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## **Prevalence of Generalized Anxiety Disorder (GAD) and its Associated Risk Factors among College Students in Chennai and Cochin – A Cross Sectional Study**

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### **ABSTRACT**

Generalized Anxiety Disorder is one of the most common disorders among mental disorders. The main causes of generalized anxiety disorder as described by Mayo Clinic arises from a complex interaction of biological and environmental factors, which may include Differences in brain chemistry and function, Genetics, Differences in the way threats are perceived, Development, and personality. The prevalence of anxiety disorders is 3.8 percent in the share of the global population with the disorder (2017) which means 284 million people are affected. Out of which, 2.8 percent are males and 4.7 percent are females. (Ritchie & Roser, 2018). "Disability and impairment in pure GAD were equivalent to pure mood disorders (Wittchen, 2002). The aim of the study includes determining the prevalence of Generalized Anxiety Disorder among college students in Chennai and Cochin, to assess the prevalence with respect to age and gender differences, and to study the effect of educational qualification and who they reside with, in the prevalence of generalized anxiety formation.

**Keywords:** Anxiety, Disorder, Generalised Anxiety Disorder, Risk Factor and Prevalence .

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### **I. INTRODUCTION**

Generalized Anxiety Disorder (GAD) is one of the most common disorders among the mental disorders. People with Generalized Anxiety Disorder (GAD) often tend to have excessive anxiety or worry, most days and this persists for at the least of 6 months, about a number of things such as personal health, work, social interactions, and everyday routine life circumstances. The anxiety, tension and fear that they experience can cause significant problems in the functioning of their lives especially such as social interactions, school, and work. According to the Mental Health information from National Institute of Mental Health the symptoms of Generalized anxiety disorder symptoms are - Feeling restless, wound-up, or on-edge, Being easily fatigued, Having difficulty concentrating; mind going blank, Being irritable, Having muscle tension, Difficulty controlling feelings of worry, Having sleep problems, such as difficulty falling or staying asleep, restlessness, or unsatisfying sleep.

The main causes of generalized anxiety disorder as described by Mayo Clinic, arises from a complex interaction of biological and environmental factors, which may include Differences in brain chemistry and function, Genetics, Differences in the way threats are perceived, Development and personality. Similarly they also mention about the risk factors as - Women are diagnosed with generalized anxiety disorder somewhat more often than men are. The following factors may increase the risk of developing generalized anxiety disorder –Personality - A person whose temperament is fearful or negative or who avoids anything dangerous may be more prone to generalized anxiety disorder than others are. Genetics - generalized anxiety disorder may run in families. Experiences - people with generalized anxiety disorder may have a history of significant life changes, traumatic or negative experiences during childhood, or a recent traumatic or negative event. Chronic medical illnesses or other mental health disorders may increase risk.

Generalized anxiety disorder can be developed by anyone in their lifetime but one can take steps to reduce the impact of symptoms if one experience anxiety - Get help early – Asking for help is the first and for most things which most them hesitate to do. The second thing which one can do is to keep a journal. Keeping track of your personal life can help you and your mental health professional identify what's causing you stress and what seems to help you feel better. One can reduce anxiety by carefully managing your time and energy. Avoiding unhealthy substance use such as alcohol and drug can help one in reducing anxiety. Even nicotine or caffeine use can cause or worsen anxiety.

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### **II. LITERATURE REVIEW**

A review research study on available data to date on the epidemiology of GAD in Europe suggested the results as about 2 percent of the adult population in the community is affected (12-month prevalence), GAD is one of the most frequent (up to 10 percent) of all mental disorders seen in primary care, GAD is a highly impairing condition often comorbid with other mental disorders, GAD patients are high utilizers of healthcare resources, and despite the

high prevalence of GAD in primary care, its recognition in general practice is relatively low".(Lieb, Becker, & Altamura, 2005). Emotional Intelligence helps in building ability to understand emotions and emotional knowledge; and to reflectively regulate emotions so as to promote emotional and intellectual growth. (Shefali Mohanty, 2019) The awareness level on OCD among Students graduating in social work need to be high in order for them to sensitize it to public their understanding and perception of OCD may be one contributor to this issue, so awareness on OCD is one important step to receive appropriate care.(Sathyamurthi K and Poonkodi, 2021) According to another review research of literatures published between 1980 and 2004, the prevalence and incidence of anxiety disorders in the general population "pooled 1-year and lifetime prevalence rates for total anxiety disorders were 10.6 percent and 16.6 percent. Pooled rates for individual disorders varied widely. Women had generally higher prevalence rates across all anxiety disorder categories, compared with men, but the magnitude of this difference varied."(et.al, 2006)

The prevalence of anxiety disorders are 3.8 percent in share of global population with disorder (2017) which means 284 million people are affected. Out of which 2.8 percent are males and 4.7 percent are females. (Ritchie & Roser, 2018). "Disability and impairment in pure GAD were equivalent to pure mood disorders (Wittchen, 2002). The knowledge level of the students are high in their second year of social work. There is no relation found with their residence or the sex of the students to their knowledge level on intellectual disability.(Sathyamurthi K and Poongothai, 2021). The study showed that 85.7 percent of moderately severe cases of depression were accounted by females. In the case of anxiety, 71.4 percent of severe anxiety was expressed by females. Mild (51.8 percent) and moderate (53.6 percent) level of depression as well as 56.6 and 57.1 mild and moderate level of anxiety respectively showed in urban area which is comparatively high with respect to rural areas. Majority of the respondents (83.1 percent) admits COVID 19 as a pandemic situation but meagre (9.7 percent) experienced COVID 19 as irritated. (Sathyamurthi. K Anjali U S Akhil Kumar.P Ancy Babu Ciju Silpa.B . P & Krishna, 2020)

### III. MATERIALS AND METHODS

This study was designed to survey and determine the prevalence of Generalized Anxiety Disorder among the college students in Chennai and Cochin. The study also tries to assess the impact of course and with whom the participants reside with on GAD. The aim of the study include determining the prevalence of Generalized Anxiety Disorder among college students of in Chennai and Cochin, to assess the prevalence with respect to age and gender differences and to study the effect of educational qualification and who they reside with, in prevalence of generalized anxiety formation. The study conducted by collecting data from college students through survey method in Chennai and Cochin districts. The study population had college graduates, postgraduate and Ph.D scholars whose ages of the categories 19 and below, 20 to 29, 30 and above. The sampling design used was simple random sampling in a sample size 205 through the structured questionnaire as the tool for data collection.

### IV. RESULTS AND DISCUSSION

The research data was analysed based on the objectives of the study and it is highlighted with relevant inferences.

**Table 1 Profile of the Study participants**

Profile		Frequency	Percent
Age (in years)	Below 19	73	35.6
	20 to 29	70	34.1
	30 and Above	62	30.2
Gender	Male	75	36.6
	Female	130	63.4
Education	Under Graduation	120	58.5
	Post-Graduation	82	40.0
	Research Program- MPhil & PhD	3	1.5
Place of Residence	Family	85	41.5
	Hostel	101	49.3
	Guardian	3	1.5
	Others	16	7.8
<b>Total</b>		205	100

Table 1 shows that out of 205 respondents 35.6 percent belong to the category of age below 19, 34.1 percent of people belong to the age group of 20 to 29 and 30.2 percent of them belong to the category of the age 30 and above. It shows the frequency of the gender of the respondents in which 75 of them

i.e. 36.6 percent are Males and 130 i.e. 63.4 percent of them are Females. It shows the frequency of the education of the respondents in which UG respondents are 120 of them i.e. 58.5 percent, 82 of them PG i.e. 40 percent of them and 3 of them doing their PhD which is 1.5 percent of them. The table shows the frequency of the respondents with whom they reside with. From the data we tend to understand that 85 of them i.e. 41.5 percent of them live with their family. 101 of them i.e. 49.3 percent live in hostel. 3 of them i.e. 1.5 percent of them live with their guardian. 16 of them i.e. 7.8 percent live with others.

**Table 2 showing the Level of Anxiety and Prevalence of the respondents.**

Level of Anxiety	Frequency	Percent
No Anxiety	31	15.1
Minimal	99	48.3
Mild	57	27.8
Moderate	18	8.8
<b>Total</b>	<b>205</b>	<b>100</b>

Table 2 shows the data about the number of people falling under different anxiety levels. 31 respondents i.e. 15.1 percent fall under no anxiety level. 99 of them i.e. 48.3 percent of them fall under minimal anxiety. 57 of them i.e. 27.8 percent of them are in mild anxiety level. 18 of them i.e. 8.8 percent of them fall under moderate anxiety category.

**Table 3 showing Age wise distribution of the level of Generalized Anxiety**

		Generalized Anxiety level				Total
		No Anxiety	Minimal	Mild	Moderate	
Age (in years)	Below 19	18 8.8 %	31 15.1 %	14 6.8 %	10 4.9 %	73 35.6 %
	20 to 29	10 4.9 %	42 20.5 %	15 7.3 %	3 1.5 %	70 34.1 %
	Above 30	3 1.5 %	26 12.7 %	28 13.7 %	5 2.4 %	62 30.2 %
<b>Total</b>		31 15.1 %	99 48.3 %	57 27.8 %	18 8.8 %	205 100 %

Table 3 shows the age wise distribution of the level of generalized anxiety. From the data we tend to understand that 15.1 percent of respondents have no anxiety whereas 48.3 percent of people responded have minimal level of anxiety. 27.8 percent of people have mild level of anxiety and 8.8 percent of people experience moderate level of anxiety. Hence more number of people tends to fall under minimal level of anxiety. Age of 19 and below, there was 8.8 percent respondents with no anxiety, 15.1 percent of them with minimal anxiety, 6.8 percent of them with mild anxiety and 4.9 percent of them with moderate anxiety. Hence in the given age group comparatively Minimal anxiety tends to run more.

The data show that in the age criteria of 20 to 29 there are 4.9 percent respondents with no anxiety, 20.5 percent of them with minimal anxiety, 7.3 percent of them with mild anxiety and 1.5 percent of them with moderate anxiety. Hence in the given age group comparatively Minimal anxiety tends to run more.

Age of 30 and above there are 1.5 percent respondents with no anxiety, 12.7 percent of them with minimal anxiety, 13.7 percent of them with mild anxiety and 2.4 percent of them with moderate anxiety. Hence in the given age group comparatively Mild anxiety tends to be more.

**Table 4 showing gender wise distribution of Generalized Anxiety**

		Generalized Anxiety level				Total
		No Anxiety	Minimal	Mild	Moderate	
Gender	Male	12 5.9 %	39 19.0 %	20 9.8 %	4 2.0 %	75 36.6 %
	Female	19 9.3 %	60 29.3 %	37 18.0 %	14 6.8 %	130 63.4 %
<b>Total</b>		31 15.1 %	99 48.3 %	57 27.8 %	18 8.8 %	205 100 %

Table 4 shows the levels of generalized anxiety across gender. From the data we tend to understand that among male respondents 5.9 percent of them have no anxiety, 19.0 percent have minimal anxiety, 9.8 percent have mild anxiety and 2.0 percent have moderate level of anxiety, which states that in Males there are more number of people having Minimal anxiety. The data also shows that among the Female respondents 9.3 percent of them have no anxiety, 29.3 percent have minimal anxiety, 18.0 percent have mild anxiety and 6.8 percent (n=14) have moderate level of anxiety. Hence it shows that in Females more number of people has Minimal level of anxiety.

**Table 5 showing the Education wise distribution of Level of Generalized Anxiety**

		Level of Generalized Anxiety				Total
		No Anxiety	Minimal	Mild	Moderate	
Education	UG	20 9.8 %	60 29.3 %	32 15.6 %	8 3.9 %	120 58.5 %
	PG	10 4.9 %	37 18.0 %	25 12.2 %	10 4.9 %	82 40.0 %
	Ph.D	1 0.5 %	2 1.0 %	0 0.0 %	0 0.0 %	3 1.5 %
<b>Total</b>		<b>31</b> <b>15.1 %</b>	<b>99</b> <b>48.3 %</b>	<b>57</b> <b>27.8 %</b>	<b>18</b> <b>8.8 %</b>	<b>205</b> <b>100 %</b>

Table 5 shows the education wise distribution of generalized anxiety disorder. From the data we tend to interpret that in UG respondents 9.8 percent of them have no anxiety, 29.3 percent of them have minimal anxiety level, 15.6 percent of them have mild anxiety, and 3.9 percent have moderate level of anxiety. In UG level there is comparatively more number of minimal anxiety. The data also shows that in PG respondents 4.9 percent of them have no anxiety, 18.0 percent of them have minimal anxiety level, 12.2 percent of them have mild anxiety 4.9 percent have moderate level of anxiety. PG students show a comparatively higher minimal level of anxiety. From the data we tend to interpret that in PhD respondents 0.5 percent of them have no anxiety, 1.0 percent of them have minimal anxiety level, 15.6 percent and none of them have mild or moderate level of anxiety. In PhD level there is comparatively more number of minimal anxiety.

**Table 6 showing the Place of Residence and Level of Generalized Anxiety**

		Level of Generalized Anxiety				Total
		No Anxiety	Minimal	Mild	Moderate	
Place of Residence	Family	8 3.9 %	44 21.5 %	27 13.2 %	6 2.9 %	85 41.5 %
	Hostel	21 10.2 %	42 20.5 %	27 13.2 %	11 5.4 %	101 49.3 %
	Guardian	0 0.0 %	2 1.0 %	0 0.0 %	1 0.5 %	3 1.5 %
	Others	2 1.0 %	11 5.4 %	3 1.5 %	0 0.0 %	16 7.8 %
<b>Total</b>		<b>31</b> <b>15.1 %</b>	<b>99</b> <b>48.3 %</b>	<b>57</b> <b>27.8 %</b>	<b>18</b> <b>8.8 %</b>	<b>205</b> <b>100 %</b>

Table 6 shows the generalized anxiety levels of the respondents across the people with whom they are residing with. The data shows that in the respondents residing with the family 3.9 percent of them have no anxiety, 21.5 percent have minimal level of anxiety, 13.2 percent of them fall under mild level of anxiety, 2.9 percent of them have moderate level of anxiety. This shows that those who are living with family have a minimal level of anxiety.

From the table we tend to interpret that in the respondents residing in hotel 10.2 percent of them have no anxiety, 20.5 percent have minimal level of anxiety, 13.2 percent (n=27) of them fall under mild level of anxiety, 5.4 percent (n=11) of them have moderate level of anxiety. Hence people living in hostel tend to show a minimal level of anxiety.

The data also shows that in the respondents residing with the guardian none of them belong to no anxiety level, 1 percent (n=2) have minimal level of anxiety, none of them fall under mild level of anxiety, 0.5 percent (n=1) of them have moderate level of anxiety. This shows that those who are living with guardian have a minimal level of anxiety.

Also to interpret that in the respondents residing with others 1 percent (n=2) of them have no anxiety, 5.4 percent (n=11) have minimal level of anxiety, 1.5 percent (n=3) of them fall under mild level of anxiety, and none of them of them have moderate level of anxiety. Hence people living with others tend to show comparatively a minimal level of anxiety.

## V. CONCLUSION

From the study conducted it is observed that out of the total respondents 48.3 percent of people have minimal level of anxiety which is comparatively higher. In all the age groups and gender they tend to show minimal level of anxiety. Depending on their course and people they live with they also tend to show a minimal level of anxiety.

**Ethics approval and consent to participate**

The authors confirm that the research presented in this article met the ethical guidelines and received approval and Ethics Committee within selected institutions. Written informed consent was obtained from each university and student participated in this study.

**Competing interests**

The authors declare that they have no competing interests.

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