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ORIGINAL ARTICLE

GENERALIZED ANXIETY DISORDER AND ITS ASSOCIATED FACTORS AMONG FEMALE STUDENTS

Dr. Umar Sadiqⁱ, Dr. Amirah Zafarⁱⁱ, Dr. Aziz Subhaniⁱⁱ, Dr. Saad Kamal Akhtar^{iv}, Shakeela Rasheed^v

Correspondence Dr. Amirah Zafarⁱⁱ

ABSTRACT

Background and Aim: To determine the Generalized Anxiety Disorder and its association with factors like hormonal changes, chronic illness among female students of university.

Methodology: Perceptions and preferences of Female Students were determined in well-organized Institute (Superior University) with ages between 16-28 years old of all disciplines. Electronic self-administrated questionnaires consisting of two parts; demographics factors (Age, Gender, Designation, education Discipline, socioeconomic status and medical history) and Generalized Anxiety Disorder GAD-7, were then filled by the participated female students with sample size of 231. Then the perceptions and preferences were evaluated using a pre validated questionnaire (GAD-7) from previous research article.

Results: A total of 231 responses were returned. All respondents were females. About (62.7%) of total respondents reported feeling nervous, anxious, or on edge to some degree; 10% of respondents said that they experience this feeling nearly every day. A significant proportion of respondents reported mild to moderate anxiety levels. The mean score of anxiety scale was 3.87±3.32 with minimum and maximum score of 0 and 19. The study findings give us a better considerate that Traumatic disorders (39.4 %), hormone issues (45.2%), were the main causes of anxiety. 39.8% indicated that they had a family history of anxiety. Overall, moderate to high levels of anxiety among the participants were observed.

Conclusion: These results illustrate the need to devise treatment strategies to alleviate symptoms of generalized anxiety and reduce the prevalence of Generalized Anxiety Disorder among students. It is suggested that to decrease the level of anxiety among university students, regular counseling sessions should be implemented.

The Ziauddin University is on the list of <u>I4OA</u>, <u>I4OC</u>, and <u>JISC</u>.

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Keywords: Generalized anxiety disorder, female, university students, associated factors, counselling sessions, anxious, nervous, respondents.



Introduction

General Anxiety Disorder (GAD) was introduced as a latent category into 1980. When anxiety neurosis divided into disorders named as panic disorder and Generalized Anxiety Disorder and the Generalized Anxiety Disorder was appeared as a diagnostic category. One of the many signs of neurasthenia that vaguely described as illness is generalized anxiety disorder and should only be treated if there is no other anxiety condition¹. GAD patients are at an elevated risk of suicide, cardiovascular events and death. Primary care physicians can diagnose and treat most patients². The residual status of generalized anxiety disorder not discontinued and was ruining our society badly.

A depressive disorder is an illness that involves the body, mood, and thoughts. It affects the way a person eats and sleeps, the way one feels about oneself, and the way one thinks about things²⁴. Anxiety and Depression are the most common mental disorder and biggest factors of impairment among Primary care as well as medical specialty population over the worldwide. Individuals who meet Generalized Anxiety Disorder and any other anxiety disorder parameters may be diagnosed with both conditions. When peoples are appearing to think about issues that are connected to anxiety provoking situation or a few things that make them nervous, then people experienced regular anxiety. While, People suffering with Generalized Anxiety Disorder, tends to be described as "all the time worrying about everything"³.

The feeling of unease (excessive worries) that can be mild and severe, such as anxiety or fear is generalized anxiety disorder. Everybody has feelings of fear for example a person might become nervous and anxious about sitting an exam or getting a medical assessment and a job interview. This feeling of anxiety can be normal and natural at times like these. Yet, some people have trouble managing their worries and they have a more intense feeling of fear. Their anxiety is more persistent, and can affect their everyday lives. Furthermore, this disorder shows around the middle age. It is found that many of those diagnosed suffered with symptoms for years before seeing a doctor and then being properly diagnosed.

Generalized Anxiety Disorder gradually progresses, with the greatest risk between childhood and middle age. It was described as an unreasonable and uncontrollable concern over a truthful situation. Anxiety disorder raises a big public health problem. If left untreated, Generalized Anxiety Disorder tends to an extremely severe condition and can lead to other conditions such as depression. Generalized anxiety disorder is marked by persistent, non-specific and difficult in managing worry. Academic pursuits take a heavy toll on the mental capacities of all students and medical students are more prone to depression than their non-medical peers. Female students can be particularly vulnerable; in a study among medical students in Shiraz, Islamic Republic of Iran, women were reported to be more anxious, phobic and depressed than men²⁵. GAD (generalized anxiety disorder) prevalence is more severe among women (6%) than man (3%). The frequency of anxiety disorder in woman is significantly greater than man. Females showed more anxiety than males, and minority tribal members showed more anxiety than majority tribal members. Two of the most familiar anxiety disorder are panic disorder (PD) and generalized anxiety disorder (GAD), with an incidence rate of 0.8-2.7% and 1.0-3.7% respectively in the general population over 12 months⁵.

Generalized Anxiety Disorder occurs as a multi-factorial stress-related anxiety or depression arising from both distal and proximal factors, some of which can be modifiable by intervention in the health care. Social anxiety disorder usually began before the age of 18 years; one study found that nearly 80% of individuals with diagnosis of the condition encountered before the age of 18 years. However, whether social anxiety disorder onset occurs more frequently with puberty or has been addressed earlier in growth⁶.

The objective of my study is to determine the Generalized Anxiety Disorder and its association with factors like hormonal changes, chronic illness and traumatic conditions among female students of university.

Rationale of Study

Anxiety is a generalized mood condition that occurs without an identifiable triggering stimulus,

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while many symptoms of depression include, persistent sad, anxious, or "empty" feelings, feelings of hopelessness, feelings of guilt, worthlessness and/or helplessness, irritability, restlessness, and loss of interest in activities or hobbies once pleasurable. All these conditions create a gap between the students and institutions of learning.

1. The university counselors, practitioners, and public health policymakers should address these risk factors in trying to facilitate a student-friendly environment that protects against mental health problems among them.

2. By making such mental health policies on priority will save the future generation.

Methodology

It was a Descriptive study conducted in six months.

Inclusion Criteria

- 1. University Females students were included.
- 2. Age 16 and above were included.
- 3. Age limit 16 28 years' old
- 4. All Allied health disciplines were included in the study.

Exclusion Criteria

- 1. Any past history of trauma was not included.
- 2. Male Students were not included in the study.

Sample size was calculated by following formula is 231.

Convenient sampling technique was used and Participants willingly filled the asked questionnaire. GAD-7 Scale was used to measure the Level of GAD. Data analysis was done by SPSS version 22. Descriptive data was represented as numbers and percentages, for categorical variables, frequency was calculated while for continuous variables.

Ethical Consideration

This study was not violating any medical ethics. Approval from ethical committee of superior university Lahore campus was ensured. Every step was taken to ensure the privacy & confidentiality of the participants. The safety of collected data was ensured. It was making certain that this concerned study was not affecting the patient's ethical values as researcher followed all the professional code of conducts. Data was taken after an informed consent signed by the participants and the females who was conducting in this study. This informed consent contained the topic and objectives of the study moreover it was mentioned that the collected data was remain confidential and was be used for the research purpose along with other ethical considerations.

Outcome Measures

A total of 231 responses were returned. All respondents were females. About (62.7%) of total respondents reported feeling nervous, anxious, or on edge to some degree; 10% of respondents said that they experience this feeling nearly every day. A significant proportion of respondents reported mild to moderate anxiety levels. The mean score of anxiety scale was 3.87 ± 3.32 with minimum and maximum score of 0 and 19. The study findings give us a better considerate that Traumatic disorders (39.4 %), hormonal issues (45.2%), were the main causes of anxiety. 39.8% indicated that they had a family history of anxiety. Overall, moderate to high levels of anxiety among the participants were observed.

Discussion

The aim of discussion is to analyze outcomes in the context of current psychiatric condition of Generalized Anxiety Disorder in descriptive manner. GAD is one of the most common disorders of anxiety and can lead to other significant issues, such as extreme depression. To solve this problem and to improve the quality of life, early detection is essential. The GAD-7 scale, created in 2006 by Spritzer and colleagues⁷, is highly recommended in various disciplines as a reliable method for screening GAD and assessing its severity. Because in some previous papers (13), the GAD-7 scale was used as a tool for evaluating GAD and determining its prevalence in a student



sample at the Superior University of Lahore. In particular, to our understanding, this is the first research from Lahore to evaluate the prevalence of GAD among female students using this version of the questionnaire.

Factors Causing Generalized Anxiety Disorder	(Yes) Frequency	Percentage	(No) Frequency	Percentage
Do you have any hormonal problem?	110	45.2%	121	54.8%
Do you have any long-term disease and chronic illness?	44	19.0%	187	81.0%
Do you have any history of self-harm?	35	15.2%	196	84.8%
Do you have social connection and environmental threat	ts? 50	21.6%	181	78.4%
Do you have habit of smoking, alcohol, drugs?	6	2.6%	225	97.4%
Do you suffer any traumatic condition?	91	39.4%	140	60.6%
Do you have ethnicity issue?	17	7.4%	214	92.6%
Do you have good relationship with your family?	213	92.2%	18	7.8%
Anxiety disorder tends to run in the family	92	39.8%	139	60.2%

Table-1 Factors causing Generalized Anxiety Disorder.

Previous research has shown that an increased prevalence of anxiety among university students is expected¹⁴. There are many factors that can explain this study i.e. socio-demographic, socio-economic and psychopathology factors. This study found a high prevalence of mild-to-moderate GAD among these students (54.5%, m = 231)¹⁵. The mean total score on the GAD-7 was 3.87±3.32 (mild anxiety), which was also consistent with previous studies^{8, 9, 10}. Our results indicate the following distribution of scores according to GAD-7 severity cut-offs: no anxiety (4.8%), mild anxiety (37.7%), moderate anxiety (57.6%), and severe anxiety (0%).

Generalized Anxiety Disorder	Not at all	Several days	More than half the days	Nearly every day
Feeling nervous, anxious or on edge	86 (37.2%)	94 (40.7%)	28 (12.1%)	23 (10%)
Not being able to stop or control worrying	60 (26%)	106 (45.9%)	31 (13.4%)	34 (14.7%)
Worrying too much about different things	39 (16.9%)	88 (38.1%)	37 (16%)	67 (29%)
Trouble relaxing	78 (33.8%)	88 (38.1%)	42 (18.2%)	23 (10%)
Being so restless that it is hard to sit still	72 (31.2%)	78 (33.8%)	37 (16%)	44 (19%)
Becoming easily annoyed or irritable	77 (33.3%)	75 (32.5%)	40 (17.3%)	39 (16.9%)
Feeling afraid as if something awful might happen	78 (33.8%)	94 (40.7%)	25 (10.8%)	34 (14.7%)

Table-2 Generalized Anxiety Disorder

Questionnaires' first question based on hormonal problems of the female. In the light of previous researches, it is possible that pre-existing abnormalities might pre-dispose Generalized Anxiety Disorder or. However, it is evident from Pigott study (2003) that a risk factor has a more precise effect on the severity of symptoms in GAD is hormonal cycle for female reproduction. Generalized Anxiety Disorder was significantly correlated with Estriol. The adverse direction of this relationship suggested that higher levels of Generalized Anxiety Disorder were correlated with lower Estriol levels¹⁶.

Level of Anxiety	Frequency	Percentage
No Anxiety	11	4.8
Mild Anxiety	87	37.7
Moderate Anxiety	133	57.6
Total	231	100.0

Table-3 Level of Anxiety

The females with ratio of 15.2% have history of self-harm. In Brazil, reports of past-year suicide attempts in public schools (12-14 years old) and in Greater São Paulo (15-18 years old) were 6.7% and 10 %, respectively 17,18,19,23. Another study in the state of Sergipe recorded a 6 % prevalence rate of suicide attempts in adolescents aged 13 to 18 years. The variations between the results of stud-



Minimum	Maximum	Mean	SD
0	19	3.87	3.32

Table-4 Score of Anxiety Scale

Does each GAD-7 problem involve the distribution of students as approximately 68 % of total respondents reported feeling to some degree "nervous, anxious, or on the edge", with 10 % saying they experience this feeling "nearly every day". 29 % students reported the feeling of "worrying too much" about different things while 19% reported that it's difficult for them to sit still. Some studies observed comparable rates across all questions of screening scale of Generalized Anxiety Disorder, which is consistence with our studies^{8,11,12}.

Conclusion

In our research, it was concluded that under-graduate female students (16-19, 20-24) age group with middle socioeconomic status are more anxious and nervous, the factor responsible for the anxiety is hormonal problems, chronic illness and traumatic conditions. Generalized Anxiety Disorder has a relation with those females who have a strong family history of anxiety. These results illustrate the need to devise treatment strategies to alleviate symptoms of generalized anxiety and reduce the prevalence of Generalized Anxiety Disorder among female students. It is suggested regular counseling sessions should be implemented to decrease the level of anxiety among university students.

Reference

- [1] Crocq M-A. The history of generalized anxiety disorder as a diagnostic category. Dialogues Clin Neurosci. 2017;19(2):107-16.
- [2] Generalized Anxiety Disorder.2019;170(7):ITC49-ITC64.
- [3] Gale C, Davidson O. Generalised anxiety disorder. BMJ. 2007;334(7593):579-81.
- [4] Newman MG, Przeworski A. The increase in interest in GAD: Commentary on Asmundson & Asmundson. J Anxiety Disord. 2018;56:11-3.
- [5] Moreno-Peral P, Conejo-Cerón S, Motrico E, Rodríguez-Morejón A, Fernández A, García-Campayo J, et al. Risk factors for the onset of panic and generalised anxiety disorders in the general adult population: a systematic review of cohort studies. J Affect Disord. 2014:168:337-48.
- [6] Zhang X, Norton J, Carrière I, Ritchie K, Chaudieu I, Ancelin ML. Risk factors for late-onset generalized anxiety disorder: results from a 12-year prospective cohort (the ESPRIT study). Transl Psychiatry. 2015;5(3):e536.
- [7] Spitzer RL, Kroenke K, Williams JBW, Löwe B. A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. Archives of Internal Medicine. 2006;166(10):1092-7.
- [8] Alatawi A, Alghamdi A, Albalwi A, Altayar M, Jalal M, Frah E. Prevalence of Generalized Anxiety Disorder (GAD) Among Saudi Medical Students and Associated Risk Factors. International Journal of Medical Research & Health Sciences. 2020;5:1-9.
- [9] Auerbach RP, Alonso J, Axinn WG, Cuijpers P, Ebert DD, Green JG, et al. Mental disorders among college students in the World Health Organization world mental health surveys. Psychol Med. 2016;46(14):2955–2970.



- [10] Salem GM, Allah MBA, Said RM. Prevalence and predictors of depression, anxiety and stress among Zagazig University students. Med J Cairo Univ. 2016;84(2):325–334.
- [11] Mahmoud I, Saravanan C. Prevalence of Mental Disorders and the Use of Mental Health Services among the Adult Population in United Arab Emirates. Asian J Epidemiol. 2020;13(1):12–19.
- [12] Al Bahhawi T, Albasheer OB, Makeen AM, Arishi AM, Hakami OM, Maashi SM, et al. Depression, anxiety, and stress and their association with khat use: a cross-sectional study among Jazan University students, Saudi Arabia. Neuropsychiatr Dis Treat. 2018; 14:2755.
- [13] Ahulu LD, Gyasi-Gyamerah AA, Anum A. Predicting risk and protective factors of generalized anxiety disorder: a comparative study among adolescents in Ghana. International Journal of Adolescence and Youth. 2020;25(1):574-84.
- [14] Vijayakumar L, Phillips MR, Silverman MM, Gunnell D, Carli V. Suicide, In. In: Patel V, Chisholm D, Dua T, Laxminarayan R, Medina-Mora ME, editors, editors. Disease control priorities. 3rd ed. Washington: World Bank; 2016. pp. 163–81.
- [15] Ferrey AE, Hughes ND, Simkin S, Locock L, Stewart A, Kapur N, et al. The impact of self-harm by young people on parents and families: a qualitative study. BMJ Open. 2016;6:e009631.
- [16] McKinnon B, Gariépy G, Sentenac M, Elgar FJ. Adolescent suicidal behaviours in 32 low-and middle-income countries. Bull World Health Organ. 2016;94:340–50F.
- [17] Simioni AR, Pan PM, Gadelha A, Manfro GG, Mari JJ, Miguel EC, et al. Prevalence, clinical correlates and maternal psychopathology of deliberate self-harm in children and early adolescents: results from a large community study. Revista brasileira de psiquiatria (Sao Paulo, Brazil: 1999). 2018;40(1):48-55.
- [18] Nakar O, Brunner R, Schilling O, Chanen A, Fischer G, Parzer P, et al. Developmental trajectories of self-injurious behavior, suicidal behavior and substance misuse and their association with adolescent borderline personality pathology. *J Affect Disord*. 2016; 197:231–8.
- [19] Hu J, Dong Y, Chen X, Liu Y, Ma D, Liu X, et al. Prevalence of suicide attempts among Chinese adolescents: a meta-analysis of cross-sectional studies. *Compr Psychiatry*. 2015; 61:78–89.
- [20] Martel MM, Pan PM, Hoffman MS, Gadelha A, Rosario MC, Mari J, et al. A general psychopathology factor (p-factor) in children: Structural model analysis and external validation through familial risk and child executive function. *J Abnorm Psychol.* 2017; 126:137–48.
- [21] Odgers CL, Donley S, Caspi A, Bates CJ, Moffitt TE. Living alongside more affluent neighbors predicts greater involvement in antisocial behavior among low-income boys. *J Child Psychol Psychiatry*. 2015; 56:1055–64.
- [22] Ferrey AE, Hughes ND, Simkin S, Locock L, Stewart A, Kapur N, et al. The impact of self-harm by young people on parents and families: a qualitative study. *BMJ Open*. 2016;6:e009631.



- [23] Beiter R, Nash R, McCrady M, Rhoades D, Linscomb M, Clarahan M, et al. The prevalence and correlates of depression, anxiety, and stress in a sample of college students. J Affect Disord. 2015; 173:90-96.
- [24] National Institute of Mental Health. Depression: A Treatable Illness. NIH Publication No. 03-5299. Printed March 2003 Reprinted December 2004. [Online]. [Accessed on 17th December, 2005]. Available from URL: http://menanddepression.nimh.nih.gov/infopage.asp?id=15.
- [25] Ahmadi J, Benrazavi L, Ghanizadeh A. Substance abuse among contemporary Iranian medical students and medical patients. Journal of nervous and mental disease, 2021, 189(12):860-1.

¹Associate Professor, Physiotherapy CMH Medical College & IOD, Lahore (0000-0001-9051-3552) ¹⁸Senior Lecturer, Physiotherapy CMH Medical College & IOD, Lahore (0000-0003-1362-6830) ¹⁸Clinical Physiotherapist, Superior University, Lahore (0000-0001-6444-7125) ¹⁹Physiotherapist, THQ Hospital, Muridkey (0000-0002-5115-614X) ¹Medical Imaging Technologist CMH Medical College, Lahore (0000-0002-3538-3764)