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A STUDY OF DEPRESSION PREVALENCE IN ADOLESCENTS

Paediatrics

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ABSTRACT

Depression is a serious problem that impacts a teen's life. Left untreated, teen depression can lead to problems at home and school and may even lead to serious consequences such as homicidal violence or suicide. However, early detection can empower the doctors and parents to prevent such adverse effects of adolescent depression. An attempt was made in this study for an early detection of depression amongst adolescent using a renowned questionnaire system, 'Beck's Depression Inventory II' in students of some of the junior colleges around in West Godavari district in Andhra Pradesh.

Objectives:

1.To study the prevalence of Depression amongst teenagers using the tool Beck's Depression Inventory.

2.To postulate and suggest possible remedial actions in case of necessity.

Subjects and methods:

Study Design: Cross sectional observation study.

Methodology: A structured questionnaire of 21 queries given to students and asked to fill in a reasonable time period.

Evaluation: The answers received are analyzed using MS Excel and MS Access software and statistical significance of results computed using IBM SPSS software.

Results:

1.Prevalence of depression amongst teenagers was found to be in the ranges of 33%, 21%, 30% and 15% as mild, minimal, moderate and severe categories, respectively.

2.The prevalence of severe depression is more in girls and this difference is statistically significant.

3.Suicidal Thoughts almost daily detected in 8 students (6 girls and 2 boys). Precautionary measures brought to the notice of concerned authorities.

Conclusion: The prevalence of depression in adolescents of plus 2 level students of different institutions in the present study is around 15% and mild to moderate degree is of the tune of 52%. This is considered quite high. More such studies at a larger scale can help save several vulnerable teenagers in the society.

KEYWORDS

Depression, Stress, Beck's Depression Inventory, Adolescents, Teenagers, Suicidal thoughts

INTRODUCTION

Adolescent depression is a disorder occurring during the teenage years marked by persistent sadness, discouragement, loss of self-worth, and loss of interest in usual activities. Depression is a serious problem that impacts every aspect of a teen's life. Left untreated, teen depression can lead to problems at home and school, drug abuse, self-loathing—even irreversible tragedy such as homicidal violence or suicide. Fortunately, teenage depression can be treated, and as a concerned parent, teacher, or friend, there are many things you can do to help.

True depression in teens is often difficult to diagnose because normal adolescent behavior is marked by both up and down moods. Unlike in adults, who have the ability to seek assistance on their own, teenagers usually must rely on parents, teachers, or other caregivers to recognize their suffering and get them the treatment they need.

Teenagers face a host of pressures, from the changes of puberty to questions about 'who they are' and 'where they fit in'. The natural transition from child to adult can also bring parental conflict as teens start to assert their independence. It isn't always easy to differentiate between depression and normal teenage moodiness. Making things even more complicated, teens with depression do not necessarily appear sad, nor do they always withdraw from others. For some depressed teens, symptoms of irritability, aggression, and rage are more prominent.

If you suspect that a teenager in your life is suffering from depression, take action right away. Depression is very damaging when left untreated, so don't wait and hope that the symptoms will go away. Even if you're unsure that depression is the issue, the troublesome behaviors and emotions you're seeing in your teenager are signs of a problem. Whether or not that problem turns out to be depression, it still needs to be addressed - the sooner the better.

REVIEW OF LITERATURE:

According to the psychoanalytic theory and stages of psychosexual development it was shown that the development of depressive disorder is precluded until the development of super-ego in young children. However, others argued that depression did occur in children but it assumed clinically different forms such as 'anaclitic depression', masked depression' and 'depressive equivalents'.

Varying prevalence rates have been reported for depression. Kashani and Sherman, in a study of preschoolers drawn from general population, reported a prevalence of 0.3 per cent[1]. A point prevalence estimate of major depressive disorder is less than 1 per cent in pre-pubertal children (Costello et al)[2]. Malhotra et al in a study of children between 7-14 yr age attending child and adolescent psychiatry clinic at Chandigarh over a period of 6 yr (1991- 1996) observed that of the 1600 patients, 33 had a diagnosis of affective disorder (2%), of which 23 had a diagnosis of unipolar depression and 1 bipolar depression[3]. In a review of literature by Birmaher[4], the prevalence rates of depression in children have been reported to be in the range of 0.4 to 2.5 per cent. Studies conducted in specialized paediatric populations have revealed 28 per cent of the patients in child psychiatric clinics and 59 per cent of child psychiatric inpatient as depressed. There are no community studies on adjustment disorder in children.

Gender differences: In children, major depressive disorder occurs at the same rate in girls and boys where as in adolescence the ratio is 2:1 as in adults. A prospective, 10-yr longitudinal study of preadolescent into young adults revealed critical time for gender difference to emerge was between 15 to 18 yr.

Socio-economic status: Gilman et al reported that participants from lower socioeconomic backgrounds had nearly a two-fold increase in life time risk for major depression compared to those from the highest socio-economic background independent of childhood socio-demographic factors, family history of mental illness, and adult socioeconomic status[5]. Children in disadvantaged situations may acquire less control over their environment and may develop difficulties in forming intimate relationships; both of these factors may increase children's vulnerability to depression throughout the life course. Other potential mediators of this association include family disruption, strained social relationships, and poor physical health, each of which is related to depression.

Beck Depression Inventory is a long-used depression inventory was designed around 1961 by Dr. Aaron T. Beck. It's a simple well-laid-out 21-question inventory that allows the person taking it to self-assess for depression. However, it's usually given and analyzed by a health care professional.[6]

There are three versions of the BDI—the original BDI, first published in 1961 and later revised in 1978 as the BDI-1A, and the BDI-II, published in 1996. The BDI is widely used as an assessment tool by healthcare professionals and researchers in a variety of settings.[7]

The Beck Depression Inventory or BDI, has been updated, and with the update it has been changed in order to better address the needs of people suffering from depression.

0 - 13 indicates minimal depression.
14 - 19 indicates a mild form of depression.
20 - 28 indicatesmoderate depression.
29 - 63 indicates severe depression.

The higher someone's score, the more likely it is that they may be clinically depressed. If a moderate-to-severe score is calculated further tests and assessments are necessary before a doctor would come to an absolute decision. The questions are written at a grade so that they are easy for the person taking the test to spot

Limitations of the BDI – II

- It's only an assessment or measurement of signals or symptoms of someone who may or may not have depression.
- The inventory has only been proved useful for people aged 13 and up so children cannot benefit.

Reliability: The reliability figures here were above 0.90. Internal consistency studies demonstrated a correlation coefficient of 0.86 for the test items, and the Spearman-Brown correlation for the reliability of the BDI yielded a coefficient of 0.93.

Validity: One study addressing concurrent validity demonstrated a correlation of 0.77 between the inventory and psychiatric rating using university students as subjects. Beck reports similar studies in which coefficients of 0.65 and 0.67 were obtained in comparing results of the BDI with psychiatric ratings of patients.[8]

Effects of teen depression

Untreated Depression Can Lead to: -

Problems at school: Depression can cause low energy and concentration difficulties. At school, this may lead to poor attendance, a drop in the grades, or frustration with schoolwork in a formerly good student.

Running away: Many depressed teens run away from home or talk about running away. Such attempts are usually a cry for help.

Substance abuse: Teens may use alcohol or drugs in an attempt to "self-medicate" their depression.

Low self-esteem: Depression can trigger and intensify feelings of ugliness, shame, failure, and unworthiness.

Eating disorders: Anorexia, bulimia, binge eating, and yo-yo dieting are often signs of unrecognized depression.

Internet addiction: Teens may go online to escape from their problems. But excessive computer use only increases their isolation and makes them more depressed.

Self-injury: Cutting, burning, and other kinds of self-mutilation are almost always associated with depression.

Reckless behavior: Depressed teens may engage in dangerous or high-risk behaviors, such as reckless driving, out-of-control drinking, and unsafe sex.

Violence: Some depressed teens (usually boys who are the victims of bullying) become violent.

Suicide: Teens who are seriously depressed often think, speak, or make "attention-getting" attempts at suicide. Suicidal thoughts or behaviors should always be taken very seriously *Suicide warning signs in teenagers*

An alarming and increasing number of teenagers attempt and succeed at suicide. According to the Centers for Disease Control and Prevention (CDC), suicide is the third leading cause of death for 15- to 24-year-olds. For the overwhelming majority of suicidal teens, depression or another psychological disorder plays a primary role. In depressed teens who also abuse alcohol or drugs, the risk of suicide is even greater.[9]

The warning signs of depression in adolescents:

- Talking or joking about committing suicide.
- Saying things like, "I'd be better off dead."
- Speaking positively about death or romanticizing dying.
- Writing stories and poems about death, dying, or suicide.
- Engaging in reckless behavior or having a lot of accidents resulting in injury.
- Giving away prized possessions.
- Saying goodbye to friends and family as if for good.
- Seeking out weapons, pills, or other ways to kill themselves

Helping a depressed teenager

The first thing you should do if you suspect depression is to talk to your teen about it. In a loving and non-judgmental way, share your concerns with your teenager. Let him or her know what specific signs of depression you've noticed and why they worry you. Then encourage your child to open up about what he or she is going through.

As the depressed teenager in your life goes through treatment, the most important thing you can do is to let him or her know that you're there to listen and offer support. Now more than ever, your teenager needs to know that he or she is valued, accepted, and cared for.[10]

AIMS AND OBJECTIVES:

3. To study the prevalence of Depression amongst 'plus one and plus two' level junior college students of West Godavari District using the well accepted testing tool, "The Beck's Depression Inventory".
4. To postulate and suggest possible remedial actions in case of necessity.

MATERIALS AND METHODS

The present study was carried out during the period October 2018 to July 2019. The data were collected from different Junior Colleges in the district of West Godavari in A.P., India. The colleges were selected on random basis considering the accessibility and approachability of the managements.

A total of 1015 students (510 boys and 505 girls) aged 11-14 years participated in the present study. Prior permission was obtained from the college managements and the principals. The data collection instrument was designed to be easily understandable with all the 21 items of BDI printed in both English and Telugu, the local language. The students were explained the purpose of the visit and the scope of the study. The importance of the study was explained to the subjects so that they do not take it as a trivial manner and the students were counseled to give the responses genuinely and honestly. The filled data sheets were collected by medicos and the data are computerized in MS Excel sheets. Total scores are computed on the computer. Then the data were exported to a Database file made in MS Access.

OBSERVATIONS AND RESULTS:

A total of 1015 students of different junior colleges formed the participants of the present study

- Of them, 510 are male and 505 are females (50.25% vs. 49.75 % respectively)
- The prevalence of depression as per the BDI – II criteria is found to be in this pattern

Prevalence of Depression

Minimal[BDI Score 0 to 13] = 344 (33.9%)
Mild [BDI Score 14 to 19]= 222 (21.9%)
Moderate [BDI Score 20 to 28]= 300 (29.5%)
Severe [BDI Score 29 to 63] = 149 (14.7%)

Prevalence of Depression – Sex Ratios

Minimal = 344 [189 (M)155 (F)]

Mild= 222 [123(M) 99(F)]
Moderate= 300[139(M)161(F)]
Severe= 149 [59(M) 90(F)]

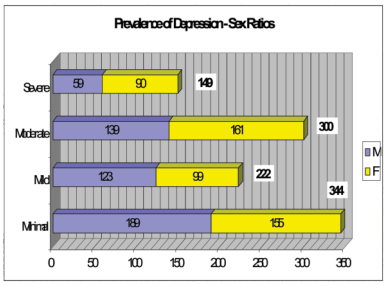

Fig 1. Depression prevalence evaluation:

The prevalence of severe depression is more in girls and this difference is statistically significant.

($\chi^2 = 13.99, p < 0.005$)

Sex Distribution amongst various groups of depression prevalence:

Table. 1

a) In Minimally affected individuals

	Num	%
Male	189	55
Female	155	45
Total	**344**	

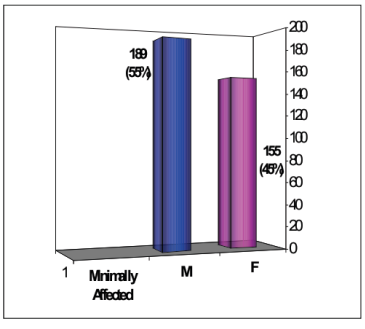

Fig 2. Minimally affected individuals

Table. 2

b) In Mildly affected individuals

	Num	%
Male	123	55
Female	99	45
Total	**222**	

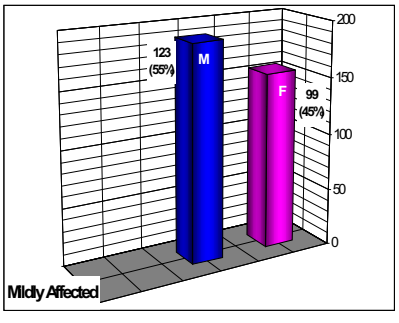

Fig 3. Mildly affected individuals

Table. 3

c) In Moderately affected individuals

	Num	%
Male	139	46
Female	161	54
Total	**300**	

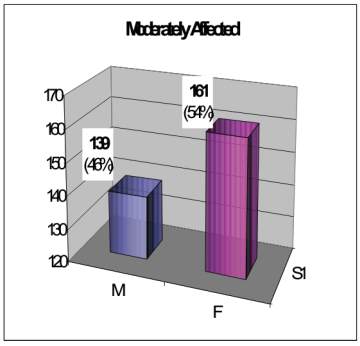

Fig 4. Moderately affected individuals

Table 4

d) In Severely affected individuals

	Num	%
Male	59	40
Female	90	60
Total	**149**	

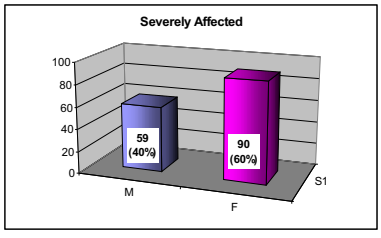

Fig 5. Severely affected individuals

- In our study we noticed that the prevalence of Suicidal Thoughts almost daily (score 3) in 8 students (6 girls and 2 boys)

BDI Symptoms – Extreme Score reporting – Table 7

Sl. No.	Item	No. of Students	Percentage
1	Sadness	58	5.71
2	Pessimism	55	5.42
3	Past Failures	77	7.59
4	Loss of Pleasure	32	3.15
5	Guilt Feeling	52	5.12
6	Punishment feeling	32	3.15
7	Self Dislike	32	3.15
8	Self Criticism	43	4.24
9	Suicidal Thoughts	8	0.79
10	Crying	62	6.11
11	Agitation	78	7.68
12	Loss of interest	39	3.84
13	Indecisiveness	68	6.70
14	Worthlessness	42	4.14
15	Loss of energy	19	1.87
16	Change in sleep pattern	44	4.33
17	Irritability	57	5.62
18	Change in appetite	35	3.45
19	Concentration difficulty	65	6.40
20	Tiredness	59	5.81
21	Loss of interest in sex	12	1.18

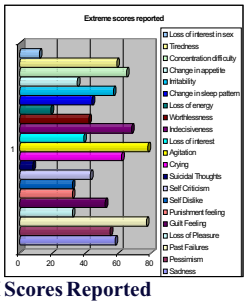

Fig 6. Extreme BDI Scores Reported

DISCUSSION:

Brown University reported in 2002 that many parents simply do not recognize the symptoms of depression in their adolescent children. They found that even parents who have good communication with their children do not necessarily realize it when a child is depressed.[11]

The findings of this investigation are more similar to those of Adams (1986)[12], who reported only 18.1 % of the adolescents scoring above 16 on the BDI, and the results of Kaplan et al. (1980)[13], who found only 60 % of 80 students scoring over 16 on the BDI.

In our study the students above 16 score are 557 (about 55 %). Clearly our finding of only 20% of males and 25% of females scoring in moderate to severe range (20 + on the BDI) lends considerable concern about the mental health of adolescents of plus one and plus two level studies.

We urge caution in interpreting the results presented here. We measured depression only once and in reference to feelings during the past 2 weeks. We cannot say whether use of a trait depression measure would yield similar results. Some authors have documented the stability of depression (trait) in adolescents. The association of substance abuse and depression is to be examined.

The suicide rate for adolescents has increased more than 200% over the last decade. Adolescent suicide is now responsible for more deaths in youths aged 15 to 19 than cardiovascular disease or cancer. Recent studies have shown that greater than 20% of adolescents in the general population have emotional problems and one-third of adolescents attending psychiatric clinics suffer from depression. Despite this, depression in this age group is greatly under-diagnosed, leading to serious difficulties in school, work and personal adjustment which often continue into adulthood.[14]

Though there are several studies internationally and nationally, there are no regional studies to document the prevalence of depression amongst teenagers of Coastal Andhra. In this small study we found that the prevalence of serious depression i.e. BDI scores more than 28 was found to be 15%.

The major limitation of the present study may be the sampling procedure. The results obtained from the students of junior college level may not be a representative of the community at large as they are subjected to the stress of education to the maximum at that stage.

The setting for this study may have affected the results. It is known that administering self-report measures in non-clinical populations can result in inflated scores (Baron & Perron, 1986)[15]. One may question whether this inflation would be more or less likely to occur when questionnaires are completed confidentially in large groups in classroom settings.

Regarding the usefulness of the BDI with an adolescent population, this instrument was selected due to the absence of an "industry standard" for this age group. Strengths of the BDI are the clarity of its language and ease of administration. In terms of the psychometric properties of this instrument, our findings were consistent with other reports (Kendall et al., 1987) which have confirmed a positive skew in the distribution of scores

CONCLUSIONS:

The prevalence of depression in adolescents of plus 2 level students of different institutions in the present study is around 15% and mild to moderate degree is of the tune of 52%. This is considered quite high.

Since the sample size is small, similar larger studies in this direction are needed to have an idea of the prevalence of the problem of adolescent depression and plan for remedial measures.

More such surveys at a larger scale can help save several vulnerable teenagers in the society.

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