



## “An Investigation into the Incidence of Physiological Stress and Anxiety among Adolescent Females”

### Introduction

Stress is a state of strain, whether physical, emotional, or psychological, that arises from changes in one's environment. It is the body's reaction to situations that require attention or action. Stress is a common experience for everyone, and how individuals respond to it can greatly impact their overall well-being. It can manifest as emotional or physical tension and can be triggered by various events or thoughts that elicit frustration, anger, or nervousness. While stress and anxiety are related, they are distinct concepts. Stress is a response to external pressures or demands, whereas anxiety is a more generalized feeling of unease or fear. Anxiety can interfere with daily functioning and may necessitate professional intervention for effective management. While some level of stress is normal, excessive or chronic anxiety may indicate an anxiety disorder and may require treatment. Stress and anxiety can affect individuals of all genders and age groups. Factors such as academic pressure, social expectations, hormonal changes, and personal circumstances can contribute to stress and anxiety in young females.



### Objectives:

The objective of the research was to assess the levels of stress and anxiety in female university students from the general population. This evaluation was conducted at Jinnah University for Women and involved the use of various physical parameters including DASS (Depression, Anxiety, Stress Scale-21), PSS (Perceived Stress Scale), AWST (The Ardell Wellness Stress Test), SAS (A Self-Assessment of Stress), SCRI (Stress Coping Resources Inventory), Anxiety Self Rating Scale, The Leibowitz Social Anxiety Scale (LSAS), Patient Health Questionnaire (PHQ-9), and Generalized Anxiety Disorder (GAD-7). The study aimed to provide valuable insights into the prevalence and impact of stress and anxiety on the well-being of young females.

### Methodology

#### DEPRESSION ANXIETY STRESS SCALE - 21 (DASS-21)

- The first questionnaire which is DASS-21 Depression Anxiety Stress Scale-21 is asset of three self report scales designed to measure the emotional states of depression.

#### PERCEIVED STRESS SCALE (PSS)

- The Perceived Stress Scale (PSS) is a classic stress assessment instrument for helping us understand how different situations affect our feelings and our perceived stress.

#### ARDELL WELLNESS STRESS TEST

- The "Ardell Wellness Stress Test" then and now incorporates physical, mental, emotional, "spiritual" (i.e., meaning and purpose) and social aspects of health. It offers a balanced assessment of varied stress sources.

#### A SELF-ASSESSMENT OF STRESS

- This questionnaires is design to analyze the mentally, physical , psychological condition of the individual by answering relatable questions about their physical activities, their spiritual frequencies, and other activities.

#### STRESS COPING RESOURCE INVENTORY (SCRI)

- The stress Coping Resources Inventory (CRI) measures how people handle stress, conceived in five basic ways which correspond to the measure's scales. The five CRI scales are Cognitive (COG), Social (SOC), Emotional (EMO), Spiritual/Philosophical (S/P), and Physical (PHY).

#### ANXIETY SELF-RATING SCALE QUESTIONNAIRE

- The 10-item anxiety self-rating scale was a self-report tool that covers a range of physical and psychological anxiety symptoms. Participants are told to base their responses on the previous week's experiences.

#### THE LEIBOWITZ SOCIAL ANXIETY SCALE (LSAS)

- This test evaluates the impact social anxiety has on your life in a range of contexts. An overall score with a maximum of 144 points is produced by adding the total scores for the Fear and Avoidance components.

#### PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

- The nine self-report items on the two-page PHQ were completed by participants. An individual must first admit to having "had an anxiety attack, suddenly feeling fear or panic" within the previous four weeks in order to receive a diagnosis of panic disorder.

#### GENERALIZED ANXIETY DISORDER ASSESSMENT (GAD-7)

- A seven-item test called the Generalized Anxiety Disorder Assessment (GAD-7) is used to gauge or gauge the severity of generalized anxiety disorder (GAD).

A study was conducted on 100 healthy young female students (n=100) to investigate the prevalence of physiological stress and anxiety among young females to examine the frequency and intensity of stress and anxiety symptoms experienced by this specific demographic. Various physiological indicators and assessment tools were utilized to gather data and analyze the prevalence rates. The study aimed to provide valuable insights into the prevalence and impact of stress and anxiety on the well-being of young females.

### Results

**Figure 1.** DASS (depression , Anxiety, Stress Scale-21), PSS (Perceived Stress Scale), AWST (The Ardell Wellness Stress Test), SAS (A Self-Assessment of Stress), SCRI (Stress Coping Resources Inventory), Anxiety Self Rating Scale, The Leibowitz Social Anxiety Scale (LSAS),Patient Health Questionnaire (PHQ-9) & Generalized Anxiety Disorder (GAD-7). among the general population of university going female students

DEPRESSION ANXIETY STRESS SCALE-21 (DASS)		PERCEIVED STRESS		ARDELL WELLNESS STRESS TEST (AWS)	
Mild	26.25%	Mild	25.25%	Self-Actualized Person	7.5%
Moderate	12.50%	Moderate	12.50%	Mastered the Wellness	8.75%
Normal	58.75%	Normal	53.75%	Wellness Oriented	60%
Severe	1.25%	High	10%	Need Additional Training	7.5%
Extremely Severe	0%	Severe	1.25%	More Psychological Care	5%
Extremely Severe	0%	Extremely Severe	0%		

  

SELF ASSESMENT SYMPTOMS OF STRESS (SASS)		STRESS COPING RESOURCE INVENTORY (SCRI)		PATIENT HEALTH QUESTIONNAIRE (PHQ-9)	
Superior Stress -coper	0%	Wellness Scale	8.75%	Moderately Severe	15%
Above Average Stress -coper	45%	Thought control Scale	22.50%	None Minimal	22.50%
An Average Stress -coper	36.25%	Active Coping Scale	12.50%	Mild Anxiety	27.50%
Below Average Stress -coper	17.5%	Tension Reducing Scale	28.75%	Moderate Anxiety	35%
		Spiritual Practice Scale	11.25%	Severe	0%

  

ANXIETY SELF-RATING SCALE		GENERALIZED ANXIETY DISORDER (GAD-7)		LIEBOWITZ SOCIAL ANXIETY SCALE (SAD)	
Moderate Anxiety	12.50%	Severe Anxiety	6.25%	Probable SAD	40%
High Anxiety	10%	Moderate Severe Anxiety	17.50%	Unlikely SAD	47.50%
Mild Anxiety	25%	Mild Anxiety	30%	Normal SAD	12.50%
Extreme Anxiety	40%	Moderate Anxiety	46.25%	Very Probable	0%
Minimal Anxiety	42.50%			Highly Probable	0%

### Discussion

Stress and anxiety are prevalent occurrences that can significantly influence our overall well-being. The results indicate that a significant majority of respondents have encountered varying degrees of stress and anxiety in their past experiences. Moreover, the study highlights the substantial influence of stress and anxiety on individuals' lives, leading to a variety of physical and mental health issues.

It is crucial to acknowledge that the stress and anxiety are manageable conditions, and individuals facing difficulties should seek assistance from healthcare professionals. Cortisol, immunoglobulin A (sIgA), lysozyme, melatonin,  $\alpha$ -amylase, chromogranin A, and fibroblast growth factor 2 are the promising salivary biomarkers that have been associated with stress, anxiety, or depression. These biomarkers can provide insights into the physiological changes that occur in the body in response to these conditions.

Common treatment options for managing stress and anxiety include psychotherapy, medication (such as antidepressants, anti-anxiety medications, and beta-blockers), and lifestyle changes. These lifestyle changes may involve incorporating regular exercise into one's routine, practicing relaxation techniques like deep breathing or meditation, adequate amount of sleep, maintaining a healthy diet, and avoiding excessive consumption of caffeine and alcohol. Stress management techniques encompass various strategies, such as time management, setting achievable goals, prioritizing self-care activities, and participating in activities that foster relaxation and stress reduction, such as yoga or mindfulness exercises. Building a robust support network consisting of friends, family, or support groups can offer emotional support and empathy. Sharing experiences and seeking guidance from individuals who have faced similar challenges can be beneficial in managing stress effectively.

### Conclusions

Various validated questionnaires, such as the DASS (depression , Anxiety, Stress Scale-21), PSS (Perceived Stress Scale), AWST (The Ardell Wellness Stress Test), SAS (A Self-Assessment of Stress), SCRI (Stress Coping Resources Inventory), Anxiety Self Rating Scale, The Leibowitz Social Anxiety Scale (LSAS),Patient Health Questionnaire (PHQ-9) & Generalized Anxiety Disorder (GAD-7) are used to assess subjective experiences and symptoms related to stress and anxiety. These questionnaires provide standardized measures for evaluating the severity of symptoms along with other potential biomarkers of stress and Anxiety.

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