

PREVALENCE OF OBESITY AND DIETARY BEHAVIOR AMONG YOUNG ADULTS AGE 25-40 YEARS

Rukhsana Hanif¹, Summaira Feroze², Tabassum Jabeen³, Shabar uddin Lashari⁴, Sadia Ayoub⁵, Hafsa Ayoub⁶, Dr. Shammem Akhtar^{*7}

¹Post-RN BSN, MSN Scholar, People's Nursing School Liaquat University of Medical and Health Sciences Jamshoro

²Post-RN BSCN Specialization in Pediatrics Nursing MPhil in Islamic studies Nishter Hospital Multan.

³Post-RN BSN. Nishter Hospital Multan.

⁴MSN Scholar, People's Nursing School Liaquat University of Medical and Health Sciences Jamshoro

⁵4th Year BSN Nursing Student Nishter Nursing College Multan

⁶BS Nursing, Staff Nurse Indus Hospital Muzaffar Garh

^{*7}Assistant Professor, Institute of Clinical Psychology, University of Management and Technology, Sialkot.

¹rukhsana.hanif213@gmail.com, ²mairamaya263@gmail.com, ³tabasum1212446@gmail.com

⁴shabar.786 baloach@gmail.com, ^{*7}shammem.akhtar@skt.umt.edu.pk

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Corresponding Author: *
Dr. Shammem Akhtar

Abstract

Background:

Obesity is a growing global public health concern, with rising prevalence among young adults due to shifting dietary patterns and sedentary lifestyles. Nursing students, despite their health science background, are not immune to these risks.

Objectives:

To determine the prevalence of obesity among young adults aged 25–40 years, assess dietary behavior patterns, and evaluate the influence of socio-demographic factors, with the aim of recommending effective health promotion strategies.

Methodology:

A cross-sectional survey was conducted at Jamshoro College of Nursing, Sindh, Pakistan. A purposive sample of 43 nursing students aged 25–40 years, free from diagnosed metabolic disorders, was recruited. Data collection tools included BMI measurements, a self-reported Dietary Behavior Questionnaire adapted from the Food Frequency Questionnaire, and a demographic data sheet. Data were analyzed using descriptive and inferential statistics.

Results: Among participants, 37.2% were overweight and 20.9% were obese. Poor dietary habits were common: 44.2% consumed fast food ≥ 3 times per week, 53.5% ate late at night, and 48.8% reported low fruit/vegetable intake (< 2 servings/day). Breakfast skipping was noted in 39.5% of participants, and 41.9% consumed soft drinks frequently. Socio-demographic analysis showed no significant association between obesity prevalence and gender or marital status, though variations were noted across income levels.

Conclusion:

The findings reveal a high prevalence of overweight and obesity, coupled with unhealthy dietary practices, among nursing students. Targeted nutritional

education and lifestyle interventions are essential to bridge the gap between knowledge and practice in this population.

INTRODUCTION

Obesity is a growing public health concern worldwide, with rates rising dramatically across all age groups. Globally, more than 1.9 billion adults were overweight in 2016, of which over 650 million were obese (World Health Organization, 2021). While obesity was once considered a problem limited to high-income countries, recent trends indicate a sharp increase in low- and middle-income countries, including Pakistan. This increase is largely attributed to urbanization, sedentary lifestyles, and a shift from traditional diets to calorie-dense fast foods.

In Pakistan, obesity has emerged as a major non-communicable health issue, particularly in urban areas where access to processed foods, sugary beverages, and inactive routines are common. According to the Pakistan Demographic and Health Survey (PDHS, 2017–18), nearly 38% of women and 27% of men aged 25–40 was either overweight or obese. These statistics reflect an alarming trend, particularly in a country simultaneously battling undernutrition and food insecurity in rural populations. The double burden of malnutrition in Pakistan presents a complex challenge for healthcare professionals and policymakers.

Young adulthood (ages 25–40) is a critical period for establishing long-term health behaviors. However, this age group in Pakistan often faces significant lifestyle pressures, such as balancing work and family responsibilities, which can lead to poor eating habits, emotional eating, meal skipping, and reduced physical activity. With increasing exposure to fast food culture and the influence of social media, many young adults adopt Westernized dietary patterns that prioritize convenience over nutrition (Afzal & Naveed, 2019).

Moreover, there is a lack of structured public health initiatives targeting obesity prevention specifically in this age group. Public awareness regarding nutrition, portion control, and the long-term consequences of obesity is generally low. Cultural factors, such as the preference for high-fat traditional foods and the social

acceptance of weight gain after marriage, also contribute to the issue. Despite its growing prevalence, research focusing on obesity and dietary patterns in young adults in Pakistan remains limited, necessitating further investigation to guide intervention and policy.

Obesity is a multifactorial condition influenced by genetic, behavioral, environmental, and cultural factors. Dietary behavior is considered one of the most modifiable risk factors in the development and management of obesity. Studies from both developed and developing countries have consistently shown a strong association between unhealthy dietary patterns and increased body mass index (BMI).

A study by (Mozaffarian et al., 2011) highlighted that regular consumption of processed foods, sugar-sweetened beverages, and red meat contributes significantly to long-term weight gain, while increased intake of fruits, vegetables, whole grains, and nuts is associated with weight maintenance and loss. Similarly, Astrup et al. (2008) emphasized that meal frequency, portion sizes, and energy density of foods are key dietary contributors to the development of obesity.

In Pakistan, research has shown that rapid urbanization and modernization have led to a nutritional transition, characterized by increased consumption of calorie-dense fast food, fried snacks, and sugary drinks. Mushtaq et al. (2011) conducted a national survey and found that overweight and obesity were prevalent among both children and adults, with urban populations at higher risk due to sedentary behaviors and poor dietary habits. In the context of Pakistan, the situation is equally concerning. Recent studies have shown a rise in the prevalence of overweight and obesity, particularly in urban populations where dietary habits are shifting toward fast food consumption, high sugar intake, and reduced physical activity (Afzal & Naveed, 2019; Zaman et al., 2020). Additionally, cultural norms—such as the association of heavier body size with health or prosperity, and gender-based restrictions on physical mobility—can further

influence dietary behaviors and contribute to poor weight management, especially among women (Faruque et al., 2021).

Despite these alarming trends, there remains a lack of in-depth empirical research exploring the intersection of obesity and dietary behaviors specifically among Pakistani young adults. Understanding these behaviors in relation to sociodemographic variables such as education, income, and marital status can help in developing evidence-based strategies tailored to this population. Therefore, this study seeks to address the research gap by examining the prevalence of obesity and investigating the dietary behaviors of adults aged 25 to 40 years in urban Pakistan.

Rationale

Obesity is a growing public health problem worldwide, increasingly affecting young adults due to poor dietary habits and sedentary lifestyles. Nursing students, despite their health-related education, are not immune to these risks. This is particularly concerning as obesity is a major risk factor for chronic diseases such as diabetes, hypertension, and cardiovascular disorders, which place a heavy burden on healthcare systems. The high rates of overweight and obesity identified among nursing students in this study—along with patterns of frequent fast food consumption, low fruit and vegetable intake, and meal skipping—suggest a significant gap between health knowledge and personal lifestyle practices. Understanding the prevalence and dietary behavior patterns in this group is essential for designing targeted interventions, promoting healthier lifestyles, and ensuring that future healthcare professionals can model and advocate for positive health behaviors in their communities.

OBJECTIVES

1. To determine the prevalence of obesity among young adults aged 25 to 40 years
2. To explore the association between dietary behaviors and BMI levels.
3. To evaluate the influence of socio-demographic factors (e.g., income,

education, marital status) on dietary habits and obesity.

4. To provide recommendations for health promotion strategies targeting young adults.

METHODOLOGY

Research Design: This study employed a quantitative cross-sectional survey design to assess the prevalence of obesity and dietary behaviors among young adults aged 25 to 40 years. This design is appropriate for examining associations between variables at a single point in time (Creswell, 2018).

Study Setting: The data were collected from the Jamshoro College of Nursing, Sindh, Pakistan. The target population comprised young adult nursing students aged 25 to 40 years. This specific group was chosen due to their accessibility, health-related academic background, and relevance in understanding behavioral risk factors.

Sampling Method: A non-probability purposive sampling technique was used to recruit participants who met the inclusion criteria. This approach allowed the researcher to focus on individuals with specific characteristics relevant to the study.

Sample Size: A total of 43 participants were included in the study. The sample size was determined based on feasibility, time constraints, and previous research involving similar populations.

Inclusion Criteria:

- Age between 25 and 40 years
- Willingness to participate
- No diagnosed metabolic or endocrine disorders

Data Collection Procedure: Participants recruited through in-person outreach. Informed consent obtained, and anonymity will be ensured 43 nursing students were the part of this study.

Tools/Instruments:

1. **BMI Calculation:** Weight and height will be measured using standardized procedures.

2. **Dietary Behavior Questionnaire (DBQ):** A self-reported tool based on the Food Frequency Questionnaire (FFQ) format.
 3. **Demographic Sheet:** To collect information such as age, gender, income, education, and marital
- Ethical consideration:** Informed consent and confidentiality of data maintained throughout the research process.

Results

Table 1: Demographic Characteristics of Participants (N = 43)

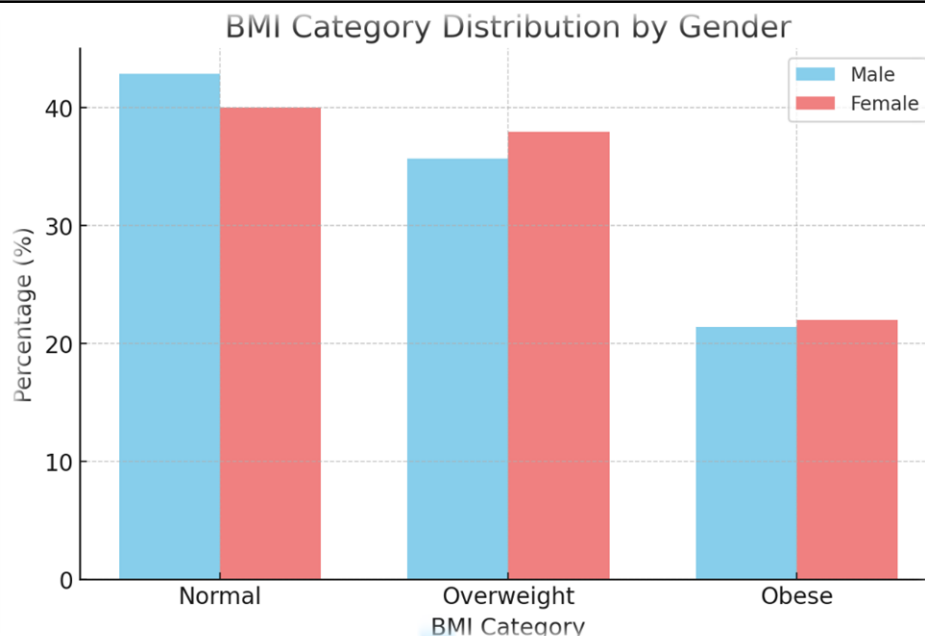
Variable	Categories	Frequency (n)	Percentage (%)
Age (years)	25–30	22	51.2%
	31–35	13	30.2%
Gender	36–40	8	18.6%
	Male	12	27.9%
	Female	31	72.1%
Marital Status	Single	21	48.8%
	Married	22	51.2%
Monthly Income (PKR)	< 30,000	17	39.5%
	30,000–50,000	19	44.2%
	> 50,000	7	16.3%

Table 2: Body Mass Index (BMI) Classification of Participants

BMI Category	Range (kg/m ²)	Frequency (n)	Percentage (%)
Underweight	< 18.5	3	7.0%
Normal weight	18.5–24.9	15	34.9%
Overweight	25–29.9	16	37.2%
Obese	≥ 30	9	20.9%

Table 3: Frequency of Unhealthy Dietary Behaviors

Dietary Behavior	Regularly (%)	Sometimes (%)	Rarely/Never (%)
Consumes fast food (>3x/week)	44.2%	34.9%	20.9%
Skips breakfast	39.5%	27.9%	32.6%
Low fruit/vegetable intake (<2/day)	48.8%	30.2%	20.9%
High soft drink consumption	41.9%	32.6%	25.5%
Eats late at night (>9 PM)	53.5%	27.9%	18.6%



Bar Chart showing the percentage of males and females in each BMI category (Normal, Overweight, Obese).

4.4. DISCUSSION

The findings of this study indicate a high prevalence of overweight (37.2%) and obesity (20.9%) among young adult nursing students aged 25 to 40 years. These results align with previous studies highlighting the rising trend of obesity in South Asian populations due to dietary and lifestyle changes (Afzal & Sultan, 2020; Bhutta et al., 2019).

Notably, over 40% of participants reported regular consumption of fast food and soft drinks, both of which are known contributors to increased BMI and metabolic disorders (Malik et al., 2013). Additionally, more than half of the respondents frequently skipped breakfast and consumed meals late at night – behaviors linked with poor metabolic outcomes and increased adiposity (Timlin & Pereira, 2007; Kant & Graubard, 2004).

Mendes-Netto et al. (2016) found that nursing students often engaged in unhealthy eating patterns despite having knowledge of nutrition, due to factors such as academic pressure and irregular schedules.

Yahia et al. (2008) reported that a large number of university students regularly skipped meals and consumed fast food, indicating a disconnect between nutritional awareness and behavior.

Despite being health science students, many participants demonstrated poor dietary habits, suggesting a possible gap between knowledge and practice. This reflects findings from other nursing cohorts where academic stress, shift work, and limited time were barriers to healthy eating (Al-Qahtani, 2019).

The use of a self-reported FFQ-based Dietary Behavior Questionnaire may have introduced recall bias; however, the standardized BMI measurements helped ensure objective assessment of obesity status.

CONCLUSION

This study highlights a concerning prevalence of overweight and obesity among young adult nursing students, alongside widespread unhealthy dietary behaviors such as frequent fastfood consumption, soft drink intake, skipping breakfast, and low fruit and vegetable consumption. Despite their academic background

in health sciences, many participants demonstrated a significant gap between nutritional knowledge and personal health practices.

The findings underscore the urgent need for targeted health promotion strategies that go beyond awareness and actively support behavior change. Interventions such as structured nutritional education, lifestyle counseling, improved campus food environments, and stress management support can play a crucial role in addressing this growing public health issue.

By fostering healthy habits in future healthcare professionals, institutions not only safeguard student well-being but also enhance the credibility and effectiveness of health promotion efforts within the wider community. Ultimately, integrating health education with supportive systems and policy initiatives is essential for mitigating obesity-related risks and cultivating a culture of wellness among young adults.

Limitations of the Study

This study has several limitations that should be considered when interpreting the findings. Firstly, the sample size was relatively small, comprising only 43 nursing students from a single institution (Jamshoro College of Nursing, Sindh), which limits the generalizability of the results to other populations or settings. Secondly, the use of a self-reported Food Frequency Questionnaire (FFQ) to assess dietary behaviors may have introduced recall bias and social desirability bias, potentially affecting the accuracy of the reported dietary patterns. Additionally, the cross-sectional design of the study limits the ability to establish causal relationships between dietary habits, socio-demographic variables, and BMI levels. Another limitation is the lack of data on physical activity, which is an important factor influencing weight status but was not included in this study. Furthermore, potential confounding factors such as sleep quality, psychological stress, and family history of obesity were not assessed, which may have influenced the observed outcomes. Despite these limitations, the study provides valuable insights into the dietary behaviors and obesity prevalence among young

adult nursing students and highlights areas for future research and intervention.

Recommendations

1. **Implement Nutritional Education Programs**
 - Develop curriculum-integrated nutrition workshops tailored for nursing students.
 - Emphasize the importance of balanced meals, especially breakfast, and the risks of frequent fast food and soft drink consumption.
2. **Promote Healthy Campus Food Environments**
 - Collaborate with campus canteens to offer healthier food options, including fruits, vegetables, and whole grains.
 - Reduce the availability of high-calorie fast foods and sugar-sweetened beverages within campus premises.
3. **Provide Lifestyle Counseling and Support Services**
 - Offer regular counseling sessions focused on diet, stress management, and physical activity.
 - Establish peer-support groups or wellness clubs to encourage behavior change through motivation and accountability.
4. **Integrate Health Behavior Change Theories into Nursing Education**
 - Teach nursing students about the Health Belief Model, Theory of Planned Behavior, and stages of behavior change.
 - Use these frameworks to help students reflect on their own habits and act as health role models.
5. **Encourage Physical Activity and Active Lifestyles**

- Facilitate access to fitness facilities or organized physical activity programs on campus.
 - Promote daily movement through awareness campaigns (e.g., walking challenges, yoga sessions).
6. **Conduct Routine Health Screenings**
- Implement annual BMI and health screenings for early detection and personalized intervention.
 - Use these assessments as teaching opportunities to reinforce the importance of preventive care.
7. **Address Time-Management and Academic Stress**
- Provide time-management workshops to help students better balance academic demands with self-care.
 - Encourage mindfulness and relaxation techniques to combat emotional eating and late-night snacking.
8. **Develop Policy-Level Interventions**
- Advocate for institutional health policies that support nutritious food access and limit exposure to unhealthy food marketing on campus.

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