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Short communication

# Psychological distress among college students in Kerala, India—Prevalence and correlates

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ABSTRACT

*Aims:* To study the prevalence and correlates of psychological distress among college students in Kerala, India.
*Material and methods:* 5784 students across 58 colleges were self-administered Kessler's Psychological Distress Scale (K10) and other standardized instruments.
*Results:* The prevalence of psychological distress was 34.8% (Mild-17.3%; Moderate-9.2%; Severe-8.3%) with a female predominance. Students with psychological distress were more likely to report academic failures, substance use, suicidality, sexual abuse and symptoms of attention deficit hyperactivity disorder. Students with severe distress had higher morbidity.
*Conclusions:* Psychological distress is common among college students and its association with negative correlates suggests the need for early interventions.



## 1. Introduction

Psychological distress is an unpleasant subjective state associated with symptoms from the anxiety-depression spectrum which leads to poor mental health and impact level of functioning (Bayram and Bilgel, 2008). Psychological distress is common among college students owing to multiple challenges they encounter in academics, social and personal life (Dyrbye et al., 2006).

Studies of prevalence of psychological distress among college students have reported rates between 25 and 83% (Adlaf et al., 2001; Dyrbye et al., 2006), with a higher prevalence among females (Adlaf et al., 2001; Iqbal et al., 2015). Indian studies have also reported prevalence rates of 25–50% (Nath et al., 2012; Singh et al., 2013; Iqbal et al., 2015).

Poverty, family dysfunction and social disadvantage have been strongly associated with psychological distress among college students (Dyrbye et al., 2006; Singh et al., 2013; Iqbal et al., 2015). Students with psychological distress also reported academic difficulties (Adlaf et al., 2001; Dyrbye et al., 2006), substance use (Geisner et al., 2004; Nitcher and Colder, 2009), suicidality (Dyrbye et al., 2006; Nath et al., 2012), ADHD (Rabiner et al., 2009) and abuse (Haz-Yahia and Tamish, 2001).

Despite the high prevalence and the range of negative correlates reported, studies of psychological distress among college students in India have been few, confined to a single or limited number of institutions, to students doing particular courses, and with limited sample sizes (Nath et al., 2012; Singh et al., 2013; Iqbal et al., 2015). It is in this context that we examined the prevalence of psychological distress and its correlates among college going young adults in the state of Kerala, India. The findings reported here are part findings of a larger study which assessed psychological issues among college students.

## 2. Material and methods

This survey was conducted in 58 colleges from the 123 colleges offering various courses selected by cluster random sampling in

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the district of Ernakulam, Kerala, India. Two classes (either odd or even years) were randomly chosen in each college for the survey.

The survey instrument consisted of a self-administered questionnaire. Students could opt for either the malayalam (vernacular language) or english version. Mental health professionals from the Department of Psychiatry, Government Medical College, Ernakulam supervised the survey and clarified doubts if any.

On the day of the survey, 5784 students who took part in the survey, 5347 questionnaires were valid. The remaining 437 (7.6%) questionnaires were excluded from analysis as they had substantial missing items.

### 2.1. Ethical considerations

Institutional Ethical approval was received from the Government Medical College, Ernakulam. Only consenting students took part in the study. The questionnaire was anonymous hence students were not required to reveal their identity.

### 2.2. Assessment tools

In addition to socio-demographic profile, the instruments that were used for assessment were as follows:

Psychological Distress–Kessler's Psychological Distress Scale (K10)

Psychological distress was assessed using Kessler's Psychological Distress Scale (K10), a screening tool for non-specific psychological distress. The K10 is a 10-item questionnaire that measures current (1-month) distress severity associated with psychological symptoms. Each question had five options ranging from 'none of the time' to 'all of the time' and were rated from 1 to 5 respectively. All the questions were collated to obtain a total score which has been interpreted as follows: a score of less than 20 as normal; 20–24 represented mild distress; 25–29 signified moderate distress; and 30- 50 signified severe distress (Andrew and Slade, 2001). The tool has been validated in India (Patel et al., 2008).

In addition, lifetime use of alcohol and tobacco was assessed using the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) (ASSIST Working Group, 2002); lifetime Sexual abuse using four questions, two questions pertaining to non-contact sexual abuse and two to contact sexual abuse, from Child Abuse Screening Tool Children's Version (ICAST-C) (Zolotora et al., 2009); retrospective assessment of ADHD symptoms using Barkley Adult ADHD rating scale –IV (BAARS –IV) – Childhood Symptoms self report (Barkley, 2011); Two questions were asked to assess lifetime suicidality: 1] Have you ever thought of killing yourself in your lifetime?, and 2] Have you ever made an attempt to kill yourself in your lifetime?;

### 2.3. Statistical analysis

SPSS Version 16 was the statistical package used for analysis (SPSS, 2007). The one month prevalence of psychological distress was determined. Socio-demographic variables were compared between those who had psychological distress and those who did not, using chi-square test. The association of academic performance, substance use, suicidality, sexual abuse and symptoms of ADHD with psychological distress was assessed using binary logistic regression analysis after controlling for significant socio-demographic variables. All tests were two-tailed and statistical significance was set at $p < 0.05$.

## 3. Results

A total of 5374 valid questionnaires were analysed, of whom 3441 (64.5%) were females with a mean age of 20.3 years (range 18–25 years). The prevalence of symptoms of psychological distress 34.8% (Mild psychological distress-922) (17.3%) (males-323 (17%), females-599 (17.4%)), Moderate-494 (9.2%) (males-159 (8.6%), females-335 (9.6%)), Severe-448 (8.3%) (males-126 (6.7%), females-322 (9.2%)). Higher psychological distress was reported among females, those with an urban residence and those above the poverty line. Students with psychological distress had a higher risk of reporting academic failures, alcohol and tobacco use, suicidal thoughts, suicidal attempts, contact or non-contact sexual abuse and symptoms of ADHD even after controlling for socio-demographic variables which were significant (Table 1). Further, increasing severity of symptoms was associated with higher morbidity (Table 1).

## 4. Discussion

This study is the largest to date from India, on the prevalence of psychological distress and its correlates among college going young adults. The strengths of the study include the assessment of a large sample from diverse institutions so findings are generalized to the state. Many of the correlates of psychological distress examined here have been reported for the first time from a college sample in India.

The prevalence of psychological distress among our students was 34.8% (Mild-17.3%; Moderate-9.2%; Severe-8.3%). There has been wide variation in prevalence rates of psychological distress among college students in studies from India and across the world but our finding is broadly consistent with the reported rates of 25–83% (Adlaf et al., 2001; Dyrbye et al., 2006; Singh et al., 2013; Iqbal et al., 2015). Multiple factors that include, methodological differences, differential distribution of risk and protective factors and socio-cultural differences have been postulated to explain this wide-variation.

Our study found a higher prevalence of psychological distress in females and those with an urban residence as reported prior (Dyrbye et al., 2006; Singh et al., 2013; Peen et al., 2010). Our students from the lower socio-economic status did not report higher distress. While most studies have reported a link between psychological distress and poverty (Dyrbye et al., 2006; Patel and Kleinman 2003), this finding has not been universally reported (Patel and Kleinman 2003).

Our students who reported psychological distress had a number of negative correlates. Students with psychological distress reported more academic failures adding to be consistent finding that academic stress could be both the cause and effect of psychological distress (Dyrbye et al., 2006; Singh et al., 2013; Iqbal et al., 2015). The robust link between psychological distress and alcohol and tobacco use has been replicated in our study (Geisner et al., 2004; Nitcher and Colder, 2009). Multiple theories have been postulated to explain the common co-occurrence. These include self-medication hypothesis; neuro-depressant effects of substances; and shared etiological factors, such as poverty, familial vulnerability, or behavioural problems (Davis et al., 2008). Another consistent finding that we replicated in our study is the association of psychological distress to suicidality. Depression has been strongly associated with completed suicide, and about 2/3 of people who commit suicide are depressed at the time of their deaths (Nath et al., 2012; King et al., 2001). Symptoms of ADHD were higher in our subjects with psychological distress. College students with ADHD face more academic and interpersonal difficulties causing higher incidence of psychological distress (Rabiner et al., 2009). Similarly, our students with psychological