



A Deep Dive into Psychosocial Health among the Geriatric Population within the Rural Communities: Risk Insights and Associations

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ABSTRACT

Background: The well-known components that support physical and psychological health are included in the contemporary concept of psychosocial health. Most Geriatric people will have a serious health problem called psychosocial health at some point in their lives. Although mental health disorders account for around one-third of all Geriatric disabilities worldwide, they are frequently under-addressed in society. This study's goals included estimating the frequency of mental illness, describing its socio-demographic characteristics in the rural Geriatric population, and examining its relationships with other variables.

Methodology: A Community-based cross-sectional study was conducted on individuals aged more than 60 years with the help of a pre-designed Self-structured questionnaire form and results are analyzed using GAD 7 to assess Anxiety, PHQ 9 for assessing depression, and PSS 10 scale for assessing Stress and Barthel Index for assessing the activities of daily living. The results were analyzed based on the participant's perception of the Questions being asked.

Results: Males (n = 226) are more likely than females (n = 214) to experience greater anxiety, out of 440 study participants. The social well-being of married people (n = 278) is stated to be lower than that of single people (n = 162).

Conclusion: Age over 70, female gender, illiteracy, living in a joint family, middle and lower socioeconomic class, complete financial dependence, and having a bad and unfair relationship with family members were socio-demographic factors that were strongly associated with mental illness and statistically significant with $p < 0.05$.

Keywords: Anxiety Disorders, Psychological well-being, Standard of living, depressive disorders, and public health.

INTRODUCTION

Psycho-social health is the condition of the mental, emotional, social, and spiritual facets of social well-being. The burden of disease will increase globally by 6.2% in 2025 as a result of mental illnesses¹. When assessing a person's lifestyle, this four-dimensional phenomenon takes into consideration their social interactions, spirituality, emotional experiences, and analytical thinking.

Poor psychosocial health leads to mental impairment, which is a significant contributor to global function disability, the second main source of illness burden, and the sixth leading cause of disability-adjusted life². Health systems face a serious problem as a result, especially in low- and middle-income nations worldwide^{3,4}.

34% of geriatrics were believed to be affected, according to a recent systematic review⁵. A characteristic of managing mental health problems is that there is limited room for "quick fixes" with these problems and that remedies must be consistently used to be effective. As a result, establishing easily available and long-lasting community-wide support systems would be the ideal strategy for dealing with mental health issues.

The term vicarious trauma was first used to describe circumstances in which psychotherapists were impacted by extended contact with patients who had mental illnesses and displayed mental symptoms like those of psychological trauma⁶. Since then, the definition of the phrase has been expanded to encompass compassion for trauma survivors who are experiencing physical symptoms like appetite loss, irritability, exhaustion, and sleep problems. Given the horrific nature of the current circumstances, it is extremely plausible that vicarious trauma is happening in medical settings where people are being treated for affective and anxiety disorders that may be related to an underlying, protracted disease⁷.

Sociodemographic factors like gender, marital status, divorce or widowhood, lack of education, standard of living, occupation, socioeconomic status, childhood sexual abuse, menopause stage, age, social habits, dietary habits, sleep patterns, and level of physical activity all have an impact on psycho-social health. The effects of these elements, whether direct or indirect, can be seen in aspects of daily life such as loss of productivity, loss of focus, lack of energy, out-of-control emotions, difficulty relaxing, abnormal sleep patterns, and mental health problems. Including stress, anxiety, and depression, which, if left untreated, can result in chronic diseases. Its main



effects were subpar academic performance, bad peer relationships, substance abuse, and suicide attempts. Women in rural areas have also been demonstrated to be more impacted by these elements and circumstances.^{8-11.}

In addition to assessing the prevalence of functional disability among the geriatrics mental illness, this study will maintain the objectivity of mental disorders in relation to socio-demographic factors, explore the causes of mental illness, develop plans, strategies, and policies for mental health promotion and prevention, and provide a thorough description of mental health and social care programs in community-based settings.

Given that it is well-known that social stratification leads to all forms of inequality worldwide, there is an urgent need to address the issue of uneven access to healthcare^{12.} To facilitate the tracking of mental healthcare within the communities, it might also be necessary to incorporate a strong health management information system connected with mental health indicators^{13.} In order to determine the population's wellness based on psycho-social health and correlate the risk factors associated with psycho-social impairment, this study aims to evaluate the psycho-social status of community members, list the components of well-being, and provide a brief description of each component, explain the factors influencing the quality of life, identify various risks of psycho-social health and their impact on quality of life, and discuss the relationship between mental health and psycho-social wellbeing.

METHODOLOGY

For a 5-month study period (from May 2023 to September 2023), a community-based cross-sectional survey was conducted among individuals of more than 60 Years of age at and near Ramachandrapuram, Tapeswaram, Alamuru, and Valluru in the Mandapeta Region of the East Godavari District in Andhra Pradesh, India.

For a 95% confidence interval with a 5% margin of error, 440 samples are required. The inclusion and exclusion criteria are used to select each participant in the study, and the research has only begun with their informed consent. The information is then totaled and put through the proper statistical processes. The study recruited elders who crossed 60 years, from both genders, who had never previously experienced suicidal thoughts or any other mental health issues. Subjects with or at risk for psychiatric issues are not included in the study.

A self-structured form for data collection was created in both Telugu and English in order to obtain the necessary information. Materials and tools used in this study include scales of GAD-7 for assessing anxiety, PHQ-9 for assessing depression, PSS-10 for assessing stress, Barthel Index for assessing disability and mobility, and Folstein's scale for assessing Cognitive Impairment. These scales are freely accessible in the public domain and are the standard form of questionnaire; using them is not subject to any restrictions. The data collecting form is made up of four parts, including socio-demographic data on age, gender,

marital status, Type of family, number of family members, educational attainment, current and past social habits, financial dependence, relationship with the family members, sleep pattern, traumatic events, physical activity, and Leisure time activities.

The measurement of a person's life quality using information on their socio-demographic traits and psychosocial health outcomes. One's physical and mental health were assessed using the information gathered. The sample size for this study is 440 people who were completely selected based on their interests. A suitable statistical test was used after the data were imported into a Microsoft Excel sheet and analyzed using the United States IBM SPSS Statistics 21.0 edition. The statistics employed were simple logistic regression, the Chi-square test, and $P < 0.05$ were used to show the association between the data and other socio-demographic variables. The data were expressed as frequency and proportions.

Generalized anxiety disorder was assessed using a Short Form scale with 12 items, and the participants responded to 7 of them. The responses ranged from "Not at all" to "Several days," "More than half the days," and "Nearly every day."

Patient health questionnaire - 9 items with responses such as "Not at all," "Several Days," "More Than Half the Days," and "Nearly Every Day," with corresponding scores of "Not At All," "Several Days," "More Than Half the Days," and "Nearly Every Day." The perceived stress measure consists of 10 items with the following responses and corresponding scores: (Never = 0, Almost Never = 1, Sometimes = 2, Fairly Often = 3, Very Often = 4).

The DAS-21 (Depression, Anxiety, and Stress) scale has three subdivision responses for each of its seven items, which are as follows: Did not apply to me = 0, applied to me to some extent = 1, some of the time = 2, applied to me to a considerable degree or a good part of the time = 3, applied to me very much or most of the time = 4. GAD-7 score patterns range from 0–4 for very little anxiety to 5–9 for mild anxiety. 10–14: mild to moderate anxiety; 15–21: severe anxiety. PHQ-9 scores fall into the following categories: minimal depression (0–4), mild depression (5–9), moderate depression (10–14), fairly severe depression (15–19), and severe depression (20–27). The PSS-10 (Perceived Stress Scale) has three different score ranges: mild stress (0–13), moderate stress (14–26), and high stress (27–40).

RESULTS AND DISCUSSION

In all, 440 people participated in the study, of whom 214 (48.6%) were female and 51.36 % were male. The majority of the study participants were in the 60–70 age range. Literate persons outweighed illiterates (227, 51.59%) by a margin of 213 to 48.4%. The bulk of the study's participants (266, or 60.4%) lived with their spouses; those who had lost their partners came in second (139, or 31.59%).



Table 1: Socio-demographic details of Study Participants

Parameters	Frequency (n = 440)
Gender	
Male	226 (51.36%)
Female	214 (48.63%)
Age	
60-70 Years	246 (55.90%)
> 70 Years	194 (44.06%)
Relationship Status	
Living with the partner	266 (60.4%)
Divorced	35 (7.95%)
Single (Partner Died)	139 (31.59%)
Educational Details	
Illiterate	227 (51.59%)
Primary Schooling	83 (18.86%)
Secondary Schooling	45 (10.2%)
Higher Education	21 (4.77%)
Graduation	40 (9.09%)
Post-Graduation	24 (5.45%)
Social Habits	
No Habits	145 (32.95%)
Cigarette Smoker	131 (29.77%)
Alcoholic	62 (14.09%)
Alcoholic + Smoker	225 (51.13%)
Tobacco Chewing	54 (12.27%)
Family Size	
2 Members	210 (47.7%)
3 Members	105 (23.86%)
4 Members	75 (17.04%)
More than 4 Members	50 (11.36%)
Traumatic Events in the Past	
Yes	204 (46.36%)
No	236 (53.63%)
Type of Family	
Nuclear Family	390 (88.63%)
Joint Family	50 (11.36%)
Socioeconomic Status	
Lower Class	76 (17.27%)
Lower-Middle Class	89 (20.22%)
Middle Class	195 (44.31%)
Upper Middle Class	46 (10.45%)
Upper Class	34 (7.72%)
Physical Activity	
Sedentary	198 (45%)
Moderately Active	101 (22.95%)
Active	141 (32.04%)

According to the Revised Kuppaswamy Scale for the Determination of Socioeconomic Status, the majority of study participants (195, 44.31%) belong to the Middle Class, followed by the Lower Class (165, 37.5%). More people in the study population (225, 51.13%) were addicted to smoking, drinking, and chewing tobacco than non-drinkers (145, 32.95%). Having these propensities might cause the review populace to have a mental deterioration and furthermore loss of psychosocial prosperity.

Table 2: Distribution of Leisure Time Activities among the Geriatric Study Participants

Type of Leisure time activity	Males (n=226)	Females (n=214)	Total (n=440)
Do nothing (Sit Idle)	29 (12.83%)	15 (7%)	44 (10%)
Chit-chatting with Neighbors	29 (12.83%)	47 (21.96%)	76 (17.27%)
Watch YouTube Videos	60 (26.54%)	12 (5.60%)	72 (16.36%)
Play with children	4 (1.76%)	11 (5.14%)	15 (3.4%)
Gardening	8 (3.53%)	18 (8.41%)	26 (5.9%)
Reading Newspaper	47 (20.79%)	15 (7%)	62 (14.1%)
Watching TV Serials/News	30 (13.27%)	47 (21.96%)	77 (17.5%)
Spiritual/Religious Activities	19 (8.40%)	49 (22.89%)	68 (15.45%)

Table 3: Grading of activities according to the Barthel Index

Scoring Interpretation	Males (n=226)	Females (n=214)	Total (n=440)
Independent (>18)	107 (47.34%)	118 (55.14%)	225 (51.13%)
Moderately Disabled (15-17)	98 (43.36%)	62 (28.90%)	160 (36.36%)
Severely Disabled (<15)	32 (14.15%)	23 (10.74%)	55 (12.5%)

Table 4: Classification of Depression based on the PHQ-9 and DASS-21 Scores

Severity	Frequency (n =440)
No Depression (0-4)	121 (27.5%)
Mild (5-9)	91 (20.68%)
Moderate (10-14)	112 (25.45%)
Severe (15-19)	116 (26.36%)

Guys (Drunkards and smokers) are more dependent than contrasted with females (Tobacco Chewers). Most of the study Populace (248, 56.36%) had unfortunate associations with their relatives which could play a part in the scratching of the general mental prosperity of the subjects. Females are accounted for to be the most impacted people in the support of poor and unjustifiable connections due to the well-established rehearses which might appear to be odd to the next relatives. The vast majority of the study subjects (276, 62.7%) were reliant upon other relatives like their children, and are likewise the most impacted populace who are experiencing some psychological maladjustment that is causing a decrease in their psychosocial well-being. This might be credited to variables, for example, an Absence of sympathy from their relatives and the powerlessness of the relatives to invest some quality energy with the review populace.

The seriousness of the disability was surveyed by utilizing Barthel Index scoring, and most of the study populace (225, 51.13%) had the option to work autonomously and have a lot of adaptable versatility in their day-to-day living. The vast majority of the people were experiencing Periodic inadvertent bladder control, hardships during washroom visits, and required help during ascending steps.

Table 5: Classification of Anxiety based on the GAD-7 Scores

Severity	Frequency (n =440)
No Anxiety (0-4)	117 (26.59%)
Mild (5-9)	110 (25%)
Moderate (10-14)	101 (22.95%)
Severe (15-21)	112 (24.45%)

Table 6: Classification of Stress based on the PSS-10 Scores

Severity	Frequency (n =440)
No Stress	124 (28.18%)
Low Stress	100 (22.72%)
Moderately Stressed	95 (21.59%)
High Perceived Stress	121 (27.5%)

Table 7: Cognitive Impairment Status by Folstein’s Mini Mental Status Examination Scale

Level of Cognitive Impairment	Males (n=226)	Females (n=214)	Total (n=440)
Normal (≥24)	101 (44.69%)	91 (42.52%)	192 (43.63%)
Mild (20-23)	61 (26.99%)	41 (19.15%)	102 (23.18%)
Moderate (10-19)	57 (25.22%)	29 (13.55%)	86 (19.54%)
Severely Impaired (<10)	31 (13.71%)	31 (14.48%)	62 (14.09%)

Table 8: Mental Illness Distribution of the Study Population and their Association with Various Sociodemographic Factors

Variable	Mental Illness			p-value
	Present	Absent	Total	
Age				
61-70 Years	110	136	246	<0.003
>70 Years	91	103	194	
Total	201	239	440	
Gender				
Male	124	102	226	<0.004
Female	96	118	214	
Total	265	175	440	
Educational Status				
Illiterate	142	85	227	<0.005
Literate	94	119	213	
Total	236	204	440	
Socioeconomic Status				
Lower Class	74	91	165	<0.004
Middle Class	85	110	195	
Upper Class	23	57	80	
Total	182	258	440	
Financial Dependence				
Independent	94	70	164	<0.003
Dependent	184	92	276	
Total	136	304	440	
Relationship with the Family Members				
Poor	197	51	248	<0.002
Fair	47	47	94	
Good	87	11	98	
Total	331	109	440	

There isn't a lot of distinction between the people who aren't experiencing any kind of despondency (121, 27.5%) and the people who experiencing serious melancholy (116, 26.36%). The people who are experiencing all types of Melancholy (Low, Moderate, and Extreme) are near (319, 72.5%), and this is assessed utilizing PHQ-9 and DASS-21 Scales.

Most of the study population (323, 73.4%) are experiencing all types of Uneasiness Problems (Low, Moderate, and Extreme) contrasted with the review subjects who aren't experiencing any type of Tension (117, 26.6%), which was assessed utilizing the GAD 7 Survey scale.

Study subjects (121, 27.5%) were experiencing Extreme Pressure during their normal everyday exercises and 124 (28.18%) subjects announced that weren't confronting any Pressure related issues. Generally speaking 316 (71.8%) concentrate on subjects were supposed to be purportedly confronting various types of Pressure-related messes



during their lifetime. The outcomes were obtained in view of the reactions from the PSS-10 Scale.

Folstein's Mini Mental Status Examination results showed that 192 subjects (43.63%) had strong cognitive functionality, while the bulk of the study subjects (248, 56.36%) were stated to be experiencing a deterioration in cognitive functioning (Moderate and Severe).

Different mental illnesses like anxiety, stress, depression, and cognitive impairment are gathered together to assess the correlation between diverse mental illnesses. The study revealed that people older than 70 years old and men were more afflicted by the spectrum of mental illnesses than people in the 60–70 year age range and women, respectively. Many factors may be to blame for this, including the fact that men are more likely to become addicted to social drugs and experience higher levels of stress at work, in the home, and over their financial and family relationships.

Additionally, our study revealed that those who lack literacy are more likely to suffer from mental illnesses. This finding may be explained by a number of factors, including the inability to pay for better housing and food, the indifference or avoidance of family members, loneliness, and interpersonal conflicts.

Due to causes including insecurity, pessimism, physical disease, and an inability to adapt to the rapid social changes, people from lower and middle class families were more impacted by mental illness than those from upper class families. Those who don't have a deep, trusting relationship with their family members are more likely to suffer from mental illness than those who do.

CONCLUSION

This study reasoned that Socio-segment factors greatly affect one's Personal satisfaction regarding nervousness, discouragement, mental weakness, Level of physical work, and stress among the geriatric populaces of rustic networks, and these variables impact their psychosocial well-being. In like that, the commonness of handicap is viewed as high, by utilizing various scales of appraisal of the psychosocial status of a person. A relationship is likewise displayed with the thought of all the conceivable gamble factors, additionally tracked down that in a way the impact of endangers on the personal satisfaction of a person. These powerful intercessions are expected to diminish the psychological status of the geriatric population.

The survey uncovered the areas of strength between socio-demographic factors like Age >70 years, Lower socioeconomic status, illiteracy, relationship with relatives, monetary reliance, and the mental morbidity of the study subjects. Measures ought to be taken to help the elderly folks, lay out local area older social orders, advisory workplaces, and administrations to help the old. The succession of social mediation expected for the administration of the older mental issues

SHORTCOMINGS OF THE STUDY & RECOMMENDATIONS

Since it was a local area-based survey, we can firmly credit the outcomes to the overall provincial south Indian populace. We utilized different approved instruments to evaluate the mental disease. The review's limit was a portion of the people with mental sickness were rejected in view of their non-participation.

Certified social and rural level well-being activists and volunteers should be prepared to recognize the mental issues of old people and to likewise give guidance and treatment. It is notable that mental comorbidities unfavorably influence the personal satisfaction of the more established individual and result in co-morbid clinical ailments. A yoga and reflection program for the old must be carried out. Professional recovery to the old to carry on with monetary free life by giving less actual maintain sources of income like narrators, performers, teachers, and so forth. There are serious areas of strength to update the information and expertise of essential consideration specialists to analyze and treat gloom in patients looking for their assistance. Better mindfulness among essential considerations clinicians can bring about better discovery of cases and their administration.

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REFERENCES

1. Toselli S, Gualdi-Russo E, Marzouk D, Sundquist J, Sundquist K. Psychosocial health among immigrants in central and southern Europe. *The European Journal of Public Health*. 2014 Aug 1;24(suppl_1):26-30.
2. Rusk RD, Waters L. A psycho-social system approach to well-being: Empirically deriving the five domains of positive functioning. *The Journal of Positive Psychology*. 2015 Mar 4;10(2):141-52.
3. Sagar R, Dandona R, Gururaj G, Dhaliwal RS, Singh A, Ferrari A, Dua T, Ganguli A, Varghese M, Chakma JK, Kumar GA. The burden of mental disorders across the states of India: The Global Burden of Disease Study 1990–2017. *The Lancet Psychiatry*. 2020 Feb 1;7(2):148-61.
4. Amare T, Seifu N, Shewangzaw M. Functional disability and associated factors among patients with severe mental illness attending psychiatry outpatient unit at Ayder comprehensive specialized hospital, Mekelle, Ethiopia: a cross-sectional study
5. Sadath A, Kumar S, Mathew S. Sociodemographic predictors of psychiatric disability in India. *Journal of Psychosocial Rehabilitation and Mental Health*. 2017 Jun;4(1):29-33.
6. Balicer RD, Omer SB, Barnett DJ, Everly GS Jr. Local public health workers' perceptions toward responding to an influenza pandemic. *BMC Public Health*. 2006;6:99.



7. Barbisch D, Koenig KL, Shih FY. Is there a case for quarantine? Perspectives from SARS to Ebola. *Disaster Med Public Health Prep.* 2015;9:547–53.
8. Mangalesh S, Dudani S, Dave ND. Assessment of mental health in Indian medical students during the coronavirus disease-2019 pandemic. *Indian Journal of Social Psychiatry.* 2021 Jan 1;37(1):105.
9. Kamenov K, Mellor-Marsá B, Leal I, Ayuso-Mateos JL, Cabello M. Analysing psychosocial difficulties in depression: a content comparison between systematic literature review and patient perspective. *BioMed research international.* 2014 Jan 1; 2014.
10. Taylor S, Landry CA, Paluszek MM, Fergus TA, McKay D, Asmundson GJ. Development and initial validation of the COVID Stress Scales. *Journal of Anxiety Disorders.* 2020 May 1; 72:102232.
11. Sirey JA. The impact of psychosocial factors on experience of illness and mental health service use. *The American Journal of Geriatric Psychiatry.* 2008 Sep 1; 16 (9):703-5.
12. Kerbo HR. *Social Stratification and inequality: class conflict in historical, comparative, and global perspective.* 8th ed. McGraw-Hill Education 2011; Chapter 16
13. Semrau M, Alem A, Ayuso-Mateos JL, Chisholm D, Gureje O, Hanlon C, et al. strengthening mental health systems in low- and middle-income countries: recommendations from the Emerald programme. *BJPsych Open.* 2019; 5 (5):e73.
14. Srinivasan M, Reddy MM, Sarkar S, Menon V. Depression, Anxiety, and Stress among Rural South Indian Women—Prevalence and Correlates: A Community-Based Study. *Journal of neurosciences in rural practice.* 2020 Jan;11(01):078-83v
15. Mahajan PB, Rajendran PK, Sunderamurthy B, Keshavan S, Bazroy J. Analyzing Indian mental health systems: reflecting, learning, and working towards a better future. *Journal of Current Research in Scientific Medicine.* 2019 Jan 1;5 (1):4.
16. Babazadeh T, Sarkhoshi R, Bahadori F, Moradi F, Shariat F. Prevalence of depression, anxiety, and stress disorders in elderly people residing in Khoy, Iran (2014-2015). *Journal of Research in Clinical Medicine.* 2016 May 9; 4 (2):122-8.
17. Kader Maiden SF, Mohd Sidik S, Rampal L, Mukhtar F. Prevalence, associated factors and predictors of anxiety: a community survey in Selangor, Malaysia. *BMC psychiatry.* 2015 Dec; 15 (1):1-2.
18. Kader Maideen SF, Mohd. Sidik S, Rampal L, Mukhtar F. Prevalence, associated factors and predictors of depression among adults in the community of Selangor, Malaysia. *PloS one.* 2014 Apr 22; 9 (4):e95395.
19. Farooq S, Khan T, Zaheer S, Shafique K. Prevalence of anxiety and depressive symptoms and their association with multimorbidity and demographic factors: a community-based, cross-sectional survey in Karachi, Pakistan. *BMJ Open.* 2019 Nov 1;9(11):e029315.
20. Bonful HA, Anum A. Sociodemographic correlates of depressive symptoms: a cross-sectional analytic study among healthy urban Ghanaian women. *BMC public health.* 2019 Dec;19(1):1-9.
21. Poongothai S, Pradeepa R, Ganesan A, Mohan V. Prevalence of depression in a large urban South Indian population—The Chennai Urban Rural Epidemiology Study (CURES–70). *PloS one.* 2009 Sep 28;4(9):e7185.
22. Amu H, Osei E, Kofie P, Owusu R, Bosoka SA, Konlan KD, Kim E, Orish VN, Maalman RS, Manu E, Parbey PA. Prevalence and predictors of depression, anxiety, and stress among adults in Ghana: A community-based cross-sectional study. *PloS one.* 2021 Oct 8;16(10):e0258105.
23. Poongothai S, Pradeepa R, Ganesan A, Mohan V. Prevalence of depression in a large urban South Indian population—The Chennai Urban Rural Epidemiology Study (CURES–70). *PloS one.* 2009 Sep 28;4(9):e7185.
24. Gautham MS, Gururaj G, Varghese M, Benegal V, Rao GN, Kokane A, Chavan BS, Dalal PK, Ram D, Pathak K, Lenin Singh RK. The National Mental Health Survey of India (2016): Prevalence, socio-demographic correlates and treatment gap of mental morbidity. *International Journal of Social Psychiatry.* 2020 Jun;66(4):361-72.
25. van Assen MA, Helmink JH, Gobbens RJ. Associations between lifestyle factors and multidimensional frailty: a cross-sectional study among community-dwelling older people. *BMC geriatrics.* 2022 Dec;22(1):1-3.
26. Almhdawi KA, Alrabbaie H, Arabiat A, Alhammouri AT, Hamadne M, Obeidat D, Alazrai A, Jaber H, Almousa KM. Physicians' Health-Related Quality of Life and Its Associated Factors During COVID-19 Pandemic in Jordan: A Cross-Sectional Study. *Evaluation & the Health Professions.* 2022 Jan 18:01632787211068899.
27. Wajid S. Assessment of Health-related Quality of Life among Diabetic Outpatients at Warangal Region Telangana India-A Cross-sectional Study. *Asian Journal of Pharmaceutics (AJP): Free full-text articles from Asian J Pharm.* 2022 Jan 18;15(04).
28. Panahi R, Osmani F, Sahraei M, Ebrahimi S, Nehadghashti MS, Javanmardi E. Relationship of health literacy and quality of life in adults residing in Karaj, Iran. *Journal of Education and Community Health.* 2022 Feb 16;4(4):13-9.
29. Sapra A, Bhandari P, Sharma S, Chanpura T, Lopp L. Using generalized anxiety disorder-2 (GAD-2) and GAD-7 in a primary care setting. *Cureus.* 2020 May 21;12(5).
30. Jordan P, Shedden-Mora MC, Löwe B. Psychometric analysis of the Generalized Anxiety Disorder scale (GAD-7) in primary care using modern item response theory. *PloS one.* 2017 Aug 3;12(8): e0182162.
31. Plummer F, Manea L, Trepel D, McMillan D. Screening for anxiety disorders with the GAD-7 and GAD-2: a systematic review and diagnostic meta-analysis. *General hospital psychiatry.* 2016 Mar 1; 39:24-31.
32. Thombs BD, Benedetti A, Kloda LA, Levis B, Nicolau I, Cuijpers P, Gilbody S, Ioannidis J, McMillan D, Patten SB, Shrier I. The diagnostic accuracy of the Patient Health Questionnaire-2 (PHQ-2), Patient Health Questionnaire-8 (PHQ-8), and Patient Health Questionnaire-9 (PHQ-9) for detecting major depression: protocol for a systematic review and individual patient data meta-analyses. *Systematic reviews.* 2014 Dec;3(1):1-6.
33. Oei TP, Sawang S, Goh YW, Mukhtar F. Using the depression anxiety stress scale 21 (DASS-21) across cultures.



- International Journal of Psychology. 2013 Dec;48(6):1018-29.
34. Thomas K, Nilsson E, Festin K, Henriksson P, Lowén M, Löf M, Kristenson M. Associations of psychosocial factors with multiple health behaviors: A population-based study of middle-aged men and women. *International journal of environmental research and public health*. 2020 Jan;17(4):1239.
35. Alharbi E, Smith A. A review of the literature on stress and wellbeing among international students in English-speaking countries. *International Education Studies*. 2018 May 29;11(5):22-44.
36. Bystritsky A, Khalsa SS, Cameron ME, Schiffman J. Current diagnosis and treatment of anxiety disorders. *Pharmacy and Therapeutics*. 2013 Jan;38(1):30.
37. Hidaka BH. Depression is a disease of modernity: explanations for increasing prevalence. *Journal of affective disorders*. 2012 Nov 1;140(3):205-14.
38. Glover CM, Capuano AW, Wilson RS, Bennett DA, Barnes LL. Correlates perceived stress among community-dwelling older African Americans. *PloS one*. 2021 Dec 1;16(12): e02607.
39. Demerdash HM, Omar E, Arida E. Evaluation of copeptin and psychological stress among healthcare providers during COVID-19 pandemic. *Egyptian Journal of Anaesthesia*. 2021 Jan 1;37(1):227-33.
40. Dunstan DA, Scott N. Norms for Zung's self-rating anxiety scale. *BMC psychiatry*. 2020 Dec;20(1):1-8.
41. Tsuji T, Miyagi Y, Kanamori S, Hanazato M, Kondo K. Community-level sports group participation and older individuals' depressive symptoms. *Medicine and science in sports and exercise*. 2018 Jun;50(6):1199-05.
42. Zhang L, Wu L. Community Environment Perception on Depression: The Mediating Role of Subjective Social Class. *International Journal of Environmental Research and Public Health*. 2021 Jan;18(15):8083-8.
43. Maynard M, Andrade L, Packull-McCormick S, Perlman CM, Leos-Toro C, Kirkpatrick SI. Food insecurity and mental health among females in high-income countries. *International journal of environmental research and public health*. 2018 Jul;15(7):1424-9.

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