental dissatisfaction with academic achievement. Peer pressure also had significant association. Having a hobby acted as a protection against depression.¹⁰

A study conducted by Chauhan et al. over 360 students of 9th to 12th class in a public school in Noida, Uttar Pradesh, in 2011 concluded that the overall prevalence of depression among study subjects was 38%. It was observed that prevalence of depression was increasing along with increase in BMI. A statistically significant association was found between BMI and depression ($P < 0.003$). Extracurricular activities and depression were inversely associated with each other ($P < 0.002$).¹¹

In a study carried out by Nagendra et al. in Davangere district in Karnataka, over 3141 students revealed that the prevalence of depression in study group was 57.7%. The prevalence of suicidal ideation was significantly ($P = 0.000$) more among the depressed (41.7%) compared to non-depressed (11.4%). Residential school students were more depressed (74.5%) than non-residential school students (52.1%, $P = 0.000$). Students from joint families were less depressed (40.1%) compared to those from nuclear families (63.3%, $P = 0.000$).¹²

Mohanraj et al. in their study in Chennai among school-going adolescents in 2010 found that of the 964 adolescents, 378 (39.2%) presented with 'no depression'. Mild depression was found in 358 (37.1%) adolescents. The number of adolescents who reported moderate depression was 187 (19.4%) and severe depression was 41 (4.3%). Thus a total of 228 (23.7%) adolescents presented with moderate to severe depression.¹³

Jayanthi et al. in their study in Thiruvallur district of Tamil Nadu in 2013-14 over 2432 school-going adolescents concluded that 612 adolescents (25%) were diagnosed to have depression during the study period. It was revealed that 45.7% of the adolescents had moderate and 9.3% had minimal depression.¹⁴

Kaur et al. in a study conducted over 200 adolescents studying in class 11th of Government Model Senior Secondary Schools of Chandigarh in 2014 found that 50% boys were depressed and 50% were non-depressed. Also, it was found that 17.3% were mildly depressed, 20% were moderately depressed and 12.7% were severely depressed. In case of girls, 40% were non-depressed and 60% were depressed. Among the girls, 21.3% exhibited mild depression, 22% moderate depression and 16.7% exhibited the symptoms of severe depression. Overall on total sample, it was observed that 55% adolescents were depressed and 45% were non-depressed. Among the depressed adolescents, 19.3% were having the symptoms of mild depression, 21% showed the symptoms of moderate depression and 14.7% exhibited the symptoms of severe depression.¹⁵

In order to find out the prevalence of depression in adolescents attending schools, Bansal et al. conducted a study in Pune during 2009 and found that 18.4% were depressed. Economic difficulty, physical punishment at school, teasing at school and parental fights were significantly ($P < 0.05$) associated with higher BDI scores, indicating depression.⁵

Patil carried out a study in Mangalore, India, in 2014 in 500 adolescents and found 32% to be normal, 30% under mild mood disturbance, 12% fell under category of borderline clinical depression, 18% moderately depressed, 6% under severe depression and 2% were extremely depressed in the total study population of 500.¹⁶

Levy et al. carried out a study to detect psychometric properties of the Adolescents Depression Rating Scale in 2007 among 402 adolescents and divided them into three groups. One-hundred and twenty-six patients

were depressed (32 males, 94 girls), 139 patients had a depressive experience but no major depressive disorder (45 males, 94 girls) and 137 patients were not depressed (48 males, 89 girls). The internal consistency of the two final versions of the ADRS was good.¹⁷

Basker et al. conducted a study among 181 adolescents in 2007 and found that cut-off score of ≥ 5 (Sn=90.9%, Sp=17.6%) for screening and cut-off score of ≥ 22 (Sn=27.3%, Sp=90%) for diagnostic utility can be used. There was a moderate concordance rate with the reference standard (54.5%) in identifying depression among adolescents.¹⁸

Conclusion

The review of the above studies revealed that the adolescents who felt academic frustration, academic conflict, academic pressure and academic anxiety are more likely to suffer from depression. Also, it is found that as the academic stress among adolescents increases, depression level also increases among them. Children not living with both parents had an increased risk of developing depression which was higher in those staying with a single parent (either mother or father) and the highest in those staying with neither parent (staying with grandparents or with nonrelatives). Presence of peer pressure has a strong association with the onset and severity of depression. Individuals who had a hobby were found to be least associated with depression. Obesity has also been directly linked with depression as adolescents with higher body mass index (BMI) tend to suffer more from depression.

Recommendations

Early screening should be instituted in schools by adequately trained counselors. Early intervention, including counseling, cognitive behavior therapy, and referral should be given when necessary. Schools should conduct seminars and workshops for teachers and set up student counseling services by mental health professionals. Adolescents with specific patterns of risk behavior should be prioritized for cost-effective depression screening. Training should be strengthened for healthcare workers and primary care providers to conduct opportunistic screening in order to detect risk factors and early signs of mental health disorders and manage appropriately. The role of the family and the importance of social support should be given emphasis because they influence psychosocial outcomes.

Depression in adolescent age group should be taken seriously and adequate prompt treatment should be initiated at the earliest. Screening of the individuals in school-based setting can help in identifying the

magnitude of the problem and in solving the issue. Sensitization of both parents as well as teachers will serve as a very effective tool in managing the problem.

Table Showing Various Studies that Were Reviewed in This Article along with the Year, Study Population and the Results Found

S. No.	Name of Author	Year	Study Population	Result
1.	Verma et al.	2014	321 students of class 12 th in Raipur	40.49% were mildly depressed and 19% had major depression. ¹⁰
2.	Chauhan et al.	2011	360 students of class 9 th –12 th in Noida	Prevalence of depression was 38%. ¹¹
3.	Nagendra et al.		3141 students in Karnataka	Prevalence of depression was 57.7%. ¹²
4.	Mohanraj et al.	2010	964 adolescents of school-going age group in Chennai	23.7% was the prevalence of depression in the study population. ¹³
5.	Jayanithi et al.	2013-14	2432 school-going adolescents in Tamil Nadu	25% of the study participants had depression. ¹⁴
6.	Kaur et al.	2014	200 students of class 11 th in Chandigarh	55% adolescents were depressed. ¹⁵
7.	Bansal et al.	2009	Adolescents in public schools of Pune	18.4% were depressed. ⁵
8.	Patil	2014	500 adolescents in Mangalore	68% were found to be depressed. ¹⁶
9.	Levy et al.	2007	402 adolescents	126 patients were found to be depressed. ¹⁷
10.	Basker et al.	2007	181 adolescents in Tamil Nadu	54.5% of the study population was found to be depressed. ¹⁸

Conflict of Interest: None

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