# Bio-socio-demographic factors associated with adolescent Psychiatric Wellness: A cross sectional study

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***Abstract***— *Adolescents are biologically prone to have more mood swings because of the hormonal changes associated with adolescence. Adolescent health problems are usually the result of their behavioural disorders. This study was aimed to know psychiatric morbidity and its bio-socio-demographic associates in adolescent aged children. This community based cross-sectional study was carried out on 400 students as per Modified Mini Screen (MMS) scale to assess the psycho-wellbeing of students schools of Jaipur city of India. General information regarding socio-demographic data and study pattern was also recorded. These data collected were analyzed and inferred with Chi-square test and ANOVA test of significance. It was observed that as per Modified MINI Screen (MMS) scale 10.75% were in red zone of psycho-wellness and 38% were in orange zone whereas 51.25% were in green. It concludes that about half of students were completely mentally healthy otherwise every alternate student was found to have poor mental health that needs further evaluation for psycho-morbidity. Although Psycho-wellness was not found to be associated with age, sex , religion and cast of students but significantly poor mental health was found in children of nuclear family and middle family socio economic status of the students. It was also revealed that among risk of psycho wellness associates with various socio-demographic variables maximum variation was in socioeconomic status where maximum risk was in Class III and minimum in Class II. Likewise it was also found that minimum risk of psycho illness was in joint families.*

***Key words****:* ***Adolescence. Psycho-wellness, Associating Factors,***

## I. INTRODUCTION

Psycho-morbidity is one of the common and major emerging diseases all over the world. It is the curse of urbanization and development. The nature of modern urbanization is having bad effect on mental health because of over crowing, pollution, stresses, rising level of violence, poor social support etc.[1] Pandav R *et al*. [2] found a lifetime prevalence of 26.5% and 30% of major depression and anxiety disorders, respectively. The rate of serious mental illness was higher for 18 to 25 year olds (7.4 %) in 2008 than for any other age group over 18.[3] In addition, the onset for 50 percent of adult mental health disorders occurs by age 14, and for 75 percent of adults by age 24.[4]

World Health Organization defines adolescents as young people aged 10-19 years. Twenty-one percent of India's population is in age group of 10-19 years[5] Early Indian studies reported prevalence rates of psychiatric disorders among children ranging from 2.6 to 35.6 % in age group of 10-14 years.[5-10] More recently psychiatric morbidity was reported 20.2% ( 20.64% in males and 19.82% in females) in 10-15 years children in Bhatinda Panjab.[10]

Adolescents are biologically prone to have more mood swings because of the hormonal changes associated with adolescence and coupled with the fact that their brains are still developing[11] Youth is the stage at which most mental disorders begin but often detected in later life, and then it becomes difficult to treat. So, detecting these disorders and individual prone to these disorders at earlier ages can facilitate better treatment.[12] Available data suggest that 20 percent of adolescents i.e. one in five adolescents have a diagnosable mental disorder. [13]

This research was aimed to study the psycho-wellness and its bio-socio-demographic associates in adolescent.

## II. Methods

A cross-sectional observational study was carried out on 400 adolscents. To find the easy approach to the adolscent 11th and 12 th students falling in 10-19 years of age group from 4 different type's schools of Jaipur city for better representation after taking clearance from Clinical Trial Screening Committee (CTSC) and Ethical Committee of SMS Medical College, Jaipur.

Sample size was calculated 400 subjects at 20% allowable error with 95% confidence limit assuming 20% prevalence of psycho-morbidity in school going children using Stratified random sampling technique. So for the study purpose 400 students were taken i.e. 100 students from each of four schools.

List of schools of Jaipur city was procured from the education department of State Government. All schools will be divided in into two categories i.e. Government and Private. Then, these were again categorised as Girls School, Boys School and Coeducation school. One school was randomly selected from each of four category i.e. Private Girls School, Private Boys School, Private Coeducation School and Government Coeducation School.

**2.1 Proforma:** Performa has two major parts. Part (1) has general information regarding socio-demographic data and study pattern. Part (2) Performa is Modified Mini Screen (MMS) scale to assess the psycho-wellbeing of students

**2.2 Modified Mini Screen (MMS) Scale**: The Modified Mini Screen (MMS) is a 22-item scale designed to identify persons in need of an assessment in the domains of Mood Disorders, Anxiety Disorders and Psychotic Disorders. (Annexure: Modified Mini Screen (MMS) acceptability and reliability was found satisfactory by many authors.[14,15] It is a 22-item scale designed to identify persons in need of an assessment in the domains of Mood Disorders, Anxiety Disorders and Psychotic Disorders. (Section 'A' for Mood, section 'B' for Anxiety and section 'C' for Psychosis). MMS also interpret psycho-wellness zone as **Green Zone (No Disease Zone) (**Scores between '1' to '5') where no further action is required, **Orange (Borderline Disease) (**Scores between '6' to '8') consider for referring to Psychiatrics and **Red Zone (Yes Disease) (**Scores '9' and above): referred to Psychiatrics for confirmation of diagnosis and treatment

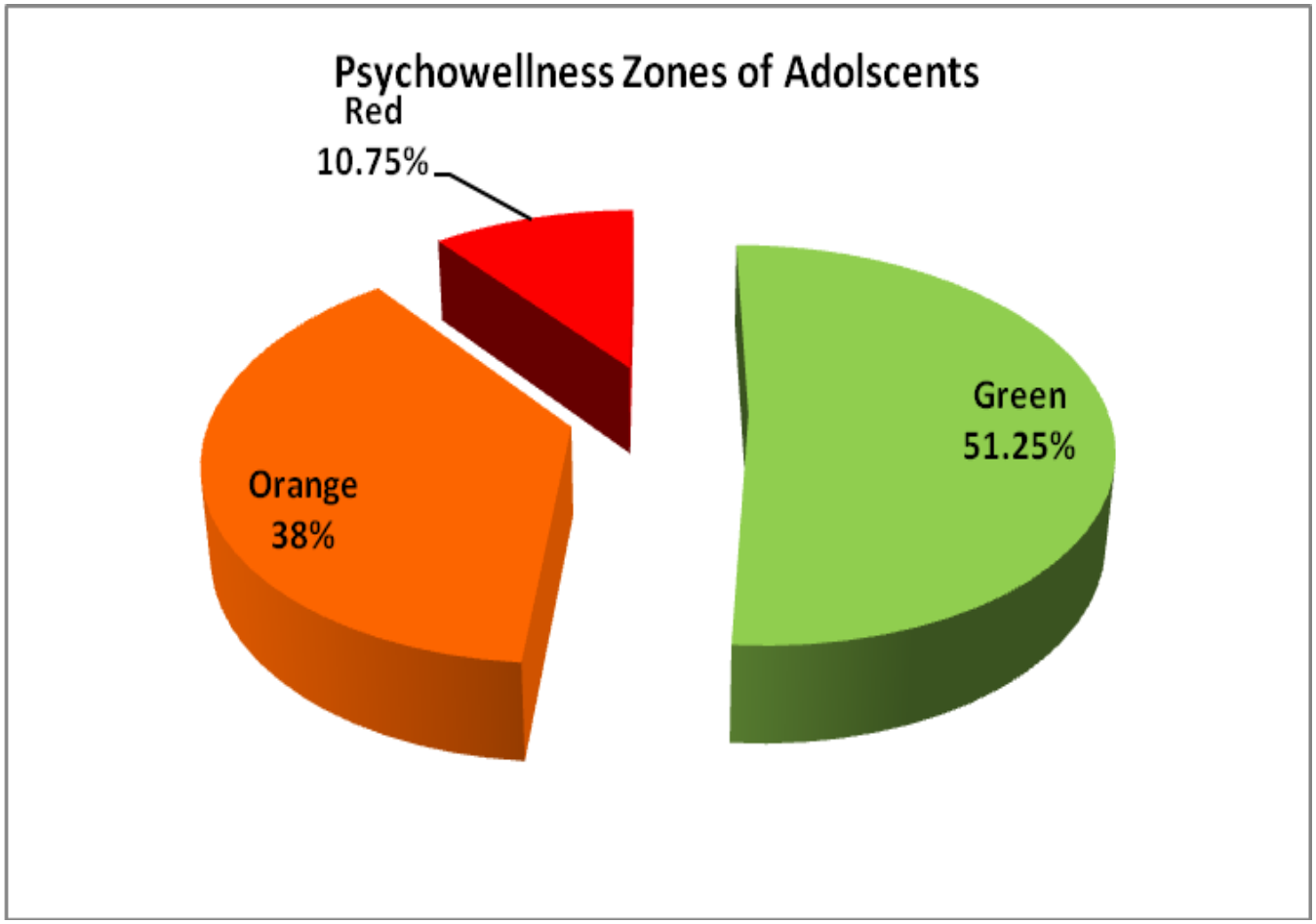
Both these performas were filled by identified students of identified schools in a given same scheduled time. Data thus obtained were entered in MS Excel 2007 worksheet**.** Significance of difference in proportions was inferred by Chi-square test and significance of difference in means was inferred by

ANOVA and Post-hoc tests. For significance 'p value' equal or less than 0.05 was considered significant. For inferring risk Odd's ratios were calculated.

## III. Results

In this present study, out of these 400 adolescent students surveyed, 205 students (51.25%) were in green zone (no disease zone), while 152(38%) students were in orange (borderline) and 43 students (10.75%) were in red zone (Psychiatric disease zone) of psycho-wellness. (Fig 1)

**Figure 1**




It was also revealed that among risk of psycho wellness associates with various socio-demographic variables maximum variation was in socioeconomic status where maximum risk of psycho morbidity was in Class III followed by Class IV, Class V, Class I and Class II. Next to socioeconomic status significant variation was observed in type of family where minimum risk was in joint families. Proportion of adolescent with psycho-wellness was not found to vary significantly as per age, sex, religion and cast were not found to be associated with psycho-wellness of students.(Table 1)

**Table 1**
**Association of Socio-demographic variables with Psycho-wellness of Adolescents (N=400)**

| Socio-demographic Variables | | Psycho-wellness | | OR (95% confidence interval) | $X^2$ Test P Value LS |
|---|---|---|---|---|---|
| | | Healthy (Green Zone) | Suspects or Diseased (Orange and Red Zone) | | |
| Age (in Years) | 14 | 2 | 1 | (R) | |
| | 15 | 66 | 47 | 1.424 (0.125-16.169) | 0.759 NS |
| | 16 | 102 | 109 | 0.468 (0.042-5.239) | 0.961 NS |
| | 17 | 31 | 35 | 0.667 (0.0.039-11.29) | 0.673 NS |
| | 18 | 4 | 3 | 0.667 (0.0.039-11.29) | 0.673 NS |
| Sex | Males | 116 | 104 | (R) | |
| | Females | 89 | 91 | 1.140 (0.769-1.692) | 0.580 NS |
| Religion | Hindu | 181 | 164 | (R) | |
| | Muslims | 12 | 9 | 0.828 (0.340-2.015) | 0.848 NS |
| | Sikh | 1 | 4 | 4.415 (0.488- 39.902) | 0.321 NS |
| | Christian | 6 | 13 | 2.391 (0.888 to 6.44) | 0.124 NS |
| | Jainism | 5 | 5 | 1.104 (0.314 to 3.88) | 0.867 NS |
| Caste | General | 175 | 161 | (R) | |
| | OBC | 17 | 16 | 1.023 (0.500 to 2.09) | 0. 0.904 NS |
| | ST | 8 | 9 | 1.223 (0.461 to 3.25) | 0.876 NS |
| | SC | 5 | 9 | 1.957 (0.642 to 5.96) | 0.354 NS |
| Type of Family | Nuclear | 114 | 144 | (R) | |
| | Joint | 80 | 36 | 0.356 (0.224 to 0.566) | <0.001 S |
| | Extended | 1 | 0 | NC | <0.001 S |
| | 3 Generation | 10 | 15 | 1.188 (0.514 to 2.74) | 0.848 NS |
| Socio-economic Status | Class I | 16 | 1 | (R) | |
| | Class II | 21 | 1 | 0.762 (0.044 to 13.13) | 0.586 NS |
| | Class III | 52 | 69 | 21.231 (2.7 to 165.27) | <0.001 S |
| | Class IV | 70 | 80 | 18.29(2.36 to 141.42 ) | <0.001 S |
| | Class V | 46 | 44 | 15.3 (1.94 to 120.34) | 0.002 S |

## IV. Discussion

This present study observed that 51.25% of students were in green zone otherwise others were either red zone (10.75%) or orange zone (38%) of psycho-wellness. These observations were well comparable to finding of other authors.[5-10] Centres for Disease Control and Prevention[5] reported more than one in four (29 %) high school students in grades 9-12 in year 2012. K. Sebi etall[10] also reported psychiatric

illnesses in 26.7%. In this study 10.75% of students fall in red zone, which is similar to a 13.3–18.3% prevalence reported in the literature.[16-18] A survey conducted in year 2008 on adolescents reported about one in 12 (8%) adolescent had a major depressive episode during the past year.[9] . In the 1990s, the National Institute of Medical Health found that up to 7% of adolescents who develop major depressive disorder may commit suicide as young adults.[6] The prevalence rates in Indian studies have been unfortunately widely varied, ranging from 6%[9] to 55.2%.[2]

It was also revealed in this study that among the socio-demographic variables studied age, sex, religion and caste of student was not found to be associated with psycho-wellness of students but type of family and socioeconomic status was found to associate with psycho-wellness of students. Risk of psycho morbidity was observed more in nuclear family and SES Middle Class than their counterparts. Similar to findings of this study Singhal et al[19] also reported that majority of the children belonged to unitary/nuclear family. This could be due to projection of tension and anxiety experienced by parents in a unitary set up into their own children. Well comparable findings were observed in other study,[20] where the associated factors were staying in nuclear families, economic dependence on others and co-morbid physical illnesses, specifically cardiovascular disorders and visual impairment. Extended families, married status and economic independence evidently act as a protective factor against developing depression in vulnerable elderly individuals. Physical disability has been consistently found to be a risk factor for depression in late life as per the other study. [21]

# V. CONCLUSIONS

Every alternate student was found to have poor mental health that needs further evaluation for psycho-morbidity, even so that one in 10th child was in red zone of psycho-wellness. Maximum risk of psycho morbidity was in Class III followed by Class IV, Class V, Class I and Class II. Next to socioeconomic status significant variation was observed in type of family where minimum risk was in joint families. Proportion of adolescent with psycho-wellness was not found to vary significantly as per age, sex, religion and cast were not found to be associated with psycho-wellness of students.

## CONFLICT OF INTEREST

None declared till now.

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