

# Screening of Adolescents for Selected Mental Illness and to Identify its Risk Factors

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## Abstract

**Background:** Mental health can be disturbed among adolescents at any time. One in five adolescents are affected by mental illness age between 14-24 years. 10-20% of adolescents are affected by mental illness by the age of twenty all over the World.

**Aims:** The study aims to Screening of adolescents for schizophrenia and depression and to identify its risk factors.

**Objectives:** 1. To identify the risk factors of specific mental illness among adolescents. 2. To screen and identify the adolescents for depression through BECK depression scale. 3. To screen and identify the adolescents for neurotic disorders through Brief psychiatric rating scale. 4. To associate the risk factors of specific mental illness with their demographic variables.

**Method:** Research approach: Exploratory approach, Research design: Descriptive design.

**Sample:** Adolescents aged between 10-20 years. Sample size: 300. Sampling technique: Non probability Purposive sampling Tools: BECK depression inventory to identify depression, Brief psychiatric rating scale: To identify for neurotic disorders. Setting of study: Selected Schools of Wardha district.

**Results:** The main risk factors identified are: Most of the adolescents was having enmeshment relationship towards their parents and 2% were having disengagement relationship; 15.67% family members of adolescents were diagnosed with psychiatric illnesses and on psychiatric treatment. In BECK depression inventory, most of the adolescents were adopted everyday ups and down are considered normal whereas 20% of them were having moderate depression.

**Conclusion:** More interventions are required to deal with mental disorders among adolescents.

**Keywords:** *Depression, Mental illness, Enmeshment, Disengagement, Neurotic disorders.*

## Introduction

Mental disorders are a major public health concern. Lifetime prevalence of mental disorders among adults around 12.2%-48.6% According to the 2001 World Health Report, most of the adolescents are going to be affected by mental disorders and 50% of the mental disorders will start by 14 years of old. According to World Health Organization reports many suicide happening always associated with mental illness and they from low and middle income countries.<sup>(1)</sup> Screening of mental

disorders among adolescents, school and colleges can be a more suitable place because they can be more free to ventilate everything to the investigator and the identification of mental illness will be easy and feasible to conduct the study.<sup>(2)</sup> The investigator have more insight because the adolescents are the future citizens, they should be mentally healthy concern to prevent mental disorders and suicidal thoughts and abnormal behaviors. <sup>(3)</sup> The adolescents in India are affected by depression, anxiety disorders, bipolar disorders, schizophrenia and

eating disorders. Depression and eating disorders are higher among females than males.<sup>(4)</sup> Mental illness is one of the main causes where the students are affected by social maladjustment, academic stress which leads to suicide in the universities.<sup>(5)</sup>

The reason for mood disorders among children and adolescents are due to chronic disturbance in sleep, genetic factors like microbiome and various types of stress in the life and environment.<sup>(6)</sup> Therefore attention towards adolescents is emergent factors to identify the risk factors and to prevent mental illness and early intervention is required.<sup>(7)</sup>

Behavioral symptoms identified in mood disorders are mainly depressed mood, anxious behavior increased energetic behavior, abnormal perception and suicidal/homicidal ideation.<sup>(8)</sup> The adolescents suffering from severe distress and expressed suicidal ideation immediate intervention is required to prevent suicide.<sup>(9)</sup> The community health workers should educate the students at school and colleges and to prevent mental health problems to occur.<sup>(10)</sup>

Anxiety had a significant effect on adolescents developmental status where they pass through one stage to another.<sup>(11)</sup> One of the risk factors in adolescents is abnormal parental relationship towards their children.<sup>(12)</sup> Another risk factors of mental illness among adolescents is academic pressure with increased amount of curriculum and expectation from the teachers and parents.<sup>(13)</sup>

### Method and Materials

The researcher has adopted quantitative research design to identify risk factors of mental illness and screening of adolescents for depression and neurotic disorders. It provides the best framework for the study. The setting for this study was in Wardha district, at school. Criteria were: Adolescents in the age group of 10 to 20 years, both males and females, who were cooperative and willing to participate in the study. The adolescents who was suffering from any systemic diseases, physically and mentally challenged was excluded. Materials used by the investigator was structured questionnaire to identify risk factors, BECK depression inventory in Marathi language to identify the level of depression and brief psychiatric rating scale to identify neuropsychiatric disorder. The investigator explained about the nature and purpose of study to the participants. A written consent was obtained from the participants prior to their recruitment in the study. They

were assured about their confidentiality of the data.

**Ethical Considerations:** The permission to conduct the study was obtained from Institutional Ethical Committee Board. First, Investigator approached the school principal to gather them in a designated place. The nature of the visit was explained to the principal and teachers and an informal gathering was arranged. To begin with, the purpose and objectives were announced and any doubts of the participants were clarified. The participants were assured about the confidentiality of their information and its applications for this study only. A written consent of participation in the study, protecting their identity was taken from each participant. Both local vernacular Marathi and Hindi languages were chosen as the medium of conversational exchange and information.

**Data Extraction:** References are collected from PUBMED, Cochrane database, CINAHL and etc.

### Results

**Table 1: Percentage wise distribution of adolescents according to their demographic characteristics (n=300)**

| Demographic Variables     | Frequency | Percentage (%) |
|---------------------------|-----------|----------------|
| <b>Age (yrs.)</b>         |           |                |
| 10-12                     | 2         | 0.7            |
| 13-15                     | 93        | 31             |
| 16-17                     | 87        | 29             |
| 18-20                     | 118       | 39.3           |
| <b>Gender</b>             |           |                |
| Male                      | 89        | 29.7           |
| Female                    | 211       | 70.3           |
| <b>Education</b>          |           |                |
| Primary                   | 5         | 1.7            |
| Secondary                 | 90        | 30             |
| Higher Secondary          | 89        | 29.6           |
| Under Graduate            | 116       | 38.7           |
| <b>Family Income (Rs)</b> |           |                |
| 3000-5000 Rs              | 61        | 20.3           |
| 5001-7000 Rs              | 42        | 14             |
| 7001-9000 Rs              | 54        | 18             |
| >9001 Rs                  | 143       | 47.7           |
| <b>Religion</b>           |           |                |
| Hindu                     | 231       | 77             |

| Demographic Variables | Frequency | Percentage (%) |
|-----------------------|-----------|----------------|
| Christian             | 9         | 3              |
| Muslim                | 7         | 2.3            |
| Buddhist              | 51        | 17.1           |
| Others                | 2         | 0.6            |
| <b>Type of family</b> |           |                |
| Nuclear               | 248       | 82.7           |
| Single Parent         | 8         | 2.7            |
| Extended              | 10        | 3.3            |
| Step Family           | 4         | 1.3            |
| Grand Parent Family   | 30        | 10             |
| <b>Residence</b>      |           |                |
| Urban                 | 157       | 52.3           |
| Rural                 | 114       | 38             |
| Semi Urban            | 29        | 9.7            |

The above table no 1 shows that distribution of adolescents according to their age was 0.7% of adolescents are belongs to 10-12 years of age, 31% of adolescents were belongs to 13-15 years of age, 29% of adolescents was belonging to 16-17 years of age and 39.3% of adolescents were belongs to 18-20 years of age group.

Distribution of adolescents according to their gender reveals that most of the participants were females and it was 70.3% and 29.7% were males.

Distribution of adolescents according to their educational qualification shows that 38.7% adolescents were undergraduate, 29.6% of adolescents were having higher secondary education, 30% of them had secondary education and only 1.7% were having primary education.

Distribution of adolescents according to their family income shows that 47.7% were having more than 9001 Rs, 20.3% were having family income between 3001-5000 Rs, 18% were having family income between 7001-9000 Rs and 14% of adolescents were having income between 5001-7000 Rs.

Distribution of adolescents according to their

religion shows that 77% of adolescents was Hindu, 17.1% of adolescents belongs to Buddhist, 3% of the adolescents belongs to Christian, 2.3% of them were Muslim and 0.6% was of other religion.

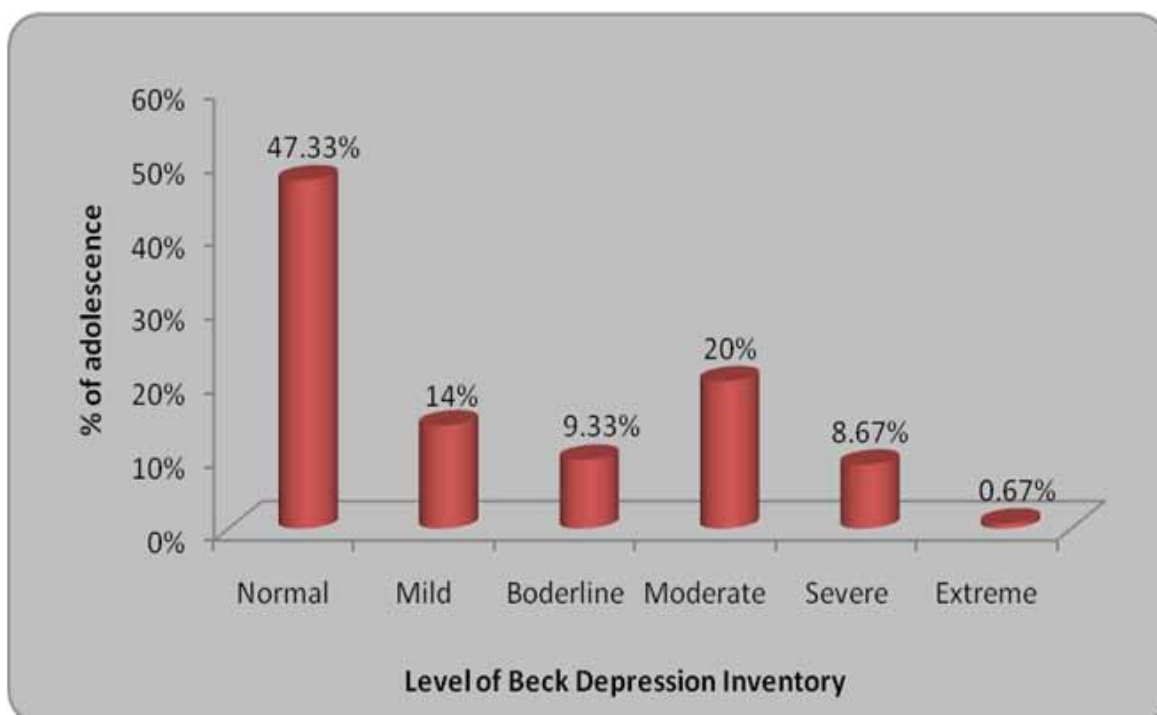
Distribution of adolescents according to their type of family reveals that 82.7% of adolescents was living with nuclear family, 10% were living with grandparent family, 3.3% were living extended family, 2.7% of adolescents had single parent family and 1.3% was having step family.

Distribution of adolescents according to their residence 52.3% of adolescents living in urban area, 38% of adolescents living in rural area and 9.7% of adolescents living in semi urban.

**Table 2: Identified risk factors among adolescents of mental illness**

| Risk factors   | Frequency | Percentage |
|--|-----------|------------|
| Family history of mental illness                           | 47        | 15.7       |
| History of Addiction                                       | 120       | 40         |
| History of accident in the past                            | 32        | 10.7       |
| Special attachments towards the parents (Enmeshment)       | 287       | 71         |
| Hatred relationship towards the parents (Disengagement)    | 06        | 2          |
| Prenatal, natal and postnatal exposure of viral infections | 09        | 3          |
| Pathological family  | 55        | 18         |
| Gambling behavior  | 95        | 31.6       |

Table 2 reveals that 15.7% of adolescents family members were suffering from mental illness, 40% of adolescents were addicted to alcohol or tobacco, 10.7% of them met with an accident, 71% adolescents were having special attachment towards their parents and 2% of adolescents were having hatred relationship towards their parents 3% of adolescents mothers were suffered from viral infections during prenatal, natal and postnatal, 18% of the adolescents were having pathological family like violent, lack of resources etc and 31.6% of them were having gambling behavior .



**Graph 1: Screening of depression among adolescents through BECK depression inventory.**

The above graph shows that 47.33% of the adolescent had normal level of beck depression inventory, 14% had mild, 9.33% had borderline, 20% had moderate, 8.67% had severe and 0.67% had extreme level of beck

depression inventory. The minimum beck depression inventory score was 0 and the maximum score was 42, the mean score was 11.75±11.03.

**Table 3: Screening of neurotic disorders through Brief psychiatric rating scale. (n=300)**

|                         | N         | Minimum   | Maximum   | Mean      | Std. Deviation | Skewness  |            |
|-------------------------|-----------|-----------|-----------|-----------|----------------|-----------|------------|
|                         | Statistic | Statistic | Statistic | Statistic | Statistic      | Statistic | Std. Error |
| Somatic concern         | 300       | 1.00      | 7.00      | 1.99      | 1.37           | 1.616     | 0.141      |
| Anxiety                 | 300       | 1.00      | 7.00      | 2.54      | 1.52389        | 0.761     | 0.141      |
| Depression              | 300       | 1.00      | 7.00      | 2.12      | 1.45523        | 1.345     | 0.141      |
| Suicidality             | 300       | 1.00      | 7.00      | 1.49      | 1.15226        | 2.888     | 0.141      |
| Guilty                  | 300       | 1.00      | 7.00      | 2.15      | 1.53547        | 1.448     | 0.141      |
| Hostility               | 300       | 1.00      | 7.00      | 1.84      | 1.23538        | 1.593     | 0.141      |
| Elated mood             | 300       | 1.00      | 7.00      | 2.00      | 1.37828        | 1.744     | 0.141      |
| Grandiosity             | 300       | 1.00      | 7.00      | 1.86      | 1.39291        | 1.927     | 0.141      |
| Suspiciousness          | 300       | 1.00      | 7.00      | 1.81      | 1.30207        | 1.708     | 0.141      |
| Hallucination           | 300       | 1.00      | 7.00      | 1.54      | 1.10717        | 2.726     | 0.141      |
| Unusual thought content | 300       | 1.00      | 7.00      | 1.94      | 1.41426        | 1.829     | 0.141      |
| Bizarre behavior        | 300       | 1.00      | 7.00      | 1.59      | 1.19443        | 2.447     | 0.141      |
| Self-neglect            | 300       | 1.00      | 7.00      | 1.82      | 1.36075        | 1.735     | 0.141      |
| Disorientation          | 300       | 1.00      | 7.00      | 1.65      | 1.28270        | 2.288     | 0.141      |

|                            | N         | Minimum   | Maximum   | Mean      | Std. Deviation | Skewness  |            |
|----------------------------|-----------|-----------|-----------|-----------|----------------|-----------|------------|
|                            | Statistic | Statistic | Statistic | Statistic | Statistic      | Statistic | Std. Error |
| Conceptual disorganization | 300       | 1.00      | 7.00      | 1.67      | 1.23445        | 2.139     | 0.141      |
| Blunted affect             | 300       | 1.00      | 7.00      | 1.90      | 1.42011        | 1.835     | 0.141      |
| Emotional withdrawal       | 300       | 1.00      | 7.00      | 2.09      | 1.59576        | 1.606     | 0.141      |
| Motor retardation          | 299       | 1.00      | 7.00      | 1.81      | 1.34145        | 2.013     | 0.141      |
| Tension                    | 300       | 1.00      | 7.00      | 2.59      | 1.85259        | .957      | 0.141      |
| Uncooperativeness          | 300       | 1.00      | 7.00      | 1.96      | 1.46020        | 1.634     | 0.141      |
| Excitement                 | 300       | 1.00      | 7.00      | 2.68      | 1.91568        | .934      | 0.141      |
| Distractibility            | 300       | 1.00      | 7.00      | 2.28      | 1.74544        | 1.436     | 0.141      |
| Motor hyperactivity        | 300       | 1.00      | 7.00      | 1.90      | 1.33765        | 1.712     | 0.141      |
| Mannerism and posturing    | 300       | 1.00      | 7.00      | 1.95      | 1.46913        | 1.629     | 0.141      |

Mean score for somatic concern was  $1.99 \pm 1.37$  ( $sk=1.61$ ), Mean score for Anxiety was  $2.54 \pm 1.5$  ( $sk=0.76$ ), Mean score for Depression was  $2.12 \pm 1.45$  ( $sk=1.34$ ), Mean score for suicidality was  $1.49 \pm 1.15$  ( $sk=2.88$ ), Mean score for guilty was  $2.15 \pm 1.53$  ( $sk=1.44$ ), Mean score for hostility was  $1.99 \pm 1.37$  ( $sk=1.61$ ), Mean score for elated mood was  $2.00 \pm 1.37$  ( $sk=1.74$ ), Mean score for grandiosity was  $1.86 \pm 1.39$  ( $sk=1.92$ ), Mean score for suspiciousness was  $1.81 \pm 1.30$  ( $sk=1.70$ ), Mean score for hallucination was  $1.54 \pm 1.10$  ( $sk=2.72$ ), Mean score for unusual thought content was  $1.94 \pm 1.41$  ( $sk=1.82$ ), Mean score for bizarre behavior was  $1.59 \pm 1.19$  ( $sk=2.44$ ), Mean score for self-neglect was  $1.82 \pm 1.36$  ( $sk=1.73$ ), Mean score for disorientation was  $1.65 \pm 1.28$  ( $sk=2.28$ ), Mean score for conceptual disorganization was  $1.67 \pm 1.23$  ( $sk=2.13$ ), Mean score for blunted affect was  $1.90 \pm 1.42$  ( $sk=1.83$ ), Mean score for motional withdrawal was  $2.09 \pm 1.59$  ( $sk=1.60$ ), Mean score for motor retardation was  $1.81 \pm 1.34$  ( $sk=2.01$ ), Mean score for tension was  $2.59 \pm 1.85$  ( $sk=0.95$ ), Mean score for uncooperativeness was  $1.96 \pm 1.46$  ( $sk=1.63$ ), Mean score for excitement was  $2.68 \pm 1.91$  ( $sk=0.93$ ), Mean score for distractibility was  $2.28 \pm 1.74$  ( $sk=1.43$ ), Mean score for motor hyperactivity was  $1.90 \pm 1.33$  ( $sk=1.71$ ), Mean score for mannerism and posturing was  $1.95 \pm 1.46$  ( $sk=1.62$ ).

## Discussion

One article has reported alcohol is another risk factor among adolescents and others are conduct problems, alcohol and drug use in the family and friends' substance use<sup>(14)</sup>. Many of them does not approach to mental health services at all because of their negligence and lack of resources.<sup>(15)</sup>

Another article has reported that low parental attachment leads to mental illness; addiction to cannabis, alcohol use and cigarette smoking is having independent association to mental disorders among adolescents.<sup>(16)</sup>

Another study reported that negative functioning behavior and gambling behaviors are having greater association with mental illness among adolescents.<sup>(17)</sup>

Presence of mental disorders during adolescence may be a greater predictor point for mental illness later in their life time.<sup>(18)</sup> Increased rates of emotional and behavioral problems are very common among youth nowadays.<sup>(19)</sup> There is extensive evidence that association of addicted to smoking, alcohol and other drugs and mental health problems like depression and anxiety with the indicators of low income level and educational attainment.<sup>(20)</sup>

One of the article reported clearly and vigorously that low social maturity, mental energy and emotional stability among late adolescents are associated with non affective psychotic illnesses.<sup>(21)</sup> Chronic stress also mediates with the growing brain and produce significant changes in the neural circuits which predominantly causes mental illness among adolescents.<sup>(22)</sup> Another author has reported, depression is more among adolescent girls and the present study also noted moderate level of depression among adolescents

Adolescents with behavioral problems frequently have difficulty in expressing their emotions and to understand others emotions also. There are evidence that relations exist between depression and smoking among adolescents. Parental separation also one of the reason

for adolescents to have mental disorders. There is a temporal relationship between selected mental disorders and having chance of addiction in later life. Aryal et al reported similar findings. Gaidhane et al have reported effects of electronic media among adolescents.

### Conclusion

The adolescents are facing lots of stress in their academic because of growing competition and inequalities in the educational system, the parents should be more supportive for their children.

**Ethical Clearance:** Taken from institutional ethics committee.

**Source of Funding:** Self.

**Conflict of Interest:** Nil.

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