Original Article :

Exploring the prevalence and determinants of the risk of depression and suicidal thoughts among university students

Md. Muzahid Islam[1,3*], Afshana Mimi[1], Masom Mia[2], Maisha Maliha Misha[4], Hafsa Akter[5]

1. Department of Psychology, Faculty of Biological Science, University of Rajshahi, Rajshahi 6205, Bangladesh
2. Department of Clinical Psychology, Faculty of Biological Science, University of Rajshahi, Rajshahi 6205, Bangladesh.
3. Institute of Natural Resources Research and Development, Rajshahi 6206, Bangladesh.
4. Sir Salimullah Medical College and Hospital(SSMCH), Dhaka, Bangladesh.
5. Faridpur Medical College and Hospital (FMCH), Faridpur, Bangladesh.

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Corresponding Author:
Md. Muzahid Islam. Department of Psychology, Faculty of Biological Science, University of Rajshahi, Rajshahi 6205, Bangladesh. Email: muzahidislammuzahid@gmail.com

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Abstract

Background and Aims:
Depression and suicidal ideation possess a serious threat on university students. It's important to find out the epidemiology of depression and suicidal ideation among university student. The aim of the present study was to find out the prevalence and associated factors of depression and suicidal ideation among university students of Bangladesh.

Methods:
A total of 315 students were recruited using multistage random sampling. A semi-structured questionnaire was used to collect information. The questionnaire consists of socio-demographic variables and KUDS scale to measure depression risk (Kutcher's KADS). For the factor analysis in this study, the $\chi 2$-test was used.

Result:
Of the participants, 51.75% were males and 48.25% were females with a mean age of 21.99 years. 66% of the participants reported their thought about suicide, and 47.62% were at risk for experiencing depression. Nevertheless, the analysis of the determinants, including socio-demographic characteristics, did not reveal any statistically significant difference with a risk of depression.

Conclusion:
In accordance with these findings, university student's susceptibility to depression may change over time and be impacted by a wide range of factors. This emphasizes the relevance of continuous mental health evaluation and assistance in educational settings.

Keywords:
Depression, Suicidal thoughts, University Students, Psychological disorder

Introduction:

Depression is a widespread psychological condition that affects more than 340 million individuals worldwide. It is a global public health concern that frequently begins at a young age.[1-3] As of right now, estimates indicate its potential impact on adolescents and young adults at up to 9.8%.[2-4] Bangladesh, a nation of 169 million people, reports about 10,000 suicides annually, a number that analysts claim is rising gradually. The primary indicators include low moods, feelings of shame, worthlessness, or a lack of ability to focus or work efficiently. On the other hand, an individual's phase of development determines the extent of their symptoms, which vary over time. Although the exact cause of depression is unidentified, a number of risk factors, including socioeconomic, environmental, cultural, ethnic, or genetic influences, are believed to play a role in its formation. One of the most paralyzing disorders is considered to be depression, which not only makes it difficult for victims and their families to go about their daily affairs but also puts an immense burden on society.[1,2,5,6] At this point, efforts have been made to identify the frequency of depression and to define specific traits linked to depression[7-12] this stated how gender, profession, and race affected the disorder's occurrence. A significant correlation between depression, suicidal thoughts, and suicide was also one of the primary consequences of depression.[13-17] It is significant to note that a study by Cash et al., reported that depression existed in as many as 60% of adolescent individuals who committed suicide at the point of death.[16] Additionally, research suggests that between 40 and 80 percent of youth who made suicide attempts had depressive disorders at the time they did it.[14-17] Furthermore, depressive disorder has been connected, especially among young people, to a variety of adverse effects, such as a higher risk of illicit drug and alcohol consumption, crime, and dependency on alcohol.[16,18-24] Research reveals that whereas early-life depression may have severe developmental and functional consequences, such as chronic psychosocial issues or academic collapse, it is frequently incorrectly diagnosed, neglected, or even ignored.[25,26] Because identifying depression risk and associated variables is vital to developing adequate prevention and treatment initiatives, investigating this phenomenon has theoretical and practical implications. People who have had major occurrences or changes are thought to be more susceptible to depression or symptoms of depression. Because of the difficulties linked to university years, multiple authors suggest that students should learn about them on their own in this particular instance. Also, they

argue that attending university symbolizes the passage from adolescence to early adulthood, during which time people go through psychophysical changes typical of this phase of life. Additionally, they experience psychological modifications such as migrating away from home, being parted off from friends and family, and adapting to an unfamiliar system of education.[25-27]

In this section, it is obvious that young people are not an identical group; their backgrounds and economic status vary. Additionally, students attending public universities in Bangladesh are not the same as those attending private ones since government-funded institutions admit college graduates who perform significantly better on matriculation examinations than do universities that are private. This research assessed the prevalence of the risk of depression and suicidal thoughts among students, taking into account the importance of the problem of student depression. Particular focus was devoted to the role of the student's gender, permanent place of residence, current living arrangements, and perceived financial status from parents.

Materials and Methods:

This is a cross-sectional study conducted among Rajshahi University student. A total of 315 university students were selected via multistage random sampling. Respondents were from the different departments. We used the following mathematical formula to calculate required sample for the study: n= z2p(1–p) d2, where n= number of samples, z = 1.96 (95% CI); p = prevalence estimate (0.271); and d = precession of the prevalence estimate. We considered p= 0.271, thus 1-p= 0.729 and d=0.05. The p value was taken from a previous study.[28] The formula provided that 304 samples were enough for the study; however, we initially considered 350 with 15% absent rate.

A semi-structured questionnaire was used to collect information. The questionnaire consists of socio-demographic variables and KADS scale to measure depression. Socio-demographic variables include age, gender, family type, family income, father education, mother education, parental support and students major.

Kutcher Adolescent Depression Scale (KADS) was used to assessed their vulnerability to depression. Participants were given instructions to choose the best response on a 0-3 scale (0 = hardly ever, 1 = much of the time, 2 = most of the time, and 3 = all the time). The six items on KADS a self-report scale and screening tool for evaluating young people's risk of depression are related to sadness, hopelessness, tiredness, difficulties in life, worry, and suicidal thoughts. According to this test, every individual with a score of six or more is considered to be at risk for depression.[29] According to Cronbach's α, KADS's internal relia-

bility was 0.84. Assessment item correlations, measured by Pearson's r, ranged from 0.35 to 0.66.[30] This scale was translated in Bangla, evaluated by the experts and then a pilot study was conducted. The internal consistency of the scale was found higher (α=0.798). They were each interviewed separately under circumstances that ensured their confidentiality and anonymity were properly preserved.

Excel spreadsheets were used to gather the data so that analyses of the parameters of the evaluated variables and assessments of their distributions could be carried out, and respondents were sorted based on the features that were evaluated. The χ2-test was then used to evaluate the statistical differences between these groups. To perform statistical analysis, GraphPad Prism 8.0.1 was used.

Ethical approval:

The ethical approval was taken from the Ethical Review Committee-Research and Publication (ERCRP), Department of Psychology, University of Rajshahi, Rajshahi-6205, Bangladesh [approval code: ERCRP-PSYRU-2(18)24; Date: October 10, 2024]. Participants were made to be assured that all the information they provided would remain confidential and were informed of their right to withdraw from the study whenever they want. Written consent was obtained from every individual participant.

Results:

Participant's characteristics:

A total of 315 University of Rajshahi (RU) students in Bangladesh were selected randomly to participate in the study. The age range of the participants was 20–24 (mean age = 21.99; SD = 1.23). The respondent's primary fields of study were Bangla (8.57%), Crop Science and Technology (6.35%), Fisheries (6.35%), Geography and Environmental Studies (12.06%), Marketing (6.03%), Mathematics (9.52%), Psychology (17.77%), Sanskrit (8.88%), Sociology (6.35%), Urdu (5.71%), Veterinary and Animal Science (6.66%) and Zoology (5.71%) (Table 1). According to the analysis, there were 48.25% female and 51.75% male participants (Table 2). Following an analysis of the participants' permanent residence, it was found that 40% lived in urban areas and 60% were from rural areas (Table 2). Information on the current living conditions of respondents is provided (Table 3). Note that the respondents typically shared a flat with a roommate (39.05%), stayed in a dormitory (25.07%), or lived at a parent's home (12.38%). Table 3 also provides information about participant's perceived financial status. Of them, 7.62% considered their status to be very good, 20.95% decided it was good, 54.92% felt it was average, 11.42% thought it was poor, and 5.08% suspected it was incredibly poor.

Table 1: Respondent's data by major area of study.

Respondent's major	No. of participants	Percentage	No. ofpartici-pants who met Kutcher's criteria for depression (test score ≥ 6)	Percentage of participants who met Kutcher's criteria for depression (test score ≥ 6)
Bangla	27	8.57	12	44.44
Crop Science and Technology	20	6.35	8	40
Fisheries	20	6.35	10	50
Geography and Environmental Studies	38	12.06	18	47.36
Marketing	19	6.03	9	47.36
Mathematics	30	9.52	19	63.33
Psychology	56	17.77	18	32.14
Sanskrit	28	8.88	16	57.14
Sociology	20	6.35	6	30
Urdu	18	5.71	10	55.55
Veterinary and Animal Science	21	6.66	14	66.66
Zoology	18	5.71	10	55.55
Total	315	99.96	150	

Table 2: Participants data by gender and permanent place of residence.

Participant's gender	No. of par-ticipants	Percentage	No. of participants who met Kutcher's criteria for depression (test score ≥ 6)	Percentage of participants who met Kutcher's criteria for depression (test score ≥ 6)	P Value
Male	163	51.75	85	52.14	0.227
Female	152	48.25	65	42.76	
Total	315	100	150		
Permanent place of residence					
Rural Area	189	60	96	50.79	
Urban Area	126	40	54	42.85	0.317
Total	315	100	150		

Table 3.:Living arrangements and financial status of participant's.

Current living arrangements	No. of participants	Percentage	No. of participants who met Kutcher's criteria for depres-sion (test score ≥ 6)	Percentage of partici-pants who met Kutcher's criteria for depression (test score ≥ 6)	P Value
Own Flat	17	5.40	10	58.82	
Share a flat with a roommate	123	39.05	64	52.03	
Dormitory	79	25.07	33	41.77	
With Sister/ Brother	22	6.98	14	63.63	
With Family	35	11.11	12	34.28	
At Parents Home	39	12.38	17	43.58	
Total	315	99.99	150		0.530
Participants perceived financial status					

Excel sheets were used to gather information and provide distributions of the variables according to evaluation. The average test score, according to an analysis of the KADS test responses, was 5.49 (median = 5, min = 0, max = 18). When a respondent's KADS score was ≥6, 47.62% of them satisfied Kutcher's criterion for depression (Table 4). Suicidal thoughts remained the least common symptom in the examined group, with 31.43%, whereas tiredness (77.78%), worry (70.47%), and sadness (62.84%) were the most common depression. Initially, the investigated students were divided based on their gender in order to calculate the effect of gender on respondent's depression. Of those who responded, 51.75% were male and 48.25% were female. Table 2 shows that 42.76% of female respondents and 52.14% of male respondents in the sample were found to be prone to depression. Gender exhibited no impact on depression, according to a statistical analysis of the incidence of depression in the groups (chi-square test, p-value = 0.227). Secondly, the respondents were split up according to where they had permanently lived in order to determine the impact of this place of residence on the risk of depression in the sample of research. Up to 50.79% of respondents from rural regions and 42.85% of respondents from urban areas were determined to be prone to depression based on an assessment of depression in the sample that was submitted (Table 2). At p-value = 0.317, the variances between these two groups weren't statistically significant. Thirdly, the number of students for study was divided based on their current housing arrangements in order to determine whether the respondent's living arrangements had an impact on their symptoms of depression. The risk of depression was most common in students who share a flat with a roommate (39.05%) (Table 3). It was determined that there were no statistically significant differences between the groups according to the analysis of the KADS results (at p-value = 0.530). Lastly, the group of students under investigation was separated depending on the reported financial state of each respondent in order to assess the impact of this information on their depression. The respondents with an average financial level (54.92%) and those who had good financial status (20.95%) reported being more vulnerable to depression (Table 3). There were statistically no differences in the incidence of the risk of depression between subjects who thought their financial status was very poor (at p-value = 0.601), poor (at p-value = 0.876), good (at p-value = 0.766), or very good (at p-value = 0.625), and participants who stated their financial status was average. Additionally, there were no

noticeable variations (at p-value = 0.796) between participants with good and poor economic status. However, there were no statistically significant differences between those with good and very good financial status (p-value = 0.596) and the subjects with poor and very good financial standing (p-value = 0.641)

Table 4: Individual participants frequency of answer to KADS items.

KADS items	Hardly Ever	Much of the time	Most of the time	All of the time
1. Sadness	37.14%	37.77%	20.95%	4.12%
2. Hopelessness	38.41%	38.09%	18.09%	5.39%
3. Tiredness	22.22%	42.54%	27.30%	7.94%
4. Difficulties in life	36.50%	38.41%	20%	5.08%
5. Worry	29.52%	42.54%	21.27%	6.66%
6. Suicidal thoughts	68.57%	20.32%	6.98%	4.13%

Discussion:

Depression research has become increasingly important for a variety of reasons, such as the fact that it is common among juvenile offenders, alcoholics, and drug addicts, in addition to suicide victims,[31] and the belief that treatment and prevention would have beneficial effects on society.[18-20] Numerous studies have examined the genesis, symptomatology, and progress of depression in relation to an individual's development through every phase of their life. Researchers emphasized specific features that were predictive of early-stage depression and symptoms of depression. So far, factors such as gender, financial status,[32] biological origins,[11] social and natural influences (family relations),[6,7] or behavioral characteristics (emotion regulation)[33] have been defined as factors leading to depression in young people. Because involvement in a university represents a phase when adolescents grow into young adults and experience many psychological changes, such as rendering home or experiencing estrangement from family and friends, university students are additionally affected by particular factors, which could lead to the appearance of depression.[26] Bangladesh has seen a sharp increase in the number of students in recent years, making the issue of student depression especially important there. This study assesses the frequency of thoughts of suicide and the risk of depression in a sample of public university students from Rajshahi, Bangladesh. Furthermore, the possible impact of demographic variables on depression risk was assessed. These factors included the respondent's gender, housing circumstances, permanent place of residence, and financial status. The results show that there are no statistically significant variations in the risk of depression between respondents who live in rural

areas and those who live in urban areas. The study demonstrated that the probability of depression was nearly twice higher in rural students (30.48% vs. 17.14%, respectively) than in urban peers. Because this problem has not yet been investigated, the results acquired cannot be compared to those obtained by other researchers. According to a study by Weich et al. (2006), people in the UK who live in rural locations are considerably less likely than those who live in urban areas to suffer from mental disorders such as depression.[34] Similar results were also obtained in a Swedish study.[35] The previously mentioned authors connected the disparities to the widely recognized psychological benefits of peaceful settings, stunning scenery, and calmness. But according to a study conducted in Australia, adolescents who live in rural regions of the country may be more susceptible than those who live in cities to psychological disorders such as depression.[36] The study's authors explain their findings about the impact of difficult living conditions, parental approval, and self-esteem. While the respondent's students in the offered study had already lived for a while in an educational center, putting them in touch with both urban and rural lifestyles and environments, the findings presented above relate to permanent residents of rural areas. However, it appears that rural students might need to put in more effort to finish their university degree. They could feel more alone as a result of having less time for social engagements and their social network.[25,37] Additionally, one could speculate as to the origins of the phenomenon by forming a connection between feelings of loneliness and being cut off from one's family of origin. Living apart from one's parents usually comes with a greater degree of independence and less parental supervision. However, it is frequently noted that being away from one's parents can be distressing and might cause young people to experience depression.[27] The respondent's gender and place of residence had no impact entirely on their depression status, although the previously indicated characteristics had the potential to do so. Explaining the gender-related outcomes was especially challenging because, according to reports currently available, females ought to be far more prone to depression.[1-3,6,23,27] Although male participants in the study were shown to have a higher risk of depression (26.78% compared to 20.63% female), statistical differences could not be shown, possibly due to limited statistical strength. Respondent's self-reported financial situations were categorized into five groups-very poor, poor, average, good, and very good-in order to examine the impact of these situations on the likelihood that they would suffer from

depression. This indicates that there was no significant difference in depression among students according to how they considered their financial situation. There has already been literature on the connection between depression and economic status.[23,27,32] Nevertheless, other researchers who evaluated respondent's economic situations using alternative criteria did not discover that average financial status affected depression vulnerability. It's possible that the "average" financial status of the study participants affected their sense of self-worth since they compared their living conditions to those of others and felt "worse" if their status wasn't as good. It is also possible to make predictions that, in Bangladesh today, or at least among the students in the sample that was provided, social standing was more influenced by financial situation than by educational attainment. According to the analysis provided, there is a significant risk of depression among students. Based on the present information, it may be stated that university psychological and medical services, in addition to student government and student organizations, should support students from groups at risk for depression, especially those from rural areas.

Conclusion:

This study emphasizes the alarming prevalence of depression among university students in Bangladesh. In this study, which was limited to one university, raises the possibility that the outcomes would differ greatly if information were gathered from several universities and with more systematic way.

References:

1. Lewinsohn PM, Essau CA. Depression in adolescents. In: Gotlib, IH.; Hammen, CL (eds). Handbook of Depression. New York, NY: Guilford Press, 2002. p. 541-559.
2. Üstün, T. B., & Kessler, R. C. (2002). Global burden of depressive disorders: the issue of duration. The British Journal of Psychiatry, 181(3), 181-183. doi:10.1192/bjp.181.3.181
3. Cuijpers, P., Beekman, A. T., & Reynolds, C. F. (2012). Preventing depression: a global priority. Jama, 307(10), 1033-1034. doi:10.1001/jama.2012.271
4. Khan, T. M., Sulaiman, S. A. S., & Hassali, M. A. (2012). Factors associated with suicidal behaviour among depressed patients in Penang, Malaysia. Archives of Medical Science, 8(4), 697-703.
5. Fergusson, D. M., Boden, J. M., & Horwood, L. J. (2007). Recurrence of major depression in adolescence and early adulthood, and later mental health, educational and economic out-

comes. The British Journal of Psychiatry, 191(4), 335-342. doi:10.1192/bjp.bp.107.036079

6. Rao, U., & Chen, L. A. (2009). Characteristics, correlates, and outcomes of childhood and adolescent depressive disorders. Dialogues in clinical neuroscience, 11(1), 45-62. https://doi.org/10.31887/DCNS.2009.11.1/urao

7. Hammen, C. (1992). The family-environmental context of depression: A perspective on children's risk. Developmental perspectives on depression, 4, 251-282.

8. Wilhelm, K., Roy, K., Mitchell, P., Brownhill, S., & Parker, G. (2002). Gender differences in depression risk and coping factors in a clinical sample. Acta Psychiatrica Scandinavica, 106(1), 45-53. https://doi.org/10.1034/j.1600-0447.2002.02094.x

9. Lorant, V., Deliège, D., Eaton, W., Robert, A., Philippot, P., & Ansseau, M. (2003). Socioeconomic inequalities in depression: a meta-analysis. American journal of epidemiology, 157(2), 98-112. https://doi.org/10.1093/aje/kwf182

10. Bond, L., Toumbourou, J. W., Thomas, L., Catalano, R. F., & Patton, G. (2005). Individual, family, school, and community risk and protective factors for depression in adolescents: A comparison of risk profiles for substance use and depression. Prevention science, 6, 73-88. https://doi.org/10.1007/s11121-005-3407-2

11. Zalsman, G., Oquendo, M. A., Greenhill, L., Goldberg, P. H., Kamali, M., Martin, A., & Mann, J. J. (2006). Neurobiology of depression in children and adolescents. Child and Adolescent Psychiatric Clinics, 15(4), 843-868. https://doi.org/10.1016/j.chc.2006.05.010

12. Shanahan, L., Copeland, W. E., Costello, E. J., & Angold, A. (2011). Child-, adolescent-and young adult-onset depressions: differential risk factors in development? Psychological medicine, 41(11), 2265-2274. doi:10.1017/S0033291711000675

13. Beautrais, A. L. (2000). Risk factors for suicide and attempted suicide among young people. Australian & New Zealand Journal of Psychiatry, 34(3), 420-436. https://doi.org/10.1080/j.1440-1614.2000.00691.x

14. Polewka, A., Kroch, S., & Chrostek Maj, J. (2004). Zachowania i próby samobójcze młodzieży i młodych dorosłych: epidemiologia, czynniki ryzyka,

prewencja i leczenie. Przegląd Lekarski, 61(4).

15. Szumilas M, Kutcher SP. Youth and suicide. CMAJ fact sheet. CMAJ. 2008; 178: 286.

16. Cash, S. J., & Bridge, J. A. (2009). Epidemiology of youth suicide and suicidal behavior. Current opinion in pediatrics, 21(5), 613-619. DOI: 10.1097/MOP.0b013e32833063e1

17. Verona, E., & Javdani, S. (2011). Dimensions of adolescent psychopathology and relationships to suicide risk indicators. Journal of youth and adolescence, 40, 958-971.: 958-971. https://doi.org/10.1007/s10964-011-9630-1

18. Angold, A., & Costello, E. J. (1993). Depressive comorbidity in children and adolescents. American journal of psychiatry, 150(12), 1779-1791.

19. Nagin, D. S., & Land, K. C. (1993). Age, criminal careers, and population heterogeneity: Specification and estimation of a nonparametric, mixed Poisson model. Criminology, 31(3), 327-362. https://doi.org/10.1111/j.1745-9125.1993.tb01133.x

20. Birmaher, B., Ryan, N. D., Williamson, D. E., Brent, D. A., Kaufman, J., Dahl, R. E., ... & Nelson, B. (1996). Childhood and adolescent depression: a review of the past 10 years. Part I. Journal of the American Academy of Child & Adolescent Psychiatry, 35(11), 1427-1439. https://doi.org/10.1097/00004583-199611000-00011

21. Kessler, R. C., Avenevoli, S., & Merikangas, K. R. (2001). Mood disorders in children and adolescents: an epidemiologic perspective. Biological psychiatry, 49(12), 1002-1014. https://doi.org/10.1016/S0006-3223(01)01129-5

22. Rutter, M., Kim-Cohen, J., & Maughan, B. (2006). Continuities and discontinuities in psychopathology between childhood and adult life. Journal of child psychology and psychiatry, 47(3-4), 276-295. https://doi.org/10.1111/j.1469-7610.2006.01614.x

23. Mendelson, T., Kubzansky, L. D., Datta, G. D., & Buka, S. L. (2008). Relation of female gender and low socioeconomic status to internalizing symptoms among adolescents: a case of double jeopardy? Social Science & Medicine, 66(6), 1284-1296. https://doi.org/10.1016/j.socscimed.2007.11.033

24. Makara-Studzińska, M., Pyłypczuk, A., & Urbańska, A. (2011). Occurrence of depression and anxiety disorders according to the period of abstinence

in patients addicted to gambling and alcohol. Journal of Pre-Clinical and Clinical Research, 5(1).

25. Tjia, J., Givens, J. L., & Shea, J. A. (2005). Factors associated with undertreatment of medical student depression. Journal of American college health, 53(5), 219-224. https://doi.org/10.3200/JACH.53.5.219-224

26. Arria, A. M., O'Grady, K. E., Caldeira, K. M., Vincent, K. B., Wilcox, H. C., & Wish, E. D. (2009). Suicide ideation among college students: A multivariate analysis. Archives of suicide research, 13(3), 230-246. DOI: 10.1080/13811110903044351

27. Mikolajczyk, R. T., Maxwell, A. E., Naydenova, V., Meier, S., & El Ansari, W. (2008). Depression and perceived burdens related to being a student: Survey in three European countries. Clinical Practice and Epidemiology in Mental Health, 4, 1-9. https://doi.org/10.1186/1745-0179-4-19

28. Hassan, T., Alam, M. M., Wahab, A., & Hawlader, M. D. (2020). Prevalence and associated factors of internet addiction among young adults in Bangladesh. Journal of the Egyptian Public Health Association, 95, 1-8.

29. LeBlanc, J. C., Almudevar, A., Brooks, S. J., & Kutcher, S. (2002). Screening for adolescent depression: comparison of the Kutcher Adolescent Depression Scale with the Beck Depression Inventory. Journal of Child and Adolescent Psychopharmacology, 12(2), 113-126. https://doi.org/10.1089/104454602760219153

30. Mojs, E., Warchol-Biederman, K., & Samborski, W. (2012). Prevalence of depression and suicidal thoughts amongst university students in Poznan, Poland, preliminary report. Psychology, 3(2), 132-135. http://dx.doi.org/10.4236/psych.2012.32020

31. Zisook, S., Lesser, I., Stewart, J. W., Wisniewski, S. R., Balasubramani, G. K., Fava, M., ... & Rush, A. J. (2007). Effect of age at onset on the course of major depressive disorder. American Journal of Psychiatry, 164(10), 1539-1546. https://doi.org/10.1176/appi.ajp.2007.06101757

32. McLoyd, V. C. (1998). Socioeconomic disadvantage and child development. American psychologist, 53(2), 185. https://doi.org/10.1037/0003-066X.53.2.185

33. Giletta, M., Scholte, R. H., Prinstein, M. J., Engels, R. C., Rabaglietti, E., &

Burk, W. J. (2012). Friendship context matters: Examining the domain specificity of alcohol and depression socialization among adolescents. Journal of abnormal child psychology, 40, 1027-1043. https://doi.org/10.1007/s10802-012-9625-8

34. Weich, S., Twigg, L. I. Z., & Lewis, G. (2006). Rural/non-rural differences in rates of common mental disorders in Britain: prospective multilevel cohort study. The British Journal of Psychiatry, 188(1), 51-57. doi:10.1192/bjp.bp.105.008714

35. Sundquist, K., Frank, G., & Sundquist, J. A. N. (2004). Urbanisation and incidence of psychosis and depression: follow-up study of 4.4 million women and men in Sweden. The British Journal of Psychiatry, 184(4), 293-298. doi:10.1192/bjp.184.4.293

36. Papandrea, K., Winefield, H., & Livingstone, A. (2010). Oiling a neglected wheel: An investigation of adolescent internalising problems in rural South Australia. Rural and Remote Health, 10(4), 107-118. https://search.informit.org/doi/10.3316/informit.396509647000948

37. Jeong, Y., Kim, J. Y., Ryu, J. S., eun Lee, K., Ha, E. H., & Park, H. (2010). The associations between social support, health-related behaviors, socioeconomic status and depression in medical students. Epidemiology and health, 32. doi: 10.4178/epih/e2010009