

# SEASONAL AFFECTIVE DISORDER AMONG UNDERGRADUATE STUDENTS IN PESHAWAR DISTRICT

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## ABSTRACT

### OBJECTIVE

To find the frequency of seasonal changes on undergraduate students and make a comparison between undergraduate students on the basis of prevalence of Seasonal affective disorder.

### STUDY DESIGN

Cross sectional study

### PLACE & DURATION OF STUDY

Data was collected from different universities of Peshawar city including Khyber medical university, Abasyn University, Peshawar University, Cecos University, and Rehman Medical Institute from 7 January 2022 to 17 November, 2022.

### METHOD

The sample size consisted of 100 undergraduate students from different universities in Peshawar (N=100). Their ages ranged from 18 to 26 years old. The Seasonal Pattern Assessment Questionnaire (SPAQ) along with a demographic information sheet and informed consent sheet was administered.

### RESULTS

Results revealed that among 100 participants, 71 were affected by SAD. Further on, it was elaborated that female students have higher rates of SAD as compared with male students.

### CONCLUSION

The results of the study confirmed the presence of seasonal affective disorder among undergraduate students with a large female population being affected by it.

### KEY WORDS

Depression, Seasonal Depression, Seasonal Changes, Seasonal Affective Disorder

## INTRODUCTION

In a quote that highlights the philosophical viewpoint, Charles Dickens said, "Nature bestows upon each season its own unique and unparalleled splendor." Despite this universal truth, some struggle to appreciate the allure of wintertime due to a condition known as Seasonal Affective Disorder (SAD). Such individuals, unlike their unaffected counterparts, face heightened adversity during this period. SAD not only interferes with their daily routines and schedules but also leaves a profound impact on their overall well-being.<sup>1</sup> Though it shares resemblances with standard depressive disorders in terms of various symptoms, SAD differentiates itself in the sense that it is not perpetually continuous. Instead, this malady exclusively surfaces during the winter months, subsiding as spring emerges.<sup>2</sup> Consequently, acknowledging and differentiating Seasonal Affective Disorder from general depression becomes essential for accurate assessment and treatment planning.

Major depressive disorder, or simply depression, is a psychological condition that significantly influences one's mood, behaviour, and overall well-being. It is marked by ongoing feelings of sadness, emptiness, or despair, a reduction in interest in once-enjoyable activities, and physical symptoms like sleep disruptions, appetite changes, and unexplained aches.<sup>3</sup> Seasonal affective disorder (SAD) is a specific form of depression linked to seasonal changes - typically emerging in the fall and persisting through winter. SAD sufferers may exhibit low energy levels and heightened moodiness during these periods but tend to improve when spring and summer arrive.<sup>4</sup> Seasonal fluctuations in mood can greatly affect an individual's thoughts, emotions, and daily functioning.<sup>2</sup> These mood fluctuations are associated with varying daylight hours, and understanding their significant impact on a person's mental health is crucial. The shifting seasons impact an individual's emotional state, with the "winter blues" often giving way to improved moods in spring as daylight hours increase.<sup>5</sup> Environmental variables like temperature, latitude exposure to natural light sources, and seasonally based fluctuations in neurotransmitter release have all been postulated to influence the development and progression of such behavioral and neuro-vegetative afflictions.<sup>6</sup>

This research aims to investigate the symptoms of Seasonal Affective Disorder (SAD) among undergraduate students. The semester system, which is characterised by its relatively shorter duration compared with an annual academic plan, can exacerbate the challenges faced by students already predisposed to SAD. In-depth research can help develop strategies to mitigate SAD's negative effects on undergraduate students. This study aims to know the frequency of symptoms of SAD among undergraduate students in the Peshawar

region. The goal is to raise SAD awareness, improve overall well-being, and enhance psychological comfort. Therefore, it is crucial to direct the attention of the public and educational committees towards this issue to support affected students and improve their overall well-being.

**METHOD**

This cross-sectional study was conducted from 7 January 2023 to 17 November 2023. The Ethical approval for the research study was obtained from the research committee of Fazaia College of Education for Women, Peshawar. Data were collected from different universities in Peshawar city, including Khyber Medical University, Abasyn University, Peshawar University, Cecos University, and Rehman Medical Institute. A sample of 100 undergraduate students ranging in age from 18 to 35 years, including 50 male and 50 female students, was selected using the non-probability consecutive sampling technique. The Seasonal Pattern Assessment Questionnaire (SPAQ)<sup>7</sup> by Rosenthal et al. (1984) was administered to assess the seasonal changes in mood and behavior. The SPAQ is the most widely used test for screening for seasonal affective disorder and has good reliability and validity.<sup>8</sup> A demographic information sheet was used to collect data regarding student characteristics, and written informed consent was obtained from the students prior to inclusion in the study.

Data analysis was performed using SPSS Version 21.0. A chi-square test was used to find out the comparison between male and female students' seasonal affective disorder.

**RESULTS**

S.A.D. was assessed in both male and female individuals using the Seasonal Pattern Assessment Questionnaire. With a p-value of 10.928, the data confirmed the hypothesis that there were gender differences in Seasonal Affective Disorder. SAD afflicted 71 of the 100 subjects, including both male and female populations, however, subsequent examination revealed that SAD impacted 43 of the 50 females and 28 of the 50 men. It supports the premise that women are more affected. One of the underlying significant factors is that female students do not get enough sun exposure, which worsens the illness more than men since they get more exposure, so even if they are affected by SAD, they can get the minimal amount of sunshine they need and their symptoms can be controlled.

**Table 1**  
**Demographics Characteristics of Participants.**

	Frequency N-100	Percent
<b>Gender</b>		
Male	50	50
Female	50	50
<b>Marital Status</b>		
Married	05	05
Unmarried	95	95
<b>Age</b>		
18-20 Years	36	36.00
21-23 Years	50	50.00
24-26 Years	13	13.00
30-32 Years	01	01.00

**Table 2**  
**Relationship of Gender with SAD**

Sex	No	Yes	Total
Male	22	28	50
Female	07	43	50
Total	29	71	100

**Table 3**  
**Responses for replying Yes to experiencing change with the season.**

Sex	Mild	Moderate	Severe	Total
Male	6	17	5	27
Female	5	25	12	42
Total	11	42	17	69

**Table 4**  
**Chi-square Test Result for relationship of gender with SAD.**

	Value	Df	Asymptotic significance (2-sided)	Exact sig. (2-sided)	Exact sig. (1-sided)
Pearson Chi-Square	10.928 <sup>a</sup>	1	.001		
Continuity Correction <sup>b</sup>	9.519	1	.002		
Likelihood Ratio	11.341	1	.001		
Fisher's Exact Test				.002	.001
Linear-by-Linear Association	10.818	1	.001		
N of Valid Cases	100				

**DISCUSSION**

The following research was carried out to determine the presence of Seasonal Affective Disorder in undergraduate students. It is believed that studies based solely on the SPAQ have revealed prevalence estimates for full-syndrome SAD as high as 1012% at latitudes 40°65'N, 9°W while the mean minimum temperature during winter in Peshawar is 4 °C (39 °F) and the maximum is 18.35 °C (65.03 °F), which supports the occurrence of SAD in Peshawar.

This study specifically focused on undergraduate-level students, highlighting the escalated challenges of maintaining mental and emotional well-being amidst a demanding higher education setting, especially within semester-based curricular structures. Depressed individuals struggle to manage academic commitments effectively due to their inherent lack of focus and energy stemming from their mental health challenges.

In this study, results generated that among 100 participants, 71 reported being affected by Seasonal Affective Disorder, and among those 71 affected, 43 were female. Previous studies have also found a higher prevalence of SAD among females.<sup>10,11</sup> A study examining mental health problems of undergraduate students comprising of sample from different universities of Lahore found that 16% of the students had very

severe mental health problems, while 31% had severe mental health issues.<sup>12</sup> Another study examining relationship between seasonality and psychological distress found significant positive correlation between seasonality and depression, anxiety, and stress.<sup>13</sup>

The incidence of psychiatric morbidity, including anxiety disorders, depressive disorders, and Bipolar disorders is also reported among those suffering from SAD.<sup>14,15</sup> Higher prevalence rates of SAD have been reported by a study conducted to assess psychiatric morbidity in patients suffering from seasonal affective disorder. The study found that 41.7% of the students suffered from SAD. Among those suffering from SAD, more than one third had psychiatric morbidity.<sup>4</sup> According to our study, females suffered more from Seasonal Affective Disorder. A recent epidemiological study conducted to find out the prevalence of winter depression in Pakistan found that women and girls had more winter depression as compared to males. The study found winter depression and winter blues to be present among 26% of the study population.<sup>11</sup>

### CONCLUSION

The results of the research corroborate the hypothesis that Seasonal Affective Disorder predominantly affects women, as the data obtained exhibited statistical significance. It is conjectured that females experience a higher prevalence of SAD on a global scale.

### Recommendations

Seasonal Affective Disorder is a complex disorder that needs attention along with awareness. SAD is mostly neglected because of its rare presence in the climate area. It is recommended that researchers study this disorder and its impact in different regions of Pakistan with a large sample size. They should also use a life quality score to identify the extent to which it impacts the lives of different age groups. Medical experts should study to know the exact underlying causes behind it and also develop effective treatments. There is a need to understand the situation and help to build some student-friendly system to support the students affected by SAD. The faculty and management should give some leverage to the affected students, as this would prevent them from getting further depressed.

### CONFLICT OF INTEREST

Authors declared no conflict of interest.

### FUNDING

None

### DISCLOSURE

This paper is part of a BS Thesis.

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**AUTHOR(S) CONTRIBUTION / UNDERTAKING FORM**

Sr. #	Author(s) Name	Author(s) Affiliation	Contribution
1.	Dr. Ijaz Jamal	Bacha Khan Medical College, Mardan	Study Conception
2.	Aimen Khalil	Fazaia College, Peshawar	Design, Methodology
3.	Tabassum Faiz	Fazaia College, Peshawar	Data collection, Data Analysis
4.	Dr. Ejaz Gul	BKMC, Mardan	Final Review, study conception
5.	Dr. Ali Mufti	JM, Peshawar	Data collection, study Design
6.	Dr. ...	BKMC, Mardan	Methodology, write up

RETRACTED

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