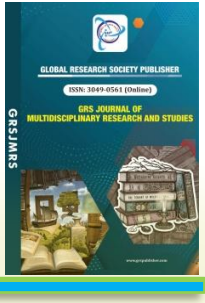
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Factors Influencing the Eating Behavior of Medical Students in Azerbaijan

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Abstract: Background: Eating behaviors are shaped by psychological, social, and cultural determinants. Unhealthy food choices are closely associated with obesity, metabolic disorders, and other health problems. This study aimed to identify the psychological and social factors shaping eating behaviors among students of Azerbaijan Medical University and to examine the relationships among these factors using factor analysis.

Methods: The study included 200 medical students aged 18–30 years. Eating behaviors were assessed using the Dutch Eating Behavior Questionnaire (DEBQ). Factor analysis was performed using the Principal Component Analysis (PCA) method.

Results: Four principal factors explaining 65.7% of the total variance were identified: healthy eating, unhealthy eating habits, environmental influences, and psychological factors. The healthy-eating factor had the highest mean score (3.8), while the mean scores for unhealthy habits, environmental influences, and psychological factors were 2.4, 3.1, and 2.9, respectively. Despite the relatively high level of healthy eating behaviors, emotional eating and the influence of social media played a substantial role in students' eating patterns.

Conclusions: Psychological and social influences play an important role in shaping the eating behaviors of medical students. The findings may inform the development of public health interventions aimed at improving eating habits among young people.

Keywords*: Eating Behavior; Emotional Eating; Students; Social Determinants; Factor Analysis; Public Health; DEBQ.*

Cite this Article

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Introduction

Eating behaviors are among the most important factors affecting people's quality of life and health. In contemporary society, food-consumption habits are shaped not only by the need to meet biological requirements but also by psychological, social, and cultural influences. The analysis of eating behaviors is of considerable importance to public health because unhealthy eating is closely associated with obesity, metabolic diseases, and other health problems. Eating behavior is a multidimensional phenomenon that develops through the interaction of psychological, social, and cultural determinants. Current research indicates that these behaviors cannot be explained solely by biological and physiological factors; rather, individual choices occur within a broader psychosocial context [1].

Eating behavior is a multifaceted process shaped by psychological, social, cultural, and environmental factors [1]. The findings of such research may provide an important basis for better understanding the dietary habits of medical university students and for developing future healthcare programs.

Materials and Methods

This was a quantitative, empirical, and descriptive study. It aimed to assess eating behaviors among students of Azerbaijan Medical University and to analyze how these behaviors are associated with psychological, social, and cultural factors.

The study included 200 students of Azerbaijan Medical University aged 18–30 years. Gender and age were recorded in accordance with the study objectives; however, the

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principal focus was on how eating behaviors are shaped by psychological and social factors.

Data were collected using a questionnaire. The Dutch Eating Behavior Questionnaire (DEBQ), a psychometric instrument developed in the Netherlands to assess different aspects of eating behavior, was used to evaluate disordered eating behaviors. The questionnaire consists of 34 items. Participants were asked questions concerning various psychological and social factors that may influence eating behaviors [2]. The questions were grouped into the following domains:

1. Eating control: the degree of control over food intake and dietary regulation.

2. Emotional eating: eating habits in response to stress, distress, or other emotional states.

3. Social and family influences: the impact of family members and friends on food choices.

4. Environmental influences: the effects of social media, advertising, and society.

Factor analysis was applied to the study data. Factor analysis is a statistical method used to identify relationships among variables and reveal underlying structures. In this study, the analysis was conducted using Principal Component Analysis (PCA). PCA is used to represent a set of variables by a smaller number of components, thereby making the data easier to interpret [3]. SPSS software was used for the analysis. Participants were informed about the purpose and expected outcomes of the study, and no personal identifying questions were asked [4].

Results and Discussion

Factor analysis (PCA) was applied to examine the psychological and social factors determining eating behaviors among students of Azerbaijan Medical University. The students included in the study responded to four questions considered central to the 34-item DEBQ questionnaire. Factor analysis identified four principal factors from the 34 items. These factors explained 65.7% of the total variance, indicating a substantial proportion of explained variance. The four factors were as follows:

1. Healthy eating behavior. This factor reflects behaviors associated with healthy eating and dietary control. It includes fruit and vegetable consumption, water intake, balanced portion control, and attention to dietary variety.

2. Unhealthy habits. This factor reflects the consumption of fast food and sugar-sweetened beverages, eating late at night, and preferences for high-calorie products. It indicates behaviors associated with urbanization and stress.

3. Environmental influences. This factor reflects the effects of social media, advertising, and family and friends on eating behaviors, highlighting the role of the social environment and societal influences.

4. Psychological factors. This factor reflects stress-related and emotional eating behaviors. Stress, emotional hunger, and feelings of guilt are its main components.

These findings indicate that eating behaviors are determined by a complex structure influenced by a wide range of factors (Table 1). Table 2 presents the principal variables included in each factor and their factor loadings.

The healthy-eating factor had the highest mean score (3.8), suggesting that participants paid greater attention to healthy eating. The unhealthy-habits factor had a lower mean score (2.4), which may indicate a lower frequency of unhealthy eating habits. Environmental influences and psychological factors had mean scores of 3.1 and 2.9, respectively, indicating a notable influence.

According to the factor-analysis results, healthy eating accounted for the largest proportion of the variance. Respondents' consumption of fruit and vegetables, balanced portion control, and attention to water intake were rated more highly than the other factors. This suggests that participants paid considerable attention to healthy eating habits. However, these habits are generally observed more frequently among students with higher levels of education and greater health awareness [1, 4].

The unhealthy-habits factor includes fast-food consumption, sugar-sweetened beverages, and eating late at night. This factor indicates the presence of problematic eating patterns among respondents. The findings suggest that modern lifestyles may encourage the consumption of unhealthy foods. An increase in unhealthy habits may contribute to a higher risk of health problems such as obesity, diabetes, and cardiovascular diseases [2].

Environmental influences are also highly relevant and demonstrate how social media, advertising, and societal factors affect eating behaviors. Social influences and advertising may increase people's preference for foods that can lead to unhealthy eating habits and weight gain. For example, restaurant advertisements and the sharing of food images on social media may increase the desire to eat [5, 6].

Psychological factors shape emotional eating behaviors. These factors are also associated with feelings of guilt and self-blame, which influence food choices. They include emotional hunger and eating in response to difficult situations [7]. Similar studies confirm that psychological stress and emotional states have a significant effect on eating habits [8].

The study findings indicate a significant relationship between healthy eating and psychological factors. Students who reported healthy eating habits also reported lower stress levels and better sleep quality. This suggests that healthy eating habits may help improve psychological well-being. At the same time, a positive relationship was observed between unhealthy habits and environmental influences.

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Social influences and advertising may increase fast-food consumption and encourage less healthy eating habits [6].

Future studies and recommendations should include different age groups and social strata and be conducted across wider geographical areas. Such research could enable a more comprehensive assessment of the effects of the social environment and cultural factors on eating behaviors. In addition, research into mindful-eating approaches should be conducted to explore possible interventions for reducing emotional eating [9].

The study is of both theoretical and practical importance. From a theoretical perspective, it represents one of the first attempts to analyze the psychological and social determinants of eating behaviors in Azerbaijan. In practical terms, the findings may contribute to the development of programs and policies aimed at changing eating behaviors.

Table 1. Variance explained by the factors

Factor	Variance explained (%)	Cumulative variance (%)
Healthy eating	22.4	22.4
Unhealthy habits	17.6	40.0
Environmental influences	13.5	53.5
Psychological factors	12.2	65.7

Table 2. Factor loadings

Factor	Principal variables	Factor loading
Healthy eating	Daily fruit and vegetable consumption	0.81
	Attention to water intake	0.78
	Balanced portion control	0.74
	Emphasis on dietary variety	0.69
Unhealthy habits	Fast food and sugar-sweetened beverage consumption	0.83
	Eating late at night	0.77
	Preference for salty and sugary foods	0.72
Environmental influences	Influence of social media and advertising	0.80
	Influence of family and friends	0.76
	Societal pressure regarding ‘appropriate eating behavior’	0.71
Psychological factors	Eating during stress and distress	0.79
	Feelings of guilt and self-perception	0.75
	Emotional hunger and enjoyment of food	0.70

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