



A Cross-Sectional Study of General Nutrition Knowledge among Nurses and nutrition specialists

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Abstract

Background: Adolescence is a critical period for establishing healthy eating habits, yet university students often engage in unhealthy dietary behaviors due to increased independence, social influences, and mental stress. Understanding nutrition is essential for making informed food choices and preventing chronic diseases.

Purpose: This study aimed to evaluate the nutrition knowledge of nursing students and explore the relationships between their beliefs regarding diet, disease, and weight management.

Methods: A descriptive cross-sectional study was conducted with 100 nursing students from a nursing college. Participants completed a validated revised General Nutrition Knowledge Questionnaire (GNKQ-R). Data analysis included descriptive statistics, Pearson's correlation, univariate, and multivariate analyses. The Cronbach's alpha coefficient for the scale in this study was 0.880, and a cutoff of 50% correctness was used to indicate high knowledge levels.

Results: All participants were female, predominantly single (94%). Most students had a normal BMI (68%), with 32% being overweight. Analysis revealed that 57% rated their overall health as good. The only significant predictor of good nutrition knowledge was having children under 18 in the same family.

Conclusion: This study underscores the importance of enhancing general nutrition knowledge among nursing students, considering individual and academic factors that influence nutrition knowledge in college settings.

Background:

Adolescence is a critical period for establishing lifelong healthy habits, including dietary practices. This phase, marked by rapid growth and development, necessitates proper nutrition to support physical and mental well-being. However, university students often adopt unhealthy eating behaviors, influenced by factors such as increased independence, social pressures, and academic stress. Nutrition knowledge plays a pivotal role in making informed food choices, promoting mental and physical health, and enhancing academic performance. (Belogianni et al., 2021)

Transitioning from late childhood to young adulthood is recognized as a critical time for health promotion, yet it is also a period vulnerable to unhealthy practices and weight changes. Poor dietary habits among university students are influenced by personal, social, and environmental factors, leading to potential risks of noncommunicable diseases like cardiovascular issues, obesity, and hypertension. Therefore,

interventions focusing on nutrition education and lifestyle modifications are crucial for disease prevention during adolescence. (Kabir et al., 2018)

Nutrition knowledge encompasses understanding health-related concepts, food intake practices, nutrient sources, and dietary standards. Adequate nutrition knowledge is fundamental for making healthy food choices, preventing diseases, and promoting overall well-being. Assessing nutrition knowledge among female adolescents and young adults is particularly important for early disease prevention and targeted educational interventions. (Siri et al., 2016)

Studies have consistently revealed insufficient nutrition knowledge among university students, as evidenced by low scores on general nutrition knowledge questionnaires. The General Nutrition Knowledge Questionnaire (GNKQ) has been widely utilized to assess nutrition knowledge across different populations. However, studies specific to nursing students' nutrition knowledge are lacking, highlighting the need for research in this area. (Alsaffar, 2012)

Given the increasing role of nurses in noncommunicable disease prevention and management, it is imperative for nursing students to possess comprehensive nutrition knowledge. Understanding the factors influencing nutrition knowledge among nursing students can inform educational strategies and interventions aimed at improving dietary practices and promoting better health outcomes. (Burke & Huffman, 2023)

Materials and Methods:

Study Design and Setting:

This cross-sectional, descriptive study was conducted at Nursing College . The study aimed to assess nutrition knowledge (NK) among nursing college students and identify predictors of good NK. All undergraduate nursing students were eligible to participate, and the final sample size of 100 students was determined using the Epi-Info program version 7.

Study Instruments:

Data collection utilized the validated revised General Nutrition Knowledge Questionnaire (GNKQ-R), consisting of 88 items across four dimensions: dietary recommendations, nutrient sources of foods, healthy food choices, and diet-disease and weight management. The questionnaire also included demographic and academic-related questions.

Data Collection:

Students received an email containing a link to the survey questionnaires along with a letter of information explaining the study's purpose, benefits to participants, and voluntary participation. The survey took approximately 10-15 minutes to complete, and data collection occurred over three months .

Ethical Considerations:

The study protocol, research tools, and consent forms were reviewed and approved by the Research Ethics Committee at Fatima College of Health Sciences (FECE-2-03-23-NUR-Rasha). Participants provided voluntary informed consent, and confidentiality of data was ensured.

Statistical Analysis:

Data analysis was performed using SPSS 20, including descriptive statistics, Shapiro–Wilk test for normality, Cronbach's alpha coefficient for reliability, Pearson's correlation coefficient for associations, and univariate analysis to explore individual variables' characteristics. A response rate of 50% or more on each question was considered indicative of good nutrition knowledge.

Results

The study investigated the nutrition knowledge (NK) among nursing college students and identified predictors of good NK. All participants were female nursing students, with the majority being single (94%). Regarding body mass index (BMI), 68% had a normal BMI, while 32% were overweight. Most students rated their overall health as good (57%). About 45% were enrolled in nutrition courses, and 83% lived with children under 18 years old.

The study found that nursing students exhibited a good level of general nutrition knowledge, with an overall mean score of 53.86%. Among the different dimensions assessed, the "food groups" section had the highest

mean score (57.53%), followed by "diet-disease and weight management" (53.86%), while "healthy food choices" had the lowest mean score (51.08%).

A significant positive correlation was observed between students' perceptions of diet-disease and weight management and their nutrition knowledge. Particularly, a strong correlation was found between healthy food choices and diet-disease and weight management ($r = 0.681$), indicating that students with better knowledge of diet-disease relationships tend to make healthier food choices.

In the univariate analysis, having children under 18 in the same family was identified as the only significant predictor of good nutrition knowledge among students ($P < 0.001$). Other sociodemographic factors, such as marital status, perception of health, and enrollment in nutrition courses, did not show a significant influence on nutrition knowledge in this study.

These findings highlight the importance of familial factors in understanding and promoting good nutrition knowledge among nursing students. Future interventions aimed at improving nutrition knowledge and dietary practices should consider these identified predictors, focusing on targeted strategies to enhance nutritional understanding among this population.

Discussion

The discussion of the study's findings reveals several important insights into the nutrition knowledge (NK) levels among nursing college students and the factors influencing these levels. (Al Sabbah et al., 2023)

The study's demographic characteristics align with previous literature, indicating a typical profile of single, female, undergraduate nursing students. Most students had a normal BMI, consistent with findings in other studies. However, the perception of health among students varied, with a notable proportion rating their health as poor/fair despite having a normal BMI. This discrepancy could be attributed to inadequate nutrition knowledge among students, as indicated by the fact that over half of them were not enrolled in nutrition courses. (Ali et al., 2022)

The overall nutrition knowledge score in the study was similar to findings in other studies, suggesting a moderate level of nutrition knowledge among nursing students. It is noteworthy that despite a significant portion of students not having prior nutrition education, they still demonstrated a reasonable grasp of nutrition concepts. This could be attributed to broader nutritional awareness campaigns and the availability of nutrition information in the study context. (Saghafi-Asl et al., 2021)

The analysis of different dimensions of nutrition knowledge revealed that students scored highest in food groupings and lowest in healthy food choices. This trend is consistent with findings from other studies and underscores the need for targeted education on making healthy food choices. The positive correlation between overall nutrition knowledge and attitudes toward weight management and diet-related health issues further emphasizes the importance of nutrition education in promoting healthy behaviors. (Quaidoo et al., 2018)

Surprisingly, the only significant predictor of good nutrition knowledge among nursing students was being part of a family with children under eighteen. This finding aligns with research indicating the strong influence of the domestic food environment on children's dietary habits. It suggests that family-based interventions and policies promoting healthy eating at home can have a significant impact on individuals' nutrition knowledge and dietary practices. (Cuite et al., 2023)

Contrary to expectations, enrollment in nutrition courses was not a significant predictor of high nutrition knowledge in this study, consistent with some prior literature. This finding raises questions about the effectiveness of short-term nutrition courses or the depth of nutrition education provided in certain programs. Further research is needed to explore the relationship between formal nutrition education and actual nutrition knowledge among students. (Lee et al., 2022)

Overall, the study's findings underscore the importance of promoting nutrition education and healthy eating practices among nursing college students, with a particular focus on addressing gaps in knowledge related to healthy food choices. Family-based interventions and comprehensive nutrition education programs could be key strategies in improving nutrition knowledge and fostering healthier lifestyles among this population. (Scalvedi et al., 2021)

Conclusion

The findings of this study hold several implications for nursing education and practice in healthcare settings. Firstly, the demonstrated good level of nutrition knowledge among nursing students suggests that nursing programs are effectively integrating nutrition education into their curricula. This is crucial for equipping future nurses with the skills and knowledge needed to address nutrition-related concerns and promote healthy lifestyles among patients. It also underscores the importance of ongoing education and training to ensure nurses stay updated with the latest advancements in nutrition research and practice.

Secondly, the correlation between higher nutrition knowledge and having younger family members highlights the potential influence of family dynamics on nutrition education. Nursing programs could consider incorporating family-focused nutrition interventions or providing resources to support nursing students with family-related nutrition knowledge. This approach not only enhances students' understanding of nutrition but also prepares them to educate and support families in making healthy choices, extending the impact of nursing education beyond individual patient interactions. Overall, these implications emphasize the importance of comprehensive nutrition education in nursing programs and ongoing professional development to optimize patient care outcomes related to nutrition and health.

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