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SUSTAINABLE HEALTH AND NUTRITION: A STUDY ON STUDENTS' KNOWLEDGE, ATTITUDES, AND PRACTICES ALIGNED WITH THE SDGS

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Abstract
As a rule, the eating and health patterns of college students are examined through a KAP systems. The KAP, in the present work, is located under the UN Sustainable Development Goals (SDGs) namely under SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-Being) and SDG 4 (Quality Education). Two hundred and fifteen respondents answered the survey on their KAP in diet and health. The positive relationship that existed between knowledge and practice was significant ($r = 0.212$, $p = 0.002$), as well as between knowledge and attitude ($r = 0.436$, $p < 0.001$), though there was no significant relationship that existed between attitude and practice ($r = 0.083$, $p = 0.221$). This is indicative of the fact that a good attitude towards health does not translate into actions. These revelations lead to evidence of systematic health education, institutionally-based campus interventions, and approaches that will generate the connection between knowledge, attitudes, and practiced behaviours.

Keywords: SDG, Health, Nutrition, Students.

Introduction

Sustainable human development includes health and nutrition as important aspects. These college years are very important and students tend to develop habits in their college life which tend to last into adulthood. Such behaviors may affect the health and the likelihood of getting non-communicable diseases in the long-term (Nelson et al., 2008). The students, at this age are entering adulthood and becoming less influenced when it comes to making decisions concerning diet and health. Such decisions may jeopardize or improve their physical and psychological well-being. The adoption, perception, and practice of healthy behaviors by college students are not well understood, and to design effective public health and education interventions, one must comprehend how college students interpret, understand, and make use of healthy behaviors.

The Knowledge, Attitude, and Practice model is a feasible model that can be used to analyze health and nutrition behaviors. Awareness of health principles are called knowledge. Attitude is a manifestation of individual beliefs and opinions. Practice refers to actual behaviors in a day to day life (Launiala, 2009). This model proposes that there is a progression of knowledge informing all the attitude that can influence all the behavior. But this connection, as frequently can be proved, is not that simple (Contento, 2008). The gaps between student knowledge and practice may be used to identify social, structural, or motivational obstacles that should be combatted by policy-making and education.

The concept of personal health behavior has been broadened in terms of social and environmental objectives in the recent years due to the international interest on sustainable development. In the whole field of education, the Sustainable Development Goals of the United Nations, in particular, Zero Hunger (SDG 2), Good Health and Well-being (SDG 3) and Quality Education (SDG 4) focus on the significance of nutrition, health-related knowledge, and sustainable approaches (United Nations, 2015). College campuses, in this context, play an imperative change in attaining healthy and

sustainable practices and post secondary education can result in a well-lived and healthy life, as well as stewardship of the planet.

Even with several global and national interventions, a significant percentage of college students continue to adhere to poor dieting habits, lack of physical exercise, and inconsistent health practices despite having all the necessary knowledge. Government interventions, such as Eat right Campus (FSSAI, 2021) and Poshan Abhiyaan (regarding nutrition education and sustainable food environments) are implemented in India. Nonetheless, not many researchers have examined the impact of these initiatives on the actions and perceptions of students. The studies also indicate that the young adults find it more difficult to embrace the healthy practices due to socioeconomic factors, cultural factors, and also due to academic pressures.

Review Of Literature

Historical Development of the KAP Framework

KAP model is a behavior assessment tool in the field of research in the health of the populace. It relates what individuals have learned (knowledge), how they perceive (attitude) and how they perform (practice) (Launiala, 2009). It was initially applied in infectious diseases and reproductive health. The KAP framework is applied in present nutrition and lifestyle research to identify the barrier between awareness and behavior (Contento, 2008). According to this model, the improved level of knowledge results in positive attitudes, which in turn result in healthier behaviors. Nevertheless, environmental social, and psychological factors tend to interfere with this simple connection (Deliens et al., 2014).

KAP approach will be useful in designing particular action or interventions in nutrition education. As an example, Contento (2008) indicated that the aspect of nutrition education is incomplete unless we take into account motivational and contextual factors. Subsequent studies have shown that although school children possess adequate knowledge on nutrition, there is low utilization of the same. This can be usually because of time or pressure, as well as a lack of presence of some foods (Tam et al., 2017; Yahia et al., 2016). The KAP model therefore gives one a means of discovering these gaps and designing numerous interventions to ensure behavior change.

Global Officials and Governments about Nutrition and Health

School and university nutrition and education should be integrated into health programs and agendas such as the WHO Health Promoting Universities program and the UNESCO Education for Sustainable Development program. These programs favor education places where the youth can make healthy and informed decisions. World Health Organization (2017).

In India, the FSSAI established an Eat right Campus initiative in the year 2021. It aimed at transforming educational campuses into healthy and sustainable food culture. The program aims to follow SDG 3 and SDG 12 of the United Nations which emphasize safe, healthy, and sustainable food choices. Similar measures of promoting nutrition literacy and awareness by other governmental initiatives, such as the National Health Policy (2017) and Poshan Abhiyaan (2018) also target the adolescent and young adult population.

The necessity of nutrition education has been highlighted by the WHO and FAO as one of the strategies in the context of SDG 2 and SDG 3 implementation all over the world (WHO, 2020). That is why universities can be very instrumental in effecting these policies by offering courses in nutrition, health awareness education, and introducing sustainable food systems in the university.

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Influencing Factors of Knowledge, Attitude and Practice

Physiological and situational factors that vary across workers indicate different individual and contextual factors affect the nutrition-related behaviors among college students. Personal variables consist of gender, socioeconomic status, self-efficacy and scholastic discipline. The contextual factors include the presence and inaccessibility of food, social influence, and media exposure (Sogari et al., 2018). The students of health science, for e.g. are more likely to be knowledgeable on nutrition and have more favorable attitudes as compared to their peers in other fields, which are not health science.

Nevertheless, students do not tend to adopt healthy practices in situations when they are already aware of them. This problem is normally perpetuated by socioeconomic constraints. Bruening et al. (2017) have discovered that the campus food environment, which is well- saturated with high calorie convenient food and has no healthy choices, has a direct influence on the ability of students to stick to nutritional guidelines. Also, irregular eating habits and nutrient disorders are caused by stress and academic work (Liu et al., 2020).

Online and social media exposure is two-fold. Internet health information can make people more aware, but it may equally give out inaccurate information blurring the evidence-based nutrition. Basch et al. (2021) remarked that these results indicate the necessity of the designed health communication and nutrition literacy interventions within the realm of higher education.

Attitude to health and food is also determined by cultural norms. In collectivist culture, family and community preferences are the main determinants of eating habits, which do not direct the preferences of an individual (Yahia et al., 2016). Thus, even educated students might be constrained by the conventional food habits or social meal culture, which conflicts with the advice on the matter of health.

Present Trends in Student Health and Nutrition KAP

Already cross-national studies indicate high levels of regional variance in student KAP results. In developed nations, good health promotion policies, good labeling of food and the availability of facilities on the campuses facilitate the translation of knowledge into practice. In developing countries, structural conditions such as food insecurity and lack of adequate programs to educate the masses on food issues drag the pace.

Indicatively, a study in Nigeria and India indicates that the individuals possess moderate knowledge of nutrition, but due to economic and infrastructure constraints, individuals do not make healthy decisions. The students of Malaysian university also demonstrate healthy eating attitudes but acquire bad eating habits due to their dependence on fast food as they do not have time to cook.

Compared to those in America and Europe, universities in Europe are more aligned to KAP, primarily due to the conducive campus atmosphere and wellness programs provided to students. Deliens et al. (2014) indicated that a policy-oriented environment has been supported to reduce the attitudinal discrepancies to actual practice through institutional support.

Complications that Each of the Regions Must Undergo

The cross-national research indicates the existence of regional difference in the KAP results of students. In rich nations, good policies on health-promoting activities, proper labeling of foods and facilities on the campus contribute to turning knowledge into practice. But in developing states, obstacles such as food insecurity and absence of nutrition education programs retard the process.

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As an example, a Nigerian and Indian study have concluded that despite moderate knowledge, people do not stay economically secure and face infrastructure obstacles that restrict the adoption of healthy behavior (Kumar et al., 2020). Likewise, the students of the Malaysian universities were favorable towards healthy dieting, but their food habits lacked. It was caused by the use of fast food and insufficient time to cook healthy foods (Nurul et al., 2019).

Conversely, in the American and European universities, the relationships between KAP are stronger, in part due to the positive campus atmosphere and wellness programs. This international dissimilarity brings out the significant influence that the institutional assurance and policy-guided surroundings have in bridging the understanding dissimilarity between mind and act.

The KAP-SDG Nexus

Locating KAP in SDGs points at the interrelations of health and education and sustainability. Better nutrition awareness in students is significant in SDG 3 in the prevention of lifestyle related diseases, SDG 2 in the inclusion of a balance in nutrition, and SDG 4 in the association of sustainable living in educational activities (United Nations, 2015). Universities be key learning and innovation centers when it comes to developing this agenda, and rely on models of living laboratories that focus on sustainable food systems and health-promoting campus policies (FSSAI, 2021; WHO, 2020).

This involves overhauling of the conventional teaching tools to those that promote the development of behavior change towards environmental design, peer influence and policies apparatus. According to Deliens et al. (2014) a change in behavior of young adults must be sustained by creating awareness coupled with structural support. This realization plays a significant role in the KAP framework, as well as in the realization of SDGs.

Methodology

This was a quantitative survey research to comprehend knowledge, attitude and practices of college students (KAP) towards health and nutrition. On the sample we relied on more convenient students to get 215. The data collected was done using an online questionnaire that was distributed using institutional channels. All the answers were confidential. The questionnaire was divided into three parts: Knowledge, Attitude and Practice. The sections had 15 Likert items to evaluate various factors of health-related behavior. We used SPSS and Pearson correlation analysis to examine the relationship between the three KAP components to determine the relationship among them and set the significant level to 0.05.

Results

Correlation analysis revealed that there was a significant correlation among the three components of KAP. Knowledge and attitude showed a moderate positive relationship with one another, $r = 0.436$, $p < 0.001$. The relationship between knowledge and practising was the weak but significant, $r = 0.212$, $p = 0.002$. This shows that the more people had nutritional and health knowledge, the more they had positive attitudes towards healthy living. But the essence of the correlation between attitude and practice weak, non-significant, $r = -0.083$ and $p = 0.221$. This implies that there were no consistent behaviors of positive views of health.

All these findings suggest that although knowledge can help in the formation of the attitude it is weak on changing behavior, the transition between awareness and belief to action. This suggests that there are a number of behavioral and environmental impediments to the implementation of healthy behaviours in students though they tend to have a positive perception. The outcomes explain why there

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is a necessity to implement interventions that go beyond creation of awareness. They need to specialize in strengthening behavior, skills and providing conducive conditions so as to bridge the difference between what students know, feel and what they eventually do.

Discussion

This research study has affirmed that knowledge is an important factor that can influence health and nutrition attitudes and behaviors among students. Knowledge and attitude are in a positive but moderate relationship and practice significant but less important. It demonstrates that the perception of health may have a positive impact on the attitudes, but not necessarily change the behavior. Such a scenario demonstrates a typical problem of health promotion studies, which is called the knowledge-behavior gap. According to Contento (2008), awareness does not necessarily translate to a consistent action.The insignificant and non-strong correlation between attitude and practice brings out the challenges in shaping and sustaining healthy behaviors. Even though the students may be aware of the need to have healthy lifestyles and nutritious diets, they fail to translate this knowledge into their everyday lives. This disconnection may be caused by a number of factors, such as, but not limited to, environmental, social and psychological barriers. Bruening et al. (2017) have already mentioned that the campus food environment has a strong impact on the food options of students. The availability of low-cost and high-calorie foods which are easy to access and a lack of healthier foods options do not encourage the decision of the student to eat balanced diets. Also, other issues such as affordability, hectic academic life, and work stress are other conditions that undermine the relationship between positive attitudes and real behavior (Liu et al., 2020).

Much the same results have been indicated in other related studies elsewhere in India and other parts of Southeast Asia. Kumar et al. (2020) have discovered the moderate knowledge and positive attitudes of Indian college students towards nutrition and poor eating habits, which tend to be based on convenience and taste, not health. Similarly, Nurul et al. (2019) found that Malaysian university students knew about healthy eating but could not engage in it because of the pressure of the lifestyle and the social tendency to eat. Such area parallels first indicate that attitudinal-practical disparities are structural problems that are most likely related to socio-economic status, food surrounding, and local norms, instead of motivation deficit.

The findings are important, particularly in terms of Sustainable Development Goals (SDGs). By enhancing health and nutrition literacy in college students, SDG 3 is improved because it provides preventive health outcomes and reduces the risk of non-communicable diseases in the long-term. Healthier students are also likely to do better in academics and show better focus and cognitive results. This is in accordance with SDG 4, Quality Education, that focuses on the well-being of learning success (World Health Organization, 2020). Knowledge promotion of sustainable diets and responsible food selection can help SDG 12, Responsible Consumption and Production, and promote sustainable behaviors of the environment in higher educational establishments (FSSAI, 2021).

With these relationships, learning institutions should encourage sustainable health practices. The outcomes indicate that universities cannot merely increase awareness but need to provide multilevel-based interventions that go beyond individual motivation to include environmental-related limitations. The integration of food nutrition and sustainability education into the curriculum, made of healthy food affordable and readily available in campus, and behavior-based programs such as peer support groups and interactive working sessions could be effective in converting knowledge and attitudes into practice. On the whole, this paper is a part of the growing body of research that indicates the need to have context-sensitive and holistic approaches in ensuring that the health and sustainability of students

is enhanced. Through responsiveness, universities are able to promote the well-being of students and provide a significant contribution to the SDGs due to campus health efforts to support sustainable development being part of the global agenda.

Conclusion

The research established that college students generally have a positive view concerning healthy nutrition. Still, they have no knowledge on health and nutrition and their real practices. Knowledge has a very important role in influencing attitudes and behavior even a positive attitude without actions does not result into consistent actions. Thus, educational institutions are to incorporate nutrition and sustainability education as an element of their curriculum (SDG 4.7) and offer such activities as Eat right Campus that provide students with access to both healthy and affordable food. The work in the future must not only be aimed at awareness creation but also creation of enabling conditions that will support change of behavior.The design of the study is cross-sectional, which does not permit drawing causal conclusions, and the data provided by respondents can be biased. Future studies must be based on mixed methodologies, which should take into consideration socioeconomic status, food accessibility, and media impact which are likely to be more robust in explaining deviations in the health-related knowledge, attitudes, and practices among students.

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