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Assessment of Mindful Eating Behavior and Perceived Stress Levels Among Female Non-resident Students in a Select College in Central Chennai

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Abstract: ***Psychological stress and maladaptive eating behaviors are increasingly prevalent among young adults, particularly in academic settings. This study aimed to examine the association between mindful eating behavior and perceived stress levels among female non-resident college students. A descriptive research design was adopted and data were collected using structured questionnaires to obtain information on demographic details, personal habits, mindful eating behavior, perceived stress levels with a sample of 150 participants aged 18–22 years selected through purposive sampling. Statistical analyses were conducted using descriptive measures and Pearson's correlation coefficient to assess the relationship between the variables. The results indicated moderate levels of perceived stress and varying degrees of mindful eating practices among participants. A statistically significant negative correlation was observed between mindful eating behavior and perceived stress levels suggesting that higher mindfulness in eating is associated with lower stress perception. The findings underscore the potential role of mindful eating as a behavioral strategy for stress regulation and psychological well-being among college students.***
Keywords: Mindful Eating Behavior, Perceived Stress, College Students, Psychological Well-being, Eating Patterns.

I. INTRODUCTION

College students often face a transition from adolescence to young adulthood; which can predispose them to follow inadequate eating habits which will affect both their mental and physical health [21]. Achieving a healthy lifestyle requires adopting habits such as consuming a nutritious diet, engaging in physical exercise regularly, ensuring adequate sleep and actively managing stress [10]. The rising number of students attending college has coincided with an increase in both unhealthy dietary practices and the incidence of weight gain [18]. Due to challenges like packed schedules, heightened stress, restricted access to nutritious food and existing unhealthy dietary practices, many students find it difficult to sustain proper eating habits [9].

Mindful eating is an approach of purposefully engaging with food without judgment, allowing individuals to heighten their awareness of the senses related to the meal and fully immerse themselves in the experience of consuming it [16]. It has a positive effect on intake of food by increasing the internal physical cues to eat and decreasing the emotional, external cues to eat. Mindfulness and acceptance based strategies are successful in both altering eating habits and improving mental health. Their positive outcomes include easing conditions like anxiety, depression and significantly boosting psychological mindfulness [14]. Engaging in mindfulness while in the food environment helps control food cravings and lowers the rate of cue-induced eating, thereby improving self-regulation around food [1].

Stress is defined as an intrinsic physiological and psychological response to perceived intimidating or demanding environmental circumstances. Students are experiencing high levels of psychological and emotional strain, typically attributable to multidimensional pressures originating from scholastic demands, examinations and expectations imposed by peers, instructors and parents [8]. When stress intensity exceeds an individual's physiological threshold, it becomes detrimental, causing cognitive impairment, especially affecting memory and judgment [19]. Stress-induced over-eating leads to obesity, which in turn is associated with changes in neurotransmitters, neuropeptides and inflammatory factors affecting both mood and subsequent eating behaviours [25].

Students who lack in effective coping mechanisms, stress holds the potential to detrimentally affect their physical and psychological welfare, scholastic achievement and holistic life functioning. Accelerated societal modernization has established stress as a pervasive feature of contemporary existence, this time period is frequently termed as the "age of stress"[23].

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Mindfulness-based interventions are suggested to modify dopamine pathways, which may lead to a reduction in addictive eating behaviours and an improvement in self-regulatory capacities, while also mitigating chronic stress [24]. Mindful eating employs various underlying mechanisms that collectively aid in weight reduction and the management of obesity-related health issues. By cultivating a positive and non-judgmental relationship with food, mindful eating minimizes the negative affective responses such as guilt and shame associated with consumption. These operative mechanisms suggest that mindful eating's benefits extend beyond weight loss to contribute significantly to durable behavioural changes in eating and improved overall health outcomes [13].

The study can help identify specific misconceptions, barriers and lifestyle challenges faced by non-resident students. It can also be an eye-opener for framing college health policies and for future interventions aimed at promoting overall well-being among young adults. The findings may further contribute to the development of targeted approaches within academic settings to address stress and promote mindful eating practices

II. REVIEW OF LITERATURE

College student's health and behavioral issues are gaining increasing global attention with the optimization and choices of dietary structure becoming key factors affecting their physical and mental development [26].

A. Health Outcomes in College Girls

Adhering to a healthy diet throughout the life cycle is crucial for overall health. However, numerous studies have found that many college students fail to meet the recommendations of food-based dietary guidelines alongside recommended energy and nutrient intakes [7].

B. Faulty Dietary Habits

Students become responsible for their food choices because of their freedom during college and tend to often consume oily, deep-fried food, fast food, packaged snacks and sugary drinks. These unhealthy food preferences can lead to obesity, nutritional deficiencies and an increased risk of chronic diseases like diabetes mellitus and cardiovascular disease. Disturbed eating schedules, skipping meals can contribute to poor dietary habits [22].

C. Eating Disorders

Eating disorders are a group of serious mental illnesses characterized by alterations in food intake due to a distorted perception of body image and an excessive pre-occupation with body image and food eaten. It covers a wide spectrum of clinical manifestations, the most well-known of which are anorexia nervosa and bulimia nervosa [3].

D. Prevalence of eating disorder in female college students

Eating disorder behaviour was reported in a study of 1600 students in which 10.6 per cent of females had eating disorders which includes anorexia nervosa, binge eating disorder and bulimia nervosa [17].

E. Patterns of physical activity among college-going girls

Studies showed comparatively lower level of physical activity among college-going girls during academic hours than during extracurricular periods and weekends. This finding underscores the need for targeted interventions including the incorporation of active breaks during lectures, brief in-class physical activity sessions and the promotion of structured physical, recreational activities during weekends to enhance overall physical activity levels [6].

F. Mindful Eating

Mindful eating is the act of eating while being in a state of non-judgmental awareness, shifting one's attention to the food and mind-body connection. Thus, allowing exploration of the complex cognitive-biological experience of eating [5]. It is a practice that encourages an intentional and conscious relationship with food by promoting awareness and presence during meals. Inspired by Buddhist traditions, it focuses on slowing down, savoring the sensory aspects of eating and paying attention to the body's natural signals of hunger and fullness [4].

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G. Importance of promoting mindful eating in college students

Mindful eating is a potential strategy to address multiple health concerns in college students such as improving body composition, reducing the consumption of unhealthy food, mitigating symptoms of depression, anxiety and stress. The high prevalence of overweight, obesity, unhealthy eating behaviors and emotional distress challenges in the population such that integrating mindful eating programs into student health initiatives could have substantial public health benefits [15].

H. Stress in College Students

College students are in the stage of transition from adolescence to adulthood and may experience significant stress while adjusting to the changing social environment in college life [20]. They face stress from many sources, including academic pressure, financial burdens, concerns about meeting parental expectations, building interpersonal relationships and adjusting to new environments. Students who are experiencing higher levels of stress are known to exhibit poorer adjustment outcomes such as an increased risk of mental health problems and decreased academic engagement [11].

I. Coping Mechanisms of Stress

Coping is defined as the thoughts and behaviors mobilized to manage internal and external stressful situations. Coping strategies adopted by an individual may vary according to the specific source of stress experienced or the resources available to them and may change over time [12]. It is generally categorized into four major categories which are: problem-focused, emotion-focused , meaning-focused ,social coping (support-seeking) [2].

J. Cherpak's stress-digestion-mindfulness triad

It is a model developed to distinguish the role of stress in inducing digestive distress, as well as the role of mindfulness in optimizing digestion. This framework recognizes how chronic stress disrupts homeostasis. When stress levels remain elevated, they deplete the metabolic reserve, reducing the body's ability to protect vital organs from the harmful consequences of the physiological stress response [5]. The Cherpak's stress-digestion-mindfulness triad is shown in fig.1.

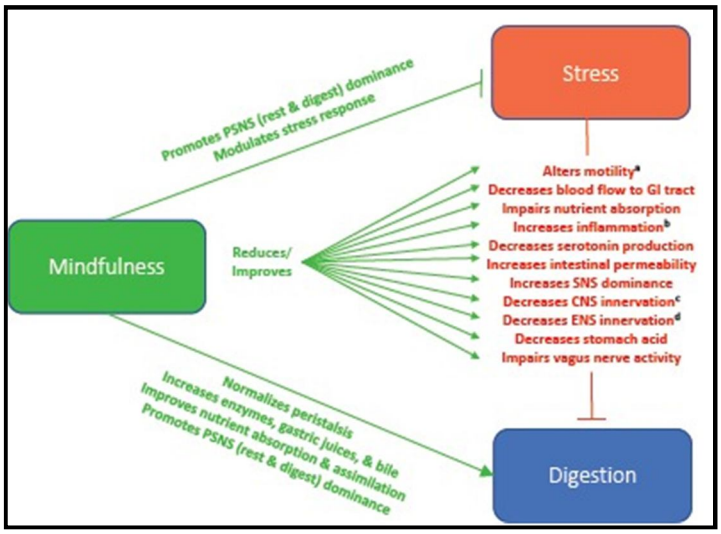


Fig. 1 Cherpak's stress-digestion-mindfulness triad

III. METHODOLOGY

This study assesses the mindful eating behavior and perceived stress levels among female non-resident students aged 18–22 years in a selected college in Central Chennai. A descriptive research design was employed. A total of 150 participants were selected from Ethiraj College for Women, Chennai using purposive sampling method. Ethical approval was obtained from the Institutional Ethics Committee of Women's Christian College, Chennai and informed consent was secured. Data were collected using structured questionnaires on demographic details, personal habits, stress and mindful eating behavior. The mindful eating behavior of the participants was assessed by using a standard mindful eating behavior scale and perceived stress levels was assessed using the perceived stress scale (Winkens et al.,2018 and Cohen et al.,1983). Data were analyzed using descriptive and inferential statistics including mean, standard deviation and Karl Pearson's correlation coefficient.

The findings are expected to contribute to the development of strategies aimed at reducing perceived stress and improving mindful eating behavior among students. Additionally, the results may contribute to creating awareness, guiding policy decisions and enhancing overall health and well-being in the college population.

IV. RESULTS AND DISCUSSION

A. *Descriptive results*

1) *Demographic Profile*

(i) The study included 150 female college students aged between 18–22 years, with a mean age of 19.8 ± 1.47 years, indicating a young adult population. The educational status indicated that the majority of participants were undergraduates (60%), while 40 per cent were postgraduates.

(ii) Based on annual family income classification, most participants belonged to the middle-income group I (34%), followed by low-income group (31.3%), very low-income group (20%) and middle-income group II (14.7%), reflecting a moderately diverse socioeconomic background.

(iii) Family type distribution showed that a large proportion of participants (80.6%) belonged to nuclear families, while 16 per cent were from joint families and only 3.3% from extended families. The mean height and weight of the participants were 157.8 ± 6.6 cm and 60.07 ± 14.3 kg, respectively, indicating average physical characteristics for the age group.

2) *Personal Habits of the participants*

(i) Lifestyle assessment revealed that a considerable proportion of participants had high screen exposure, with 37.3% reporting 4–6 hours of screen time per day, followed by 29.3 per cent with 2–4 hours. A significant majority (82.7%) reported using mobile phones before sleep, indicating poor sleep hygiene practices. The percentage distribution of participants based on their duration of screen time per day is represented graphically in fig 2.

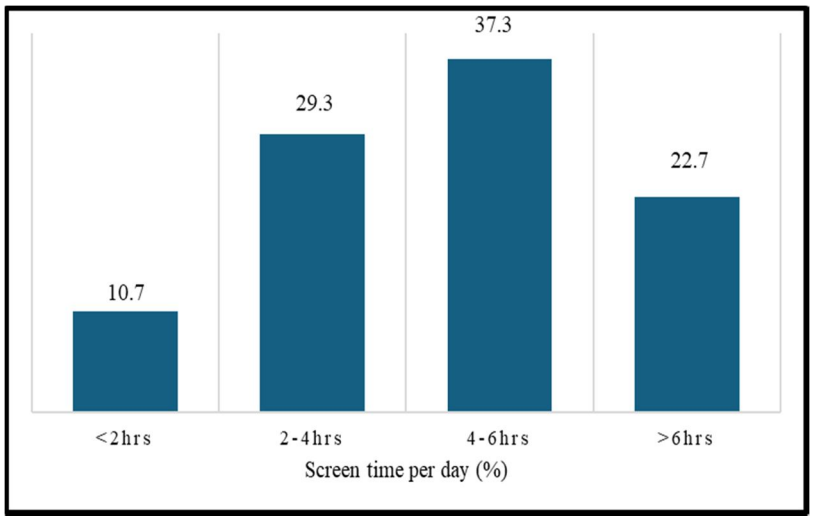


Fig. 2 Percentage distribution of participants based on their duration of screen time per day

(ii) Regarding sleep patterns, 48.7 per cent of participants reported sleeping for 7–8 hours, while 37.3 per cent slept for 5–6 hours, suggesting that although many achieved adequate sleep duration, a notable proportion experienced suboptimal sleep.

(iii) The findings further indicated that 58.7 per cent of participants did not follow a fixed daily routine, reflecting irregular lifestyle patterns. Physical activity levels were also low, with 51.3 per cent not engaging in regular physical activity. Among those who were active, walking (35.6%) and household chores (27.4%) were the most common forms, indicating reliance on low-intensity activities.

3) *Mindful Eating Behavior of the Participants*

The percentage distribution of participants based on their mindful eating behavior is presented in table I.

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Table I
Mindful Eating Behavior Of The Participants

Domain	Mean ± S.D	Interpretation
Focused Eating	20.07 ± 5.6	Moderate
Hunger & Satiety	18.17 ± 6.3	Moderate
Eating Awareness	11.63 ± 4.1	Moderate
Eating Without Distraction	14.80 ± 5.8	Moderate

4) Stress response of the participants

The percentage distribution of participants based on their stress response is presented in table II.

Table II
Stress Response Of The Participants

Stress Level	Number	Percentage
Low	91	60.7%
Moderate	28	18.7%
High	31	20.7%

B. Inferential results

1) Correlation analysis

Table III
Mindful Eating Behavior And Mean Perceived Stress Levels Of The Participants

Domains of Mindful Eating	Mean ± S.D	Mean Perceived	'r' value	't' value	p value	Interpretation
Focussed	20.07 ± 5.6	16.28 ± 9.28	+0.42	5.12	$p < 0.001$	Significant moderate positive
Reliance on	18.17 ± 6.3		+0.38	4.62	$p < 0.001$	Significant moderate positive
Eating with	11.63 ± 4.1		+0.46	5.62	$p < 0.001$	Significant moderate positive
Eating without	14.80 ± 5.8		+0.34	4.13	$p < 0.001$	Significant moderate positive

V. SUMMARY

The study findings indicate that most participants were young college women with moderate lifestyle irregularities, including high screen time, poor adherence to physical activity. A considerable proportion of participants exhibited moderate levels of perceived stress along with irregular behavioral patterns influencing their eating habits. The assessment of mindful eating revealed varying levels across its domains, suggesting inconsistent awareness and engagement in mindful eating practices among students. Inferential analysis demonstrated a statistically significant association between perceived stress levels and mindful eating behavior, indicating that higher stress was linked with poorer mindful eating practices. These findings highlight the relationship between psychological factors and mindful eating behavior, emphasizing the need for targeted strategies to reduce stress and enhance mindful eating among students.

VI. CONCLUSION

The present study evaluated mindful eating behavior and perceived stress levels among non-resident female college students (n = 150) in a selected college in Central Chennai. The findings indicated that a notable proportion of participants experienced moderate levels of perceived stress alongside inconsistencies in mindful eating practices, indicating a potential imbalance between psychological well-being and eating behavior. The significant association observed between perceived stress and mindful eating suggests that elevated stress levels may adversely influence an individual's ability to engage in attentive and regulated eating. The study highlights the need for focused approaches that promote stress management and foster mindful eating practices among the college students. Strengthening these aspects may contribute to improved behavioral outcomes and overall well-being among students.

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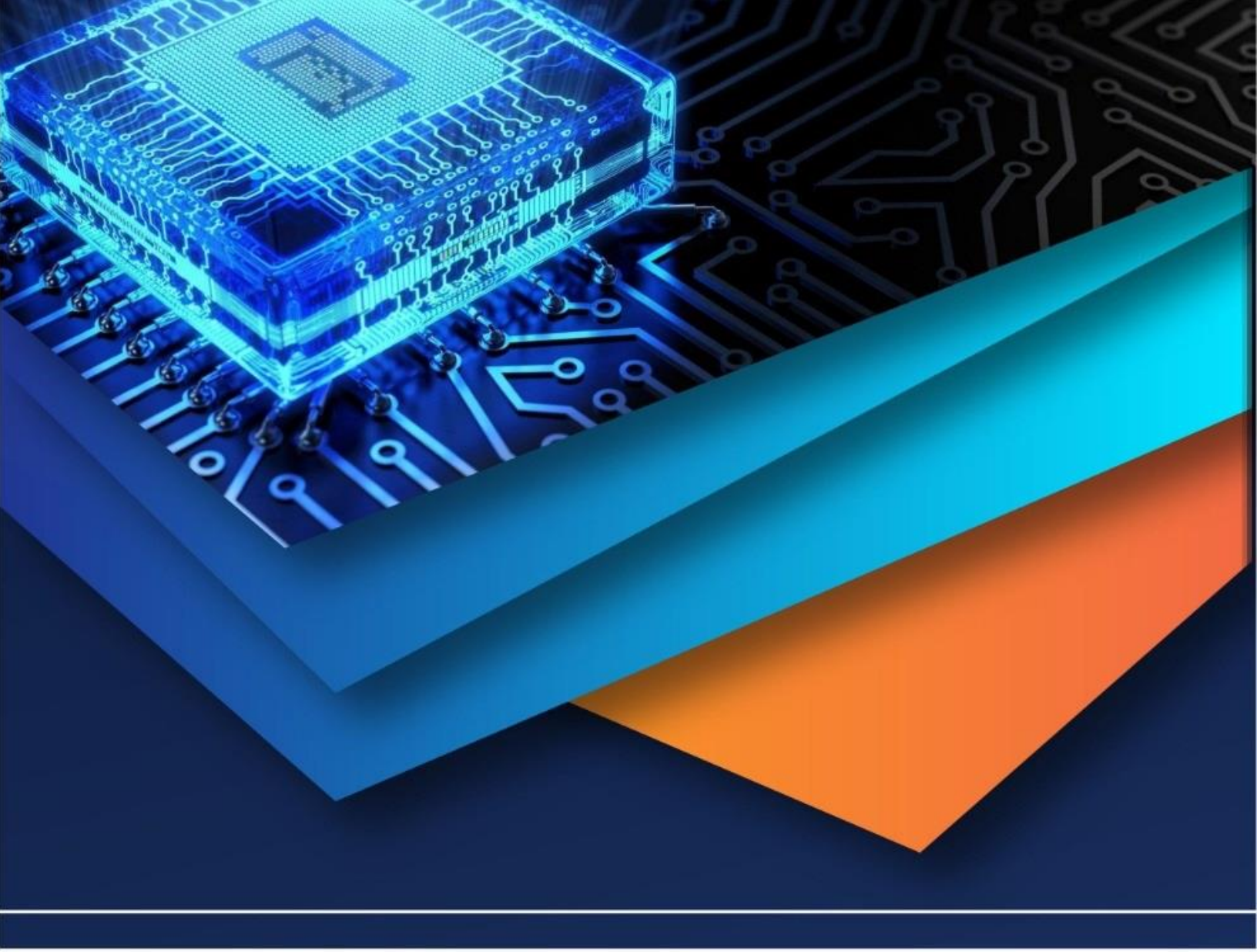
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