

Epidemiological aspects of some mental health symptoms in undergraduates

Bilesha Perera¹, Erandathi Lelwala², and Nayana Fernando¹

¹ Department of Community Medicine, Faculty of Medicine, University of Ruhuna, Galle.

² Department of Economics, University of Ruhuna, Wallamadama, Matara.

Abstract

In this study, we identified the prevalence of depressive and anxiety symptomatology, and examined the relationships between these symptoms and socio-demographic characteristics in a sample of undergraduates in Southern Sri Lanka. A self-report, anonymous questionnaire was used. The Center for Epidemiological Studies-Depression Scale (CES-D) and Spielberger's Trait Anxiety Inventory (TAI) were utilized to measure depressive and anxiety symptoms respectively. A total of 1082 university undergraduates (mean age 22.5 years, SD = 1.36) was surveyed. Medical undergraduates reported the highest prevalence of elevated (CES-D scores greater than 15) depressive symptomatology (69.2%, n = 146) followed by Business Administration (63.2%, n = 91), Science (60.4%, n = 84), Agriculture (59.6%, n = 122), and Humanities (54.3%, n = 208), $\chi^2(4, 1082) = 13.25, p < .01$. There was an interaction between gender and age [$F(2, 1076) = 3.45, p < .05$]. Junior female undergraduates were more depressed than their male counterparts, but senior female undergraduates were less depressed than their male counterparts. Gender was a significant predictor of trait anxiety scores [$F(1, 1076) = 7.33, p = 0.007$], but the mean values of TAI scores (female: mean = 46.46, SD = 7.32; male: mean = 45.24, SD = 7.42) indicated no risk. Family income was not associated with either depressive or anxiety symptoms. Depressive, but not anxiety, symptoms seem to pose a great threat to the personal well-being of the participants. Implications of these mental health issues on students' learning skills need to be further investigated.

Introduction

Young adults (aged between 15 –24 years) are highly vulnerable to certain types of mental illnesses such as depression, drug addiction and anxiety (Lewinsohn *et al.*, 1998, Weitzman 2004). It is predicted that by the year 2020, depression will become the second leading cause of disease burden worldwide. It is reported that depression and anxiety disorders generally account for around 15% of consultations in primary health care in both developed and developing countries (Broadhead, 1994). However, the attention paid by health authorities in controlling these health conditions in adolescents and young adults seems to be unsatisfactory (Lewinsohn *et al.*, 1998). Furthermore, although depressive and anxiety disorders pose a great threat to the well-being of young people, less research has been conducted to identify etiological, personal and environmental factors associated with the disorders in young people (Arnstein, 1995; Lewinsohn *et al.*, 1998) Among young people, university undergraduates may fall into one of the most vulnerable groups to have higher rates of depressive disorders because university undergraduates are confronted with multiple stresses such as academic demands, being away from the family, financial problems, drug-related problems and relationship problems (Radcliffe and Lester, 2003). Further, depression is often presented in undergraduates with other psychological ill-health conditions including anxiety, obsessive-compulsive disorders, suicidal thoughts and attempts, and substance use (Abdel-Khalek and Lester, 2002; Ferguson *et al.*, 2002). An upward trend of psychological problems in undergraduates was observed in many countries. For example, a survey conducted in a university in the USA revealed that from 1988-1992 to 1996-2001, the proportion of students who sought medical advises for depression increased from 21% to 41% (Voelker, 2003). There is a severe shortage of published research reports about mental health issues of university undergraduates in Sri Lanka. Therefore, there is an urgent need to investigate the issues related to psychological well-being of undergraduates in the country, and to find and implement possible strategies to support those undergraduates who seek counseling or any other psychological health support to recover from their mental health problems.

Methodology

Cross-sectional survey design was employed in this research. A self-report questionnaire was used to assess depression and anxiety conditions under anonymous conditions. Depressive symptomatology was assessed using the 20-question Center for Epidemiological Studies-Depression Scale (CES-D) (Radloff, 1977). The total score on the CES-D range from 0 to 60. Higher scores on the CES-D indicate elevated depressive symptoms. The standard cut-off point that was used to identify participants with elevated depressive symptoms is 16. Symptoms of trait anxiety were assessed with the 20-question trait anxiety scale from the Spielberger's Trait Anxiety Inventory (TAI) (Spielberger *et al.*, 1970). The total score of TAI range from 20 to 80, with higher scores reflecting higher levels of anxiety. TAI scores above 60 are suggested as cutting points for screening purposes (LeCompte and Oner, 1976). Internal consistency of these measures were determined using alpha coefficients, which were 0.82 for the CES-D scale and 0.81 for the TAI scale, which indicated that both scales had an acceptable level of internal consistency. Age, gender, religion, education stream, marital status and monthly income of the family were the socio-demographic characteristics that were investigated.

Ethical approval for the study was obtained from the Ethics Committee of the Faculty of Medicine, University of Ruhuna, Galle.

Results

A total of 1082 university undergraduates from the Faculties of Agriculture, Business Administration and Finance, Science, Humanities and Medicine were surveyed. The sample consisted of 704 (65.1%) male undergraduates and 378 (34.9%) female undergraduates. The age of the participants ranged from 19 years to 27 years, with mean of 22.5 years (SD = 1.36). The majority of the participants were Buddhists (95.5%). About 38.7% (n = 419) of the respondents were from lower income families (monthly income < Rs. 5000), 48.7% (n = 517) were from middle-income families (monthly income Rs. 5001 to Rs. 20,000), and 13.5% (n = 146) were from upper income families (monthly income > Rs. 20,001). The overall mean score on the CES-D scale was 19.91 (SD= 10.75) and the range was 0 to 58. Significant main effects were found for the age ($F(1, 1076) = 3.01, p = .049$). Those respondents aged 21 years or less reported a higher CES-D mean value (Mean = 21.81, SD = 11.25) than those of aged 22 years to 23 years (Mean = 19.31, SD = 10.44, $t(861) = 3.13, p < 0.01$) and those of aged 24 years or above (Mean = 19.44, SD = 10.81, $t(470) = 2.32, p < 0.05$). There was an interaction between gender and age ($F(2, 1076) = 3.45, p < .05$). Junior female undergraduates were more depressed than their male counterparts, but senior female undergraduates were less depressed than their male counterparts. Overall, Medical undergraduates reported the highest prevalence of elevated (CES-D scores greater than 15) depressive symptomatology (69.2%, n = 146) followed by Business Administration (63.2%, n = 91), Science (60.4%, n = 84), Agriculture (59.6%, n = 122), and Humanities (54.3%, n = 208), $\chi^2(4, 1082) = 13.25, p < .01$. Overall, the variable family income was not associated with CES-D scores. Only gender ($F(1, 1076) = 7.33, p = 0.007$) was found as a significant predictor of trait anxiety scores. The mean values of TAI score were 46.46 (SD = 7.32) for females and 45.246 (SD = 7.42) for males, $t = 2.14, p < .05$, which indicated no risk of developing anxiety related disorders in this study population (LeCompte and Oner, 1976). Again the family income was not associated with TAI scores.

Discussion and Conclusions

Depressive symptoms seem to pose a great threat to the personal well-being of undergraduates in this university. As seen in other studies (Kessler *et al.*, 1994), young female undergraduates scored higher on depression measures than male undergraduates. Thus, university authorities should pay more attention to understand the nature of psychological problems in junior female undergraduates. Further, it was observed that medical undergraduates were highly vulnerable to develop depressive symptoms than non-medical undergraduates. This finding may indicate that different faculties have different risk factors related to mental disorders seen in the undergraduates. Anxiety seems to be a non-significant mental health issue with regard to this student population. Institutional and environmental factors may therefore play a great role in initiating stress and depression in this target population. Academic, socio-economic, political and environmental factors associated with mental illnesses in this study population need to be investigated, and mental health promotion programs, targeted at both risk groups and non-risk groups, should be formulated and implemented based on those scientific evidences.

References

- Abdel-Khalek A and Lester D. 2002 Manic-depressiveness, obsessive-compulsive tendencies, and suicidability in Kuwaiti college students. *Psychol Rep.* 90: 1007-8.
- Arnstein RL. 1995 Mental health of the campus revisited, *J Am Coll Health.* 43(6): 248- 254.
- Broadhead MJ. 1994 Mental disorders in the developing world. *BMJ.* 308 1052-1053.
- Ferguson E, James D and Madeley L. 2002 Factors associated with success in medical school: systematic review of the literature. *BMJ.* 324: 952-957.
- Kessler RC, McGonagle KA, Zhao S *et al.* 1994 Lifetime and 12 month prevalence of DSM-III-R psychiatric disorders in the United States: Results from the National Co-morbidity Survey. *Arch Gen Psychiatry.* 51: 8-19.
- LeCompte WA and Oner N. 1976 Development of Turkish edition of the state-trait anxiety inventory. In: Spielberger, CD and Diaz-Guerrero, R (eds.) *Cross-cultural anxiety.* John Wiley & Sons, New York. 51-67.
- Lewinsohn PM, Rohde P and Seeley JR. 1998 Major depressive disorder in older adolescents: Prevalence, risk factors, and clinical implications. *Clin Psychol Rev.* 18: 765-794.
- Radcliffe C and Lester H. 2003 Perceived stress during undergraduate medical training: a qualitative study. *Med. Educ.* 37: 32-38.
- Radloff LS. 1977 The CES-D scale: a self-report depression scale for research in the general population. *Appl Psychol Measurement.* 1:385-401.
- Spielberger CD, Gorsuch RL and Lushene RE. 1970 *Manual for the State Trait Anxiety Inventory.*: Consulting Psychologist's Press. Palo Alto, CA
- Voelker R. 2003 Mounting student depression taxing campus mental health services. *JAMA.* 289 (16): 2055-2056.
- Weitzman ER. 2004 Poor mental health, depression, and associations with alcohol consumption, harm, and abuse in a national sample of young adults in college. *J Nerv Ment Dis.* 192 (4): 269- 277.