General Anxiety Disorder and Co-morbidity with Depression

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Abstract

Generalized Anxiety Disorder (GAD) and Major Depressive Disorder have been known as having a high rate of co-morbidity, ranging from 40% to 98% in treatment studies. Models have been put forth to explain this high rate of co-morbidity due to various factors such as family, environment, personality, physical health and gene factors. The present study examined the level of GAD, co-morbidity with Depression, and gender difference in generalized anxiety disorder and depression; it employed the Patient Health Questionnaire (PHQ-9-Depression Severity Scale, Spitzer, et al., 1999) on 100 patients with GAD diagnosed admitted in Hospital and 100 normal people not having GAD but shared demographic variables (sex, age, etc.) with an equal number of male and female. Results highlighted the positive relationship between levels of anxiety and depression. Results evinced the need for psychological care for a person living with GAD as their burden was coupled with depression.

Keywords: Anxiety, depression, comorbidity, environment, personality.

Introduction: Generalized Anxiety Disorder (GAD) is defined as excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (APA, 2013). In generalized anxiety disorder, the anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning. GAD is characterized by worries about possible negative outcomes in the future (Dugas, Gagnon, Ladouceur, & Freeston,1998b).

Depression has been distinguished from anxiety by the experience of loss of pleasure, thoughts of personal loss and failure, and dysphoric mood (Clark, Beck, &

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Beck, 1994), while anxiety has been distinguished by threat-related thoughts, subjective anxiety, worry, and tension (Clark et al., 1994). Depression (major depressive disorder) is extreme sadness can lasts more than days and interferes daily activities with physical symptoms (APA, 2013). It may cause the individual clinically significant distress or impairment in social, occupational, or other important areas of functioning; and the symptoms must also not be a result of substance abuse or another medical condition (Truschel, 2020).

GAD had a combined lifetime prevalence of 3.7% (0.1%), 12-month prevalence of 1.8% (0.1%), and 30-day prevalence of 0.8% (APA, 2013). Prevalence estimates varied widely across countries, with lifetime prevalence highest in high-income countries (5.0%), lower in middle-income countries (2.8%), and lowest in low-income countries (1.6%). Generalized anxiety disorder typically begins in adulthood and persists over time, although onset is later and clinical course is more persistent in lower-income countries. Lifetime co-morbidity is high, about 81.9%, particularly with mood at 63.0% (Ruscio, Hallion, Lim, Aguilar-Gaxiola, Al-Hamzawi, Alonso, Jordi, Andrade, Borges, Bromet, Bunting, Caldas de Almeida, Florescu, Girolamo, Gureje, Haro, & Yanling, 2017).

Women are 2-3 times more likely than men to meet lifetime criteria for Generalized Anxiety Disorder (GAD); having more somatic complaints, fatigue and muscle tension than men; the lifetime prevalence rate of Generalized Anxiety Disorder is between 5% and 6% in which women were reported to have an increased rate of GAD in comparison to men. GAD is reported as the second most common psychiatric disorder after depression in a primary setting. In GAD, around 90% of the individuals have comorbid psychiatric illness in which mood disorders is the most common lifetime comorbid disorders that the GAD patient acquired. GAD is also comorbid with other anxiety disorders like Panic Disorder and Social Anxiety Disorder (Jalnakpurkar, Pigott, & Allen,2018).

Studies have shown that there will be increased mental health problems when there is an outbreak of infectious diseases and that females will be more prone than males. Hou and colleagues (2020) investigated gender differences of depression and anxiety and explored the associated factors during the Covid-19 epidemic among Chinese social media users. They had recruited 3088 participants through social media in China. They conducted the study using the socio-demographic variables, COVID-19 epidemic-related questions, the 2-item Patient Health Questionnaire (PHQ-2), and the 2-item Generalized Anxiety Disorder Scale (GAD-2), the Chinese version of the 10-item Connor-Davidson Resilience Scale. The study revealed that the total prevalence of depression and anxiety was 14.14%and 13.25% respectively. Females were

experiencing more severe stress and anxiety symptoms, while males showed better resilience to stress.

The study provided that in 37% of depression cases, Anxiety began before or concurrently; whereas in 32% of anxiety cases, depression began before or concurrently. 72% of lifetime anxiety cases had a history of depression, but 48% of lifetime depression cases had anxiety (Moffitt, Harrington, Caspi, Kim-Cohen, Golberg, Gregory & Poulton, 2007).

Generalized anxiety disorder has high rates of comorbidity such as major depressive disorder and dysthymia. In the study of the comorbidity of Generalized anxiety disorder, evidence shows that generalized anxiety disorder and major depressive disorder have a shared genetic diathesis (Noyes & Russell 2001), females are more likely than males to experience an anxiety disorder (Yonkers & Gurguis, 1995), the prevalence rates were also higher in women than men for each anxiety disorder examined, including generalized anxiety disorder (Kessler, Mc Gonagle, Zhao, Nelson, Hughes, Eshleman, Wittchen & Kendler, 1994) and a previous investigation found its association with depression (Lewinsohn, Roberts, Seeley, Rohde, Gotlib & Hops, 1994).

Generalized Anxiety Disorder (GAD) is a highly prevalent and frequently comorbid diagnosis with Depression as a majority of individuals with MDD report a lifetime history of one or more anxiety disorders (Fava, et al., 2000; Kessler, et al., 1996). GAD in particular is highly comorbid, with 60–70% having a lifetime history of MDD (Carter et al., 2001). MDD and GAD are accompanied by overlapping, perhaps indistinguishable genetic liabilities (Hettema, Neale, Myers, Prescott & Kendler 2006), and several shared symptoms such as fatigue, difficulty concentrating, sleep disturbance, and agitation (Zimmerman & Chelminski, 2003). Across all psychiatric disorders, comorbidity is the rule, which is the case for anxiety and depressive disorders, as well as their symptoms. Concerning major depression, a worldwide survey reported that 45.7% of individuals with lifetime major depressive disorder had a lifetime history of one or more anxiety disorders.

Anxiety and depressive disorders are among the most common psychiatric illnesses; they are highly comorbid with each other, and together they are considered to belong to the broader category of internalizing disorders. Based on statistics from the Substance Abuse and Mental Health Services Administration, the 12-month prevalence of major depressive disorder in 2017 was estimated to be 7.1% for adults and 13.3% for adolescents (Kalin, 2020). Data for anxiety disorders are less current, but in 2001–2003, their 12-month prevalence was estimated to be 19.1% in adults, and 2001–2004 data estimated that the lifetime prevalence in adolescents was 31.9% (NIMH). Both anxiety and depressive disorders are more prevalent in women, with an

approximate 2:1 ratio compared with men during women's reproductive years (Kalin, 2020).

Across all psychiatric disorders, a worldwide survey reported that 45.7% of individuals with lifetime major depressive disorder had a lifetime history of one or more anxiety disorders (Kessler et al., 2015), commonly coexist during the same time frame; 41.6% of individuals with major depression also had one or more anxiety disorder over the same; and anxiety disorders, the lifetime comorbidity with depression is estimated to range from 20% to 70% (Dunner, 2001), that 53% of the patients with major depression had significant anxiety (Hettema et al 2006); and depression measure explained 44% of the variance in anxiety measures (Menza, Doreen, Robertson-Hoffman & Bonapace 1993).

Objectives:

Much research has been done on anxiety but comorbidity is underestimated, and they are not yet done in the targeted population of the study. On these counts, to meet the research gap, the present study framed the following objectives:

1) To determine gender differences in GAD and depression among the samples.
2) To determine illness differences in GAD and depression among the samples.
3) To examine the relationship between GAD and Depression.
4) To study any prediction of Depression on GAD.

Hypothesis

To meet the objectives framed for the present study, the following hypotheses were outlined, as follow:

1) Females will have a higher GAD and Depression than male samples among the participants.
2) Patients with GAD will have higher depression than patients without GAD.
3) GAD and Depression will have a significant positive relationship.
4) A significant prediction of depression on GAD was expected.

Methodology

The methodology followed in the study is presented below:

Sample: 200 samples consisting of two groups comprised of 100 patients with GAD diagnosed admitted to the Psychiatric Ward, Government Hospital located in Aizawl, and 100 normal persons not having GAD were selected from the same hospital where the representatives of the patients with GAD were drawn, both groups shared

demographic variables (sex, age, etc.) with an equal number of males and females, the age range was 25 to 50 years of age. Equal gender representation in both patients with GAD and Patients without GAD was there for comparison. Sample were selected as far as possible using random sampling procedure.

Tools used: *The study used the following tools for psychological evaluation of the study-*

1) The socio-demographic profiles: *constructed by the researcher (Biaknungi, 2021), and consists of the general profiles including age, gender, address, type of illness, onset time of illness, any other illness with onset, treatment history, etc to tap the subject's information which can be utilized for cross-checking of the true representation of the sample and to get any further relevant information.*
2) Patient Health Questionnaire (PHQ-9: *Spitzer, et al., 1999): It is a diagnostic instrument for common mental disorders, which scores each of the 9 DSM-IV criteria as "0" (not at all) to "3" (nearly every day), contained nine-items and having Cronbach's alpha of 0.89 among primary care patients. It is one of the most validated tools in mental health and can be a powerful tool to assist clinicians in diagnosing depression and monitoring treatment response.*
3) The Generalized Anxiety Disorder Assessment (*GAD-7: Spitzer et al., 2006*) *which measures the generalized anxiety disorder across various settings and populations, it has excellent internal consistency, scored on a four-point Likert scale (0–3) with total scores ranging from 0 to 21 with higher scores reflecting greater anxiety severity.*
4) Informed Consent Form (Biaknungi, 2022) *It was constructed by the researcher to get written consent from the sample after making them understand the purpose, activities to be done, duration of time, voluntary participation, etc.*

Research Design: The design of the present study was a 2 x 2 factorial design which represents 2 illnesses (patients with GAD and Patients without GAD) and 2 genders (male and female) for comparing on GAD and Depression.

Procedures: The researcher prepared a specific proforma for collecting demographic details of participants used for the present study, selected through the multi-stage sampling procedures Firstly patients with GAD were selected from the registered patients of the Psychiatric ward of the Government hospital in Aizawl. Secondly, patients without GAD were selected from the patients admitted to the government hospital in Mizoram with equal representation of males and females and also equally matched with the patients with GAD, and the selection was done following a random sampling procedure as far as possible. Then, the administration of the psychological scales and

interviews was conducted by strictly following APA research ethics (2000, 2016) and the prescribed manual of the tests; all doubts were clarified, and confidentiality was assured to be maintained.

Results: The raw data was checked for missing entries and outliers, then again checked for applicability of the selected scales on normality, linearity, homogeneity and reliability. The scales were found trustworthy for use in the target population (á =.89; .83), Skewness and kurtosis showed normality range from -1.02 to .51, and homogeneity was found (Levene's Test ='00; .00) significant for both scales which evinced that the parametric statistics may be used for analysis. Pearson's correlation revealed the correlation between Gad and depression was a Positive significant relationship (á =.89**). Two-way ANOVA results revealed the significant effect of gender on depression (45%) and GAD (9%), with depression prediction on anxiety (28%).

Table: showing Mean, SD, kurtosis, skewness, reliability, homogeneity, correlation and ANOVA on Depression and GAD for the sample.

Illness	Gender	Depression				GAD			
		Mean	SD	kurtosis	skewness	mean	SD	kurtosis	Skewness
GAD Patients	Female GAD	27.3	2.93	-0.83	-0.22	6.85	2.86	-0.36	0.49
	Male GAD	22.26	2.89	-0.49	-0.13	6.71	2.67	-0.11	0.48
Non-GAD patients	Female Non-GAD	20.5	2.67	0.07	-0.15	5.55	2.07	-0.16	0.37
	Male Non-GAD	15.56	2.47	-0.49	0.51	4.84	1.93	0.43	0.48
Total female scored		24,78				6.78			
Total Male scored		18.03				5.2			
Total score GAD patients		23.9				6.2			
Total Non-GAD patients		18.91				5.17			
Reliability		0.89				0.83			
Homogeneity (Brown Forsythe)		0				0			
Pearson's Correlation between depression and GAD						r=.26**			
GAD prediction on Depression (simple regression)						F=. 29.14**; R^2=.09			
ANOVA	Gender	F=332; eta sq= 45**				F=42.81; eta sq=.09**			
	Illness	F=131.82; eta sq= 28**				F=25; eta sq=.000 NS			

Discussion: The results illustrated that females scored higher than males, and patients with GAD scored higher than non-GAD patients on anxiety and depression which invites to accept the first hypothesis and second hypotheses; it has conformation findings from earlier research that females are more likely than males to experience an anxiety disorder (Yonkers & Gurguis, 1995). Pearson's correlation revealed the correlation between Gad and depression was a positive significant relationship (α=.89**) which

supports the third hypothesis and consistent finding with the earlier research that individuals with lifetime major depressive disorder had a lifetime history of one or more anxiety disorder (Kessler et al., 2015). Two-way ANOVA results revealed the significant effect of gender on depression and GAD, with depression prediction on anxiety which provided reasons to accept the third and fourth synopsis and also supported by earlier findings that patients with major depression had significant anxiety (Hettema et al., 2006) and depression explained 44% of anxiety (Menza et al., 1993).

Limitations: Participants may not represent the wider population being a small size sample and one type of mental illness. A larger sample size that would look at more types of illness would be preferable. Furthermore, no validation studies had been conducted on the selected scales.

Implications: This work provides a new evaluating approach to anxiety and depression, and contributes to understanding their relationship and predictors. The scales may inspire further simple evaluation of GAD and depression measurement, which could be beneficial for prevention and intervention.

Suggestion: Based on the findings, it was suggested that GAD and Depression are highly prevalent and need more research with bigger samples looking at the causes and their implications in the targeted population for framing prevention and intervention

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Declaration: The study is an extract of a part of the thesis of Ms Biaknungi, V.L, Department of Clinical Psychology, Mizoram University which has never been published before in any form of publication.

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