

Assessment of eating habits and knowledge regarding daily nutritional requirements among university students

Abstract

Adolescence is one of the most vigorous and compound change in the lifespan. Adolescence, as a changing period between childhood and adulthood is linked with drastic change and development of the emotional, physical and cognitive functions. Eating behaviors and nutritional health can markedly be affected by the physical, developmental, and social changes that occur during adolescence. Poor eating behavior includes meal skipping, snacking sugary foods, soft drinks and sweet, fast foods and increase intake of saturated fats among adolescents. In developed and developing countries several studies have shown that dietary practices of students are pathetic due to high intake of fatty and carbohydrate rich foods and lower intake of fresh fruits, vegetables, milk and milk products. In modern countries, major cause of mortality and morbidity even in younger age groups are chronic diseases. Healthy eating habits are essential for students to achieve academic potential, physical and intellectual development, life-long strength and comfort. Nutritional knowledge is one of the key factors for the choice and eating of suitable diet which increase the nutritional status of an individual.

Keywords: nutrition, adolescence, eating habits, cognition, knowledge, requirements

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Compromised nutrition health risk among students

To aid life, the requirement for nutritional health are providing vitamin, mineral, fats carbohydrates, protein, fiber and other micronutrients to cells and organisms.¹ According to WHO malnutrition defines as, "the cellular imbalance between the supply of nutrients and energy and the body's demand for them to ensure growth, maintenance, and specific functions."² In developed and developing countries several studies have shown that dietary practices of students are pathetic due to high intake of fatty and carbohydrate rich foods and lower intake of fresh fruits, vegetables, milk and milk products.³ Moreover, inappropriate dietary habits linked with inappropriate physical activity are related with an increased prevalence of obesity and osteoporosis.⁴ In modern countries, major cause of mortality and morbidity even in younger age groups are chronic diseases.⁵ Adolescence, as a changing period between childhood and adulthood is linked with drastic change and development of the emotional, physical and cognitive functions. Poor eating behavior includes meal skipping, snacking sugary foods, soft drinks and sweet, fast foods and increase intake of saturated fats among adolescents.⁶

Food intake patterns and overweight are associated with multiple rapid complications such as heart diseases, diabetes, hypertension, stroke, cancer, dental caries, asthma, and some other psychological disorders like depression.⁷ Therefore, researchers are now focusing on the diet quality of young adults. Although, the most of students are unable to meet the approved standards of dietary recommendations and are lacking of healthy eating habits.⁸ Moreover, quality of diet would be worsen when children grow up by higher consumption of soft drinks and less intake of fruits, vegetables, and milk.⁹

The breakfast consumption in 1965-1991 in nationwide food consumption survey is fallen from 86% (1965) to 75% (1991).¹⁰ According to the studies, overweight and obesity is more prevalent

among university students in developing countries. Pakistan: 13%-52.6%, China: 2.9%-14.3%, and India: 11%-37.5% An overall prevalence of glucose intolerance of 22% in urban and 17.1% in rural areas was revealed among Pakistani students by a survey conducted in 2007.¹¹ In Pakistan, approximately 33% of the adult population is affected by the hypertension the most common cardiovascular disease and is observe as a major risk factor of renal failure, stroke and other diseases. In Pakistani medical school, the prevalence of stress was reported 90% and in Nepali medical school was 20.9%.¹²

Impact of healthy eating habits on cognitive health and academic performance

Healthy eating habits are essential for students to achieve academic potential, physical and intellectual development, life-long strength and comfort.¹³ In consort with mental and physical activity, engaging with a healthy diet is a third adjustable standard of living that has been related to overall brain condition and lessened cognitive failure. Another study mentioned that, healthy eating habits are categorized by high consumption of fruits, vegetables, cereals, fish, nuts, and olive oil has received particular consideration in the research.¹⁴ The advantages of healthy eating habits have been demonstrated in epidemiological studies as well as in clinical trials and also reduce the risk for developing cancer, metabolic syndrome, and vascular disease.¹⁵ Nutrition is expected to play an significant role in cognitive health functioning.¹⁶ Refining nutritional status and altering risk factors that may impact directly and/or indirectly on mental health functioning, which lessen the risk of neurocognitive impairment.¹⁷ Findings are also observing in students that intake of omega-3 fatty acids, amplified the memory performance.¹⁸

Diet is also related with a significant reduction in chronic diseases i.e. ; mortality from cardiovascular disease and cancer mortality.¹⁹ Importance of healthy eating habits during the early years of life is linked with the academic performance. Nutrition play very

important role in the academic performance, according to study fruits, vegetables, milk, fish consumption have positively impact on academic achievement.²⁰ Children’s academic accomplishment has a major impact on their future health and social interaction. Academic accomplishment is connected with long-term educational achievement, which controls health and life opportunities.^{21,22} As adolescents have higher metabolic needs so it is vital for them to have healthy eating habits. Academic performances are associated with the high quality diet and health eating pattern as characterized by both the overall quality of food and the nutritional components of each food. This is because socioeconomic status and other personal features that could effect one’s academic performance might be reflected by the overall diet worth.²³

Nutrition requirements during adolescence

Adolescence is one of the most vigorous and compound change in the lifespan. Eating behaviors and nutritional health can markedly be affected by the physical, developmental, and social changes that occur during adolescence.²⁴ The growth rush in adolescence needs quick tissue development with specific nutrient demand, counting vitamin D and calcium to aid bone growth, as well as amino acids for growth of striated muscle.²⁵ Adolescents energy and nutrition requirements must match with their requirements as they mostly take part in physical work or fun exercises (boys typically more than girls), which helps striated muscle mass growth.²⁶ Appetite increases in adolescence, and individuals who has inactive lifestyle are more prone to accumulate fat if they have access to high-calorie food.²⁷ Therefore, low activity levels among adolescents are the basic reason that increases adolescent obesity across the world. The energy needs of the adolescent males are higher than the adolescent females because of the greater increase in weight, lean body mass and height.²⁸ The average nutritional requirement of some important nutrients are mentioned in table 1.²⁹

Table 1 Average nutritional requirement of some important nutrients

Nutrients	Requirements	
	Male (19-30)	Female (19-30)
Energy EER (kcal/day) ¹	3067	2403
Carbohydrates RDA(gm/day)	130	130
PROTEIN RDA ² (gm/day)	56	46
LIPIDS RDA(gm/day)	44-77	44-77
Calcium RDA (mg/day)	1000	1000
Iron RDA (mg/day)	8	18

¹ Estimated Energy Requirement

² Recommended Dietary Allowances

Factors affecting eating habits

Throughout adolescence, young individuals are in a subtle changeover period, when they progressively conquest the accountability for their individual eating habits, health insolences and behaviors generate lifetime habits, so it is important that they implement healthy habits rendering to the dietary recommendations.³⁰ Few students face trouble to fulfil the responsibilities of buying and making their personal meals and dealing new eating plans.³¹ Moreover, students also shows their concern regarding the price of healthy food items. They are against preferring processed foods over fresh ones.³² Further environmental and social aspects, counting partial availability to healthy foods.

Limited peer sustenance for eating healthy, might influence negatively on the dietary habits of the students.³³ We can consider family as a system, as it is more than the sum of persons. A related feature of the family atmosphere might be “family health climate” that can be described as the common insights and cognition regarding a healthier lifestyle of a family.³⁴ The theoretical context comprises psychosocial perceptions like family working, unity, fights, talks, socioeconomic background, parental performs and parental manners.³⁵ Considering all the factors, it is no more a surprise that the diet of the normal college student is high in fats, sugars and sodium, it is also lacking in the essential nutrients.³⁶ Certainly, a typical student eats 1 portion fruit, 1.5 portion vegetables, 0.5 portion low-fat dairy and 1.4 portions of whole grains regularly.³⁷ Eating habits normally rely on the class timetables joined by the students. Also on the availability of the foods within or in the locality of university.³⁸ Students normally experience the problems of skipping of meals, insufficient variety of the food items and snack options because of the spread in the fast food shops and shortage of healthier food points.³⁹ The idea of epitome has been used to elaborate how individuals implement performs that are educated via media acquaintance.⁴⁰ Behavior change theorizes media exposure as mutable that might effect behaviors indirectly by altering attitudinal, normative, or control beliefs.⁴¹

Impact of nutrition knowledge on health

Nutritional education or knowledge is an important factor for the choice and eating of suitable diet which increase the nutritional status of an individual.⁴² Nutrition teaching can deliver students with the ability to select improved food choices and how well students apply food-related knowledge into their regular dietary practices.⁴³ Educational institutes should provide the students with health food options in the cafeteria and nutrition education .⁴⁴ When students are being physically active in the meal planning, preparations and participations, it ultimately results in improved nutritional knowledge and education leading towards healthy eating behaviours.⁴⁵ Nutritional knowledge pays to healthier dietary choices and additional suitable nutritional consumption among students.⁴⁶ Numerous factors are of importance while making a decision regarding the diet, but the students’ knowledge on nutrition does not always principal to healthy food choices.⁴⁷ Changes in food intake patterns is an increase in need for fast-food consumption, which has been related with deprived nutrition quality.⁴⁸ Students do not think the harm from fast food was related to calories but quite risky substances and spices. The main concern the students have not the number of calories they are taking but the seasonings to their food.⁴⁹ Eventually, students who have nutritional knowledge and how it effects their health are tend to make better food choices and have less chances of gaining weight. Therefore, educating students with the nutritional knowledge and

their daily requirements is important which will automatically results in the reduction of specific health conditions.⁵⁰

Conclusion

University is a place where students are in a transition state economically, physically as well as emotionally. Therefore, their dietary habits are greatly influenced by different factors including media, peer, daily schedule and family. Poor dietary habits can lead to many chronic diseases. It has been noticed that the students who have nutritional knowledge are tend to make healthier dietary choices in comparison of the students who have less or no knowledge of their daily nutritional requirements. Institutes should provide the students with a learning environment where their health behaviour can be altered by providing nutrition education.

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