

ORIGINAL RESEARCH

Relationship between socio demographic profile and risk factors in cases of generalised anxiety disorder

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ABSTRACT

Background: Psychological health problems, especially generalized anxiety disorders (GAD), are common among adolescents. Anxiety disorder can be avoided with appropriate preventive measures, such as participation in a healthy lifestyle, coping with stress, and receiving social support.

Aim: To identify the association between sociodemographic profile and life style related factors associated with the GAD.

Materials and Methods: This case control study was conducted in department of neuro psychiatry in a tertiary care hospital, Rajasthan India. The patients with GAD were diagnosed by DSM 5 criteria. 30 GAD (cases) and 30 health subjects (control) were analysed for association of various socio-demographic and life style related risk factors to anxiety disorder

Results: Socio-demographic variables like Age, gender, ethnicity, education, marital and residential status were associated with the GAD but statistically not significant. Most of them were vegetarian diet (53.3% cases, 66.7% control), 26.7% cases was smoke and 43.3% were alcohol habit. Poor sleep 50% in cases and 73.3% among control. Cases had decreases appetite in 46.7% whereas control was only 23.3%. Family history of GAD was significantly associated with the anxiety disorder ($p < 0.05$). Serum Cortisol and TSH level was significantly associated with the GAD

Conclusion: Sociodemographic and life style factors were associated with determining the risks of GAD. With this information, future policies (e.g., screening and treatment) could be targeted at those at most risk to develop depression and GAD.

Key words: Generalized anxiety disorder (GAD), socio-demographic profile, risk factors

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INTRODUCTION

Anxiety disorders are very common in childhood and adolescence and global estimates suggest they affect 6.5% of individuals under 19 years of age ¹. The prevalence varies for different anxiety disorders and so does the usual age at onset. Child onset disorders usually include separation anxiety, specific phobias and selective mutism, whereas social phobia, agoraphobia, panic disorder and generalized anxiety disorder are more likely to start in adolescence ¹⁻². Anxiety disorders cause significant functional impairment at home, at school and with friends ³. Globally, depression is the fourth leading cause of disease and disability among adolescents aged 15-19 years, and the 15th for those aged 10-14 years. Meanwhile, anxiety is the ninth leading cause of disease and disability for adolescents aged 15-19

years and sixth for those aged 10-14 years ⁴. Anxiety or usually recognized as Generalized Anxiety Disorder (GAD) is defined as a feeling of insecurity, fearfulness, tension, and fear that arises as a result of an unpleasant event and persists for at least 6 months or more ⁵. Many factors related to anxiety disorder like, gender, age, education and type of job are some demographic related factors that are associated with depressive and anxiety symptoms. Females presented higher levels of anxiety as well as people above 40 years old. Additionally, depression levels were higher in people with a bachelor's degree when compared with people with a master's degree, and industrial service workers had a higher probability of having depression in comparison to highly qualified professionals ⁶⁻⁷. Mental health illness has severe negative impacts on physical health, society, and

economic burden. Fortunately, mental health illness can be avoided with appropriate preventive measures, such as participation in a healthy lifestyle, coping with stress and receiving social support⁸⁻⁹. The issues of mental health illness in developed and developing countries are similar. Today, mental health illness has become one of the main public health concerns in India and is predicted as the next cause of health problems after cardiovascular diseases in the near future. This is because increasingly more people will be facing work and family pressures¹⁰⁻¹¹.

AIMS & OBJECTIVES

The objective of the present study was to investigate sociodemographic, lifestyle, and health factors associated with GAD among adults in India.

MATERIALS AND METHODS

This case control study was conducted in department of neuro psychiatry in a tertiary care hospital, Dungarpur district, Rajasthan India. Study period was March 2020 to March 2022.

The patients with GAD were selected by DSM 5 criteria¹². According to these criteria we diagnosed anxiety with the three of the following physical or cognitive symptoms:

1. Edginess or restlessness.
2. Tiring easily; more fatigued than usual.
3. Difficulty in concentration or feeling as though the mind goes blank.
4. Irritability (recognized by others).
5. Increased muscle aches or soreness.
6. Difficulty sleeping (due to trouble falling asleep or staying asleep, restlessness at night, or unsatisfying sleep).

INCLUSION CRITERIA

- Age between 15 and 30 years, both males and female.
- GAD diagnosed by DSM 5 criteria.
- Who given consent for the study.

EXCLUSION CRITERIA

- Subjects below 15 and above 30 years of age.
- Subjects with metabolic diseases, malnutrition, liver or kidney diseases and cancer.
- Pregnant women.
- Who not given consent for the study.

A total of 60 participants (30 cases diagnosed with GAD and 30 healthy controls) divided in two groups
Group I: It consisted of GAD subject case (n=30), have symptoms which is diagnosed by DSM 5 criteria.

Group II: It consisted of healthy control subjects (n=30). All the subjects included in this group were healthy and there are no signs and symptoms or history of chronic diseases.

Various sociodemographic were collected from all the participants (both cases and control) like age gender, residential status, smoking habit, alcohol habit, educational status, working status, dietary practices, personal risk factors, mental health, and clinical assessment was done.

STATISTICAL ANALYSIS

The data were analysed using SPSS version 25.0. Frequencies and percentages were calculated for each sociodemographic variable. Mean and standard deviations were calculated and P values of $p < 0.05$ were taken as statistically significant.

RESULTS

Present study analysed 30 cases of anxiety disorder and 30 age related control. Most common age group was 25-30 years in cases (43.3%) and control was 53.3%, predominantly males in cases 66.7% and controls was 60%. Half of the GAD patients and 40% control were single. Majority of the subject, cases (43.3%) and control (40%) were students. Most of them, (cases=66.7% and control 60%) residing at urban areas [Table: 1].

Table 1: Socio-demographic variables of study participants

Socio-demographic variables		Case	Control	Total	P value
Age group (inyrs)	15-19	7.00 (23.3%)	9.00 (30.0%)	16.00 (26.7%)	0.33
	20-24	10.00 (33.3%)	5.00 (16.7%)	15.00 (25.0%)	
	25-30	13.00 (43.3%)	16.00 (53.3%)	29.00 (48.3%)	
Sex	Female	10 (33.3%)	12 (40.0%)	22 (36.6%)	0.59
	Male	20 (66.7%)	18 (60.0%)	38 (63.3%)	
Marital Status	Married	15 (50.0%)	18 (60.0%)	33 (55.0%)	0.44
	Unmarried	15 (50.0%)	12 (40.0%)	27 (45.0%)	
Occupation	Worker	9 (30.0%)	10 (33.3%)	19 (31.7%)	0.95
	Student	13 (43.3%)	12 (40.0%)	25 (41.7%)	
	House wife	8 (26.7%)	8 (26.7%)	16 (26.7%)	
Residence	Urban	18 (60.0%)	20 (66.7%)	38 (63.3%)	0.64
	Rural	8 (26.7%)	5 (16.7%)	13 (21.7%)	
	Tribal	4 (13.3%)	5 (16.7%)	9 (15.0%)	

Considering the lifestyle variables, most of them were vegetarian diet (53.3% cases, 66.7% control), 26.7%

cases was smoke and 43.3% were alcohol habit. GAD subjects have poor sleep (50%) as compared to

control (73.3%). Cases had decreased appetite in 46.7% whereas control was only 23.3%. Family history of GAD in both cases and control was significantly associated with the anxiety disorder [Table 2].

Table 2: Various lifestyle variables associated with GAD

Lifestyle variables		Case	Control	Total	P value
Diet	Vegetarian	16 (53.3%)	20 (66.7%)	36 (60.0%)	0.29
	Non-Vegetarian	14 (46.7%)	10 (33.3%)	24 (40.0%)	
Smoking	Yes	8 (26.7%)	6 (20.0%)	14 (23.3%)	0.54
	No	22 (73.3%)	24 (80.0%)	46 (76.7%)	
Alcoholic	Yes	13 (43.3%)	9 (30.0%)	22 (36.7%)	0.28
	No	17 (56.7%)	21 (70.0%)	38 (63.3%)	
Sleep	Good	15 (50.0%)	22 (73.3%)	37 (61.7%)	0.063
	Poor	15 (50.0%)	8 (26.7%)	23 (38.3%)	
Appetite	Good	16 (53.3%)	23 (76.7%)	39 (65.0%)	0.058
	Decreased	14 (46.7%)	7 (23.3%)	21 (35.0%)	
Family History	Yes	15 (50.0%)	6 (20.0%)	21 (35.0%)	0.015
	No	15 (50.0%)	24 (80.0%)	39 (65.0%)	

Various hormonal and sympathetic changes were seen in GAD. No significant changes in blood pressure (SBP & DBP), whereas pulse rate had significant changes ($p=0.05$). Serum TSH and Cortisol level has

significantly related to GAD ($p<0.05$), whereas serum MHPG, insulin and random blood sugar level have no significant correlation with the GAD ($p>0.05$) [table: 3].

Table 3: Various parameters and hormones levels associated with GAD

Factor	Case		Control		P value
	Mean	SD	Mean	SD	
SBP	114.83	11.2	117.42	9.42	0.337
DBP	74.57	7.05	77.73	6.87	0.084
Pulse	81.67	9.6	87.40	12.33	0.050
RBS	114.11	20.9	113.12	20.11	0.853
TSH	1.39	0.65	2.43	1.04	<0.001
Cortisol	284.83	103.47	129.97	60.17	<0.001
Insulin	17.45	8.35	18.63	3.55	0.479
MHPG	7.26	4.90	6.01	2.42	0.215

DISCUSSION

In an effort to acquire wider knowledge of the pattern of mental health illness, factors associated with depression and GAD, such as sociodemographic, lifestyle, and health were examined.

In our study majority of the subjects were 25-30 years age group, predominantly male, similar finding also reported by P Khanal *et al.*¹³ and Dalsgaard S *et al.*¹⁴. There were three key findings. First, the treated incidence of anxiety disorders increased with age, with rapid increases in females, but more stable increases in males.

Present study observed the prevalence of generalised anxiety symptoms more in school students, concordance to other studies like: Uchida S, *et al.*¹⁵ and Rao WW *et al.*¹⁶, reported school students are most vulnerable population for GAD.

No significant relationships were also found between the variables of interest and some sociodemographic factors (age, gender, marital status, occupation, religion and residential status) by means of chi-square ($p>0.05$). These results differ from some research showing that showing significant relationship from

the factors mentioned above, like: Danesh N, *et al.*¹⁷, Manaf *et al.*¹⁸ and Gill Hubbard *et al.*¹⁹.

Regarding the associations identified between sociodemographic variables and depressive symptoms in this research, the youngest participants and people without a partner were at the highest risk. Data similar to those reported by Lei *et al.*²⁰.

Apart from sociodemographic factors, our findings suggested that self-rated health was associated with depression and GAD among certain amount of population.

This study also found several behaviors factors like dietary habit, smoking, alcohol habit, appetite and sleep cycles associated with GAD, but statistically not significant, our findings are comparable with the Zhou *et al.*²¹, Triastutiet *et al.*²² and Chiriarc VF, *et al.*²³.

Current study found family history of anxiety disorder significantly associated with the GAD, accordance to the Cheah *et al.*²⁴.

In our study serum Cortisol and TSH level significantly associated with the GAD ($p<0.05$), our results consistent with the Clara Paz *et al.*²⁵ and Gray, J. R *et al.*²⁶.

The implications for the educational setting would be that such measures can be taken from the fact that several factors may contribute to the severity of GAD. The educational sector could provide supporting programs such as mental counseling, happiness program, exercise, or yoga to reduce anxiety.

CONCLUSION

This study found that younger adults, males, school students, unmarried individuals and individuals with poor self-rated health were more likely to develop GAD. There were some life style related factors like: smoking, alcohol habit, appetite and sleeping habit and family history of anxiety disorder were associated to the risk of GAD. These findings may be utilized to enable policy-making decisions and policy outputs for the benefit of patients in Rajasthan with mental health illnesses.

CONFLICTS OF INTEREST:None.

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