

# Symptoms Suggestive of Mental Health Problems and their correlates among Female Nursing students in Thiruvananthapuram, Kerala

**Author:** Dr. MKC Nair<sup>1</sup>, Dr. Sreetama C<sup>2</sup>, Dr. Anjana J<sup>3</sup>, Dr. Leena S<sup>4</sup>, Dr. Swapna<sup>5</sup>, Dr. Josephine Vinita<sup>6</sup>

1. Emeritus Professor, Noorul Islam Centre for Higher Education (NICHE), Deemed-to-be University, Kumarakovil, Kanyakumari District & Director, NIMS-Spectrum-CDRC, Aralumoodu, Tvpm.
2. IAP Fellowship Trainee in Developmental & Behavioural Pediatrics, NIMS-Spectrum-CDRC, Aralumoodu, Tvpm.
3. IAP Fellowship in Developmental Nurse Counsellor Trainee, NIMS-Spectrum-CDRC, Aralumoodu, Tvpm.
4. Senior Research Coordinator, Child Development Centre, Medical College, Tvpm.
5. Senior Developmental Therapist, NIMS-Spectrum-CDRC, Aralumoodu, Tvpm.
6. Principal, NIMS College of Nursing, NIMS Medicity Campus, Aralumoodu, Tvpm.

**Corresponding : Prof (Dr.) M.K.C.Nair, D.Sc.**

Formerly Vice Chancellor KUHS & Founder Director,

CDC & Emeritus Professor in Child Adolescent and Behavioural Pediatrics, CDC

**Director**, NIMS-SPECTRUM-Child Development Research Centre (CDRC) NIMS Medicity,

Neyyattinkara, Thiruvananthapuram **Email:** [cdecmkc@gmail.com](mailto:cdecmkc@gmail.com)

## Abstract

**Introduction:** Nursing students have a higher prevalence of mental health issues compared to students from other healthcare branches. This study aims to assess the prevalence of perceived mental health problems and their socio-demographic associations, as well as introduce a classroom based intervention model for the same.

**Methodology:** Data for perceived symptoms of mental health problems was collected using Section C of Young Adult Screening Questionnaire. The students were thereafter introduced to the intervention module. **Results:** 6.8% students had mental health issues. A statistically significant association was observed between lower age, second academic year and perceived symptoms suggestive of mental health problems. **Conclusion:** The present study highlights the need for early identification and management of mental health problems among young students, without labelling the person, and includes a simple classroom-based package for the same.



**Keywords:** mental health, nursing students, intervention package

## Introduction

The Global Burden of Disease 2019 reported mental health problems among the top ten causes of DALYs in the world, with depressive disorders accounting for the largest proportion.<sup>1</sup> A cross-sectional study conducted in South India including 201 school going adolescents found that 40.8% of students showed depression (from mild mood disturbance to severe and extreme depression) while 54.7% participants had anxiety. Prevalence

of depression was higher in females<sup>2</sup>. According to Erikson's stages of psychosocial development, young adulthood is 'Intimacy vs isolation' stage, with the major conflict being centred on forming intimate, loving relationships with peers. Success at this stage leads to fulfilling relationships while failure to do so can result in feelings of loneliness and isolation, paving the way for mental health problems<sup>3</sup>.

Globally, studies have shown that nursing students have lower general and mental health status than other health related disciplines and non-medical students<sup>4,5</sup>. Stigmatisation of mental illnesses is common even among nurses<sup>6,7</sup> that can deter early diagnosis of symptoms of mental health conditions and care-seeking practices. Previous research, however, have shown that group-based interventions in young adults may improve the future outlook and perceived symptomatology of mental health problems<sup>8,9</sup>. A previous study among young adults have shown that 11.2% of school dropouts had severe and extreme grades of depression as against 3% among school going and nil among college going adolescents<sup>10</sup>. This study has also shown feasibility of a class based approach in early detection and group intervention for mental health problems without labelling effect.

The present study was done to identify early symptoms, which may indicate possible mental health problems among undergraduate nursing students, without having a labelling effect, as well as develop a group based intervention model.

### Objectives

1. To estimate the prevalence of perceived symptoms indicative of possible mental health problems among female nursing students using Teen Screen Questionnaire (Mental).
2. To find out the correlates of mental health problems among female nursing students.

3. To develop a structured teaching programme for improving mental health.

### Methodology

This was a descriptive cross-sectional study to understand prevalence of symptoms suggestive of mental health disturbances, conducted on the female B.Sc. Nursing students from first to fourth academic years of NIMS College of Nursing, Neyyattinkara, Thiruvananthapuram. Census method was adopted for recruiting samples using the college admission register. The tools included a personal data sheet comprising of the socio-demographic details of the individual students and Section-C of the Young Adult Screening Questionnaire, appropriately modified from Teen Screen Questionnaire- Mental, with 30 questions to be marked on a 3-point Likert scale<sup>11</sup>.

After getting clearance from Institutional Ethical Committee and college authority (ECR/218/Inst/Ker/2013/RR-16 Approval No NIMS/IEC/2021/04/07), informed consent was obtained from individual students. Google form of the questionnaire was sent electronically via WhatsApp of each class group. The responses were automatically recorded and saved in Google Drive. Thereafter, a structured care counselling program was conducted via a didactic one-hour session on Google Meet platform for each academic year. Data analysis was done by descriptive statistics using SPSS version 25. The data was found to be non-normally distributed by the Shapiro-wilk test of Normality, hence median was taken as the cut-off in TSQ-M to denote poor mental health status. Association with socio-demographic variables was assessed using Chi Square Test.

### Results

221 nursing students of NIMS College of Nursing were included in the study. The socio-demographic characteristics of the study

population were as follows;

- Age: ≤20 years: 102 (46.2%), >20 years: 119 (53.8%);
- Religion: Hindu: 109(49.3%), Christian: 92(41.6%), Muslim: 20(9%);
- Type of family: Nuclear: 181(81.9%), Extended: 25(11.3%), Joint: 15(6.8%)
- Residence of family: Urban: 160(72.4%), Rural: 61(27.6%)
- Current residence of students: Home: 98(44.3%), Hostel: 123(55.7%)
- Socio-economic status: APL: 124(56.1%), BPL: 97(43.9%)
- Academic year: 1st year: 56(25.3%), 2nd year: 56(25.3%), 3rd year: 59(26.7%), 4th year: 50(22.6%)

**Table 1: Prevalence of perceived symptoms suggestive of mental health problems among female nursing students based on TSQ (M)**

Items	Frequency N(%)		
	Never	Sometimes	Always
<b>Item suggestive of ADHD/CD/ODD</b>			
1.Difficulty in focussing on one task	89(40.3)	127(57.5)	5(2.3)
2.Problems in sitting still	74(33.5)	122(55.2)	<b>25(11.3)</b>
3.Been involved in setting fires, stealing, lying or fist fight	180(81.4)	30(13.6)	11(5.0)
4.Been suspended from school /involved in police case	213(96.4)	8(3.6)	-
<b>Items suggestive of Anxiety state</b>			
5.Nervous during public speaking	77(34.8)	118(53.4)	<b>26(11.8)</b>
6.Fears that are perceived by others as unreasonable	118(53.4)	96(43.4)	7(3.2)
7.Worry about mishaps	93(42.1)	116(52.5)	12(5.4)
8.Feeling stressed at times	54(24.4)	163(73.8)	4(1.8)
9.Can manage stress well	39(17.6)	141(63.8)	<b>41(18.6)</b>
10. Feel that it is normal for students to be stressed	36(16.3)	143(64.7)	<b>42(19.0)</b>
11. Bed-wetting	208(94.1)	11(5.0%)	2(0.9%)
<b>Item suggestive of Depressive state</b>			
12.Feeling more sad than peers	121(54.8)	95(43.0)	5(2.3)
13.Change in sleep	74(33.5)	133(60.2)	14(6.3)
14.Change in appetite	94(42.5)	120(54.3)	7(3.2)
15.Change in bowel habits	114(51.6)	106(48.0)	1(0.5)
16.Thoughts of hurting oneself	133(60.2)	82(37.1)	6(2.7)
17.Feeling of Guilt	131(59.3)	84(38.0)	6(2.7)
18.Feeling of Worthlessness	149(67.4)	65(29.4)	7(3.2)
19.Feeling of Hopelessness	162(73.3)	49(22.2)	10(4.5)
20.Feeling of Helplessness	165(74.7)	53(24.0)	3(1.4)

21.Life is not worth living	155(70.1)	58(26.2)	8(3.6)
22.Thoughts of suicide	186(84.2)	32(14.5)	3(1.4)
23.Lost interest in activities previously enjoyed	128(57.9)	90(40.7)	3(1.4)
<b>Item suggestive of OCD</b>			
24.Troubled by recurrent uncontrollable thoughts	130(58.8)	85(38.5)	6(2.7)
25.Repeating certain acts beyond control	119(53.8)	93(42.1)	9(4.1)
<b>Item suggestive of Psychosis state</b>			
26.Hearing voices/seeing people when alone	185(83.7)	35(15.8)	1(0.5)
27.Feeling of being talked about/ being harmed by others	174(78.7)	42(19.0)	5(2.3)
<b>Items suggestive of Substance Use</b>			
28.Tobacco use	217(98.2)	3(1.4)	1(0.5)
29.Smoking	218(98.6)	3(1.4)	-
30.Alcohol consumption	212(95.9)	9(4.1)	-
<b>Perceived mental health status</b> <i>(Taking the median of TSQ-M as cut-off)</i>	Symptoms suggestive of mental health problems: <b>15 (6.8%)</b>		

**Table.2 :Association of Mental Health Status with key sociodemographic factors**

Domain	Mental Health Status		Chi.sq.	df	p-Value
	Normal	Abnormal			
<b>Age of students</b>					
≤20 years (n=102)	91(89.2%)	11(10.8%)	4.783	1	0.029
>20 years (n=119)	115(96.6%)	4(3.4%)			
<b>Present Educational Status</b>					
1st year (n=56)	53(94.6%)	3(5.4%)	8.799	3	0.030
2nd year (n=56)	48(85.7%)	8(14.3%)			
3rd year (n=59)	55(93.2%)	4(6.8%)			
4th year (n=50)	50(100.0%)	0			
<b>Religion</b>					
Hindu (n=109)	107(98.2%)	2(1.8%)	15.241	2	0.001
Christian (n=92)	84(91.3%)	8(8.7%)			
Muslim (n=20)	15(75.0%)	5(25.0%)			

A statistically significant relationship was found between higher perceived mental health problems and lower age (<20 years: p=0.029), being in the second academic year (p=0.03) and belonging

to Muslim religion ( $p=0.001$ ) (Table 2). No significant relationship was found with other socio-demographic variables in this study.

## Discussion

The principal aim of the present study was to identify perceived symptoms which could be early predictors of mental health problems, without labelling the student and intervene early. In this study, taking the median of TSQ-M as cut-off, 6.8% ( $n=15$ ) of the students had symptoms suggestive of mental health problems (Table.1). The maximum prevalence was observed in the items of nervousness during public-speaking(11.8%) followed by problems in sitting still(11.3%). The results are similar to previous studies which suggest that high levels of social anxiety is present among university students<sup>12</sup>. On the other hand 42 (19%) students felt that stress was a normal part of student life, and 41(18.6%) were confident of coping with stress well.

A statistically significant association was observed between abnormal mental health status and younger age and second year of academics. These findings are consistent with a previous study by Kim et al, where anxiety levels have been seen to be lower in case of nurses who are older and who have more years of academic/nursing experience<sup>13</sup>. Due to the small sample size, it would not be prudent to draw conclusions on religion from the present study because prior studies in Islamic countries have demonstrated that religious education and internalised religious orientation, are negatively correlated with perceived mental health problems<sup>14, 15</sup>.

According to WHO (2019) report, suicide is the fourth leading cause of death among young adults aged 15-29 years old<sup>16</sup>. In the present study, 2.7% of the students reported thoughts of self-harm while 1.4% reported suicidal ideation. Previous studies report a similar prevalence of

suicidal ideation among young adult population<sup>17</sup>. Nursing students, being at a transitional stage of their careers, moving away from home to a residential college, academic stress, lack of peer and family support and cognitive distortions related to depression could contribute to thoughts of self-harm and suicide<sup>18</sup>. It is important that these symptoms be detected as early as possible, as immediate intervention can potentially prevent loss of life.

The bio-psycho-social model highlights the importance of pharmacotherapy, cognitive behaviour therapy and social counselling as effective management of mental health disorders. However, chances of being isolated are possible among students at-risk, because of the high prevalence of social stigma around psychiatric disorders, especially for young women<sup>19</sup>. Group counselling sessions could be an effective model of intervention among the young adult population, because it reduces the risk of ostracization of the student. Hence, we have developed such a model for intervention, based on previous experience doing school based group counselling<sup>20</sup>.

## Conclusion

Mental health is the foundation of an individual's well-being and social functioning. Early identification of perceived symptoms of mental health issues faced by young adults by college authorities can help the students receive early and appropriate intervention. This study not only underlines the need for early screening of mental health problems, but also can help formulate a teaching module for the same in different institutions, modified according to the requirements of the students.

**Financial Support and sponsorship :** Nil.

**Conflicts of interest :** There are no conflicts of interest.

## References

1. Abbafati, C., Machado, D. B., Cislighi, B., Salman, O. M., Karanikolos, M., McKee, M., ... & Herteliu, C. (2020). Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet*, 396(10258), 1204-1222.
2. Jayashree, K., Mithra, P. P., Nair, M. K. C., Unnikrishnan, B., & Pai, K. (2018). Depression and anxiety disorders among school going adolescents in an urban area of South India. *Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine*, 43(Suppl 1), S28.
3. Orenstein, G. A., & Lewis, L. (2021). Eriksons stages of psychosocial development. In *StatPearls [Internet]*. StatPearls Publishing.
4. Wang, A. H., Lee, C. T., & Espin, S. (2019). Undergraduate nursing students' experiences of anxiety-producing situations in clinical practicums: A descriptive survey study. *Nurse Education Today*, 76, 103-108.
5. Deary, I. J., Watson, R., & Hogston, R. (2003). A longitudinal cohort study of burnout and attrition in nursing students. *Journal of advanced nursing*, 43(1), 71-81.
6. Ebrahimi, H., Namdar, H., & Vahidi, M. (2012). Mental illness stigma among nurses in psychiatric wards of teaching hospitals in the north-west of Iran. *Iranian journal of nursing and midwifery research*, 17(7), 534.
7. Rüsçh, N., Angermeyer, M. C., & Corrigan, P. W. (2005). The stigma of mental illness: concepts, forms, and consequences. *Psychiatrische Praxis*, 32(5), 221-232.
8. Chugani, C. D., Goldstein, T. R., Salk, R. H., Poling, K., Sakolsky, D., & Brent, D. (2020). Group intervention for young adults with mood and anxiety disorders transitioning to college. *Journal of psychiatric practice*, 26(2), 120.
9. Houck, G. M., Darnell, S., & Lussman, S. (2002). A support group intervention for at-risk female high school students. *The Journal of School Nursing*, 18(4), 212-218..
10. Nair, M. K. C., Paul, M. K., & John, R. (2004). Prevalence of depression among adolescents. *The Indian Journal of Pediatrics*, 71, 523-524.
11. Nair, M. K., Chacko, D., Rajaraman, V., George, B., Samraj, L., & Russell, P. S. (2014). The diagnostic accuracy and validity of the teen screen questionnaire-mental health for clinical and epidemiological studies in primary-care settings. *Indian Journal of Psychological Medicine*, 36(2), 187-191.
12. Grieve, R., Woodley, J., Hunt, S. E., & McKay, A. (2021). Student fears of oral presentations and public speaking in higher education: a qualitative survey. *Journal of Further and Higher Education*, 45(9), 1281-1293.
13. Kim, S. C., Quiban, C., Sloan, C., & Montejano, A. (2021). Predictors of poor mental health among nurses during COVID 19 pandemic. *Nursing Open*, 8(2), 900-907.
14. Forouhari, S., Teshnizi, S. H., Ehrampoush, M. H., Mahmoodabad, S. S. M., Fallahzadeh, H.,

- Tabei, S. Z., ... & Kazemitabae, M. (2019). Relationship between religious orientation, anxiety, and depression among college students: A systematic review and meta-analysis. *Iranian journal of public health*, 48(1), 43.
15. Estrada, C. A. M., Lomboy, M. F. T. C., Gregorio, E. R., Amalia, E., Leynes, C. R., Quizon, R. R., & Kobayashi, J. (2019). Religious education can contribute to adolescent mental health in school settings. *International journal of mental health systems*, 13(1), 1-6..
  16. Frick, M. G., Butler, S. A., & deBoer, D. S. (2021). Universal suicide screening in college primary care. *Journal of American college health*, 69(1), 17-22.
  17. Goldney, R. D., Winefield, A. H., Tiggemann, M., Winefield, H. R., & Smith, S. (1989). Suicidal ideation in a young adult population. *Acta Psychiatrica Scandinavica*, 79(5), 481-489.
  18. Yunitasari, E., Yusuf, A., Aditya, R. S., Acob, J. R. U., Solikhah, F. K., & Alrazeeni, D. M. (2023). Nursing Students Facilitating the Transition from Suicidal Ideation to Action in the Rural: A Qualitative Study. *Neuropsychiatric Disease and Treatment*, 171-180.
  19. Russell, S., Russell, P. S., Kaur, M. D., Nair, M. K. C., & Darilin, D. (2012). Priority mental health disorders of children and adolescents in primary-care pediatric settings in India 3: Psychotherapy and other non-pharmacological interventions. *The Indian Journal of Pediatrics*, 79, 33-38.
  20. John R, George S, Nair MKC. Classroom intervention for symptoms of Depression. In: MKC Nair, editor. *Adolescent Pediatrics*. 2<sup>nd</sup> ed. New Delhi: Noble Medical Publishers; 2023.p-130-147.

Appendix-1

CLASSROOM BASED INTERVENTION MODEL

Group intervention: Type of activities	Reason/ Comments
<b>Session 1: Ice-breaking</b>	
a. Simple games like describing a classroom partner's name, age, residence, likes and dislikes b. 9 dots game	Ice-breaking activities help the student overcome their inhibitions and relax. It increases their interest and involvement in the forthcoming sessions.
<b>Session 2: Understanding social involvement</b>	
a. Group exercises: Where am I b. Small group sharing c. Doubt clearing/ Q and A session	a. Help the participant realise the degree of their involvement in a social setting and the possible emotions they felt. b. To foster peer bonding in small groups, describing their own findings in the prior game. c. Identifying the barriers in our brain which prevent social involvement
<b>Session 3: Understanding moods</b>	
a. Simplified learning material on cognitive distortions b. Learning material on the reasons for harbouring negative attitudes (including desire for approval, love, achievement, perfectionism, entitlement, omnipotence etc)	The learning materials are presented and explained in a lucid way, in a language the students are comfortable in, giving ample time for intervening doubt-clearing sessions. The counsellor can take assistance of audio-visual modes of teaching.
<b>Session 4: Building self-esteem</b>	
a. Group exercise: Listing good and bad qualities in self b. Sharing the finding in small groups c. Help the students share their insight from the exercise	Cognitive distortions often cloud self-perception of good qualities. This exercise demonstrates that every person has positive characteristics, which we often choose to ignore in ourselves.



<b>Session 5: Risk taking and fear</b>	
<p>a. Ask for volunteers from the class without explaining the exercise</p> <p>b. After few students have volunteered, one member from each group should describe the emotion he/she felt when asked to volunteer</p> <p>c. The student is asked to describe previous similar situations in life, how they reacted and identify the causes of their said behaviour</p>	<p>Hesitation to participate in social activities often stems from a conceived notion of self-perfection. This exercise demonstrates to the participant, the absurdity of perfectionism and encourages them to come out of their comfort zones.</p>
<b>Session 6: Ways to resolve conflicts</b>	
<p>a. Describing three ways of conflict resolution</p> <p>b. Group exercises involving reflection on how a student can resolve a possible conflict in their lives</p>	<p>This exercise helps students understand alternative ways of conflict resolution by critical self-analysis and steps of implementing it.</p>
<b>Session 7: Locus of control</b>	
<p>a. Exercises to reflect on how much power we give to ourselves and others over our emotions</p> <p>b. Group sharing</p> <p>c. Discussion on the reasons of said behaviour</p>	<p>This exercise portrays the idea of internal and external locus of control, and how switching to an internal locus can empower us to modify our behaviour for betterment.</p>

*Source: John R, George S, Nair MKC. Classroom intervention for symptoms of Depression. Adolescent Pediatrics. 2<sup>nd</sup> ed. New Delhi: Noble Medical Publishers; 2023.p-130-147.*