

PERCEPTION OF HEALTHY EATING: ROLE OF KNOWLEDGE, ATTITUDE, AND PRACTICES



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ABSTRACT

A more profound comprehension of one of the factors affecting eating patterns is necessary to advocate and encourage individuals to eat effectively and successfully. Among the many things, people's eating habits influence how they view nutritious food. In this review, "Perception of healthy eating" is people's ideas about eating nutritious, ingesting for health, and consuming healthy foods. This article aims to summarise the study's findings on eating healthy and determine the current perception of knowledge, attitude, and practices. Twenty recent articles were reviewed in the present study. It is crucial to comprehend the Knowledge, Attitude, and Practices (KAP) underlying young people's eating habits to comprehend their viewpoints on food. It helps combat unhealthy eating and decreases the ratio of many diseases due to an unhealthy body. Adolescent obesity can be avoided by encouraging good eating habits; families may play a big part.

Keywords: Knowledge, Attitude, Practices, Nutritional Status, Obesity, Tools for Assessment.

1. INTRODUCTION

Knowledge, attitudes, and practices are essential for encouraging a person to modify their behaviour (KAP). Together, they contribute to cognitive comprehension, help people create beliefs and attitudes, and start efforts to change their behaviour. Because teenagers form individual eating patterns based on their dietary KAP, they must comprehend the causes of unhealthy eating in adolescents. Therefore, recognising the gaps within their KAP can assist us in creating more efficient, targeted solutions.

Regarding healthy eating, a wide range of information must be learned, including information on dietary recommendations, health consequences, and preparation techniques. Dietary recommendations for the appropriate intake of each food group are available from health authorities¹.

In health education, the Knowledge, Attitudes, and Practices (KAP) framework is frequently used. This approach

emphasises how knowledge is the cornerstone of the attitudes and beliefs that support the purpose of engaging in healthy behaviours. In order to inform the creation of successful interventions for behaviour change, the World Health Organization (WHO) advises using the framework to aid in uncovering gaps in knowledge, cultural norms, and behaviour patterns. In fact, despite having better nutritional information than Chinese students, secondary school students in Korea exhibited worse eating habits than their Chinese counterparts, according to two studies utilising the KAP model, demonstrating a difference in the application of knowledge².

A recent nationwide survey of 696 Chinese teenagers (aged twelve to seventeen) revealed that social attitudes and nutrition knowledge were two critical predictors of food preferences.

For the necessary daily allowance of vegetables and fruits, the Hong Kong government has been announcing "Two Plus Three". It is important to understand how

eating habits affect health outcomes like body weight management, digestive health and the likelihood of contracting chronic diseases like cardiovascular diseases and diabetes. It is also important to understand how food choices and preparation methods affect health outcomes, such as how to read food labels and the value of different cooking methods. Teens should learn about nutrition as a component of their academic programme, even though it only includes the basics. Lack of a thorough examination of all facets of adolescent food knowledge may be the cause of conflicting findings about the relationship between dietary knowledge and practices in research³.

The concept of healthy foods has grown in complexity due to the development of nutritional research during the last century.

Several factors must now be considered to establish a food's healthfulness, such as the kind of fat. Additionally, customers should integrate items into wholesome eating routines and patterns.

People learn about food and nutrition in this complicated environment from various sources, including media, food makers, health experts, and food labelling. These resources provide dietary data differently. Therefore, People should provide this information and determine whether it applies to and is helpful in their daily lives.

2. DIET DURING VARIOUS LIFE STAGES

Everyone requires a healthy diet. However, depending on the person- whether it is a newborn, a child in development, a woman who is pregnant or breastfeeding, or an older person- the requirements change. Age, gender, physical activity, the body's nutritional requirements at different stages of development, and other factors all affect a person's diet differently. While adult heights and weights reflect progress toward optimal health, children's heights and weights reflect a person's physical development⁴.

2.1 Fruits and Vegetables

Vegetables and fruits were most frequently cited subjects as nutritious foods, as a component of a healthy diet, or as being most crucial for healthy eating, according to a significant number of research involving children, adolescents, and adults. The relevance of fruits and vegetables to a healthy diet did not vary with age, according to studies which included older respondents and those over 65. Additionally, the significance of fruits and vegetables does not appear to have altered significantly over time, as

indicated by a few older surveys published more than twenty years ago, and that likewise stated that people believed fruits and vegetables to be an essential component of a balanced diet. A few research, however, revealed that gender may have an impact on how people see fruits and vegetables. Fruits and vegetables were viewed as more appropriate to women, and women highlighted them more frequently as a component of a healthy diet. These results support that attitudes towards fruits and vegetables vary by gender. According to Lupton⁴'s book, men are typically linked with meat and harder-to-digest foods, whereas women prefer lighter, sweeter, softer-textured foods and easier-to-digest foods.

Additionally, a Canadian study documented the growth of "the should syndrome," a morality centred around fruits and vegetables. Some of the participants in this study felt compelled to consume fruits and vegetables. The researchers linked this mentality to current health messaging emphasising the benefits of consuming fruits and vegetables for one's health and the concept that vegetables are a necessary component of the "ideal" diet⁵.

2.2 Meat

After vegetables and fruits, meat was cited in most studies for adults. Kids and teenagers also mentioned it as a component of a healthy diet. The place of meat in a balanced diet is unclear, though. The majority of the time, people's conceptions of a healthy diet involve restricting or avoiding meat. In fact, a study in Canada found that volunteers thought a healthy and nutritious diet entailed an attempt to restrict meat intake, particularly red meat, and substituting fish or chicken instead. However, other research has revealed that consumers believe increasing their meat consumption is part of a healthy diet. Each of these searches observed the uncertainty encompassing the appropriate amounts of meat and chicken to consume, with some participants thinking that consuming an excessive amount of flesh is essential to a balanced diet. The idea that meat is a necessary component of "traditional" meals is supported by older studies and more contemporary research. Finally, some studies revealed that SES might affect how people see meat. In one study, women with lower SES were more likely to consider red meat healthy. The name "meat" itself, which can include many different types of meat and meat pieces, may be partially to blame for the inconsistent impressions of meat⁶.

2.3 Low levels of sugar, oil, salts

The three dietary items most frequently identified as being eliminated for a diet that was seen to be beneficial in

all age categories were fat, salt, and sugar. According to a telephone poll of the Canadian population, consumers avoided items high in cholesterol (by more than 60%), salt (by 58%), and sugar (by 50%) to improve their diets. Another study in Canada indicated if asked what diet recommendations they would offer; participants advised staying away from fried, sugary, and high-fat items. Studies undertaken in the UK17 and the European Union (EU) came to similar conclusions. The latter revealed that when asked to define healthy eating, women were far more inclined than men to say that they consume less fat. It needs to be clarified, moreover, how SES affects how people perceive sugar, salt, and fat. While a UK study's findings indicated that women with a greater SES were more worried about eating low-fat meals than women of less privileged, both socioeconomic groups believed that sweet treats and fatty/fried foods were unhealthy. Additionally, studies indicated that older responders had a more excellent knowledge of fat, sugar, and salt. According to a Canadian telephone poll, persons over 55 were more likely to limit their intake of fat, sugar, and salt than younger age groups. Because of the connection with chronic diseases, older persons' increased concern over food's fat, sugar, and salt levels, as demonstrated in this research, is understandable^{5,6}.

2.4 Homemade, Natural and Fresh Foods

People's judgments of healthy eating were influenced by other food qualities, such as freshness, which are not related to food composition. Studies frequently compared fresh foods and food quality to processed, frozen, and canned meals. It was believed among the latter group that these kinds of food were harmful or not as healthful as fresh meals. For some older responders, eating fresh foods may also be helpful. In a research conducted across the EU, 10% of seniors cited only organic foods and zero processed foods when describing a balanced diet. Some research discussed the value and freshness of particular food groups, like vegetables, fruits, and meat items.

Studies additionally indicate how food is cooked affects how healthy people perceive it. A Canadian opinion poll identified Home-cooked dinners as the most healthy meals. Additionally, studies on kids and teenagers have revealed that the environment, setting, and scenario around eating affect perceptions. Compared to meals shared with friends or outside the home, meals consumed at home were seen as healthier. Studies on adults' perceptions did not adequately describe this discrepancy⁷.

3. CONCEPT OF MODERATION, VARIETY AND BALANCE

For views of healthy eating among all age groups, balance, diversity, and moderation were commonly mentioned. A balanced meal or a variety of meals was cited by more than half of the participants in a study in Canada as being necessary for healthy eating right away. To create balance, it has been recommended that eating more on one day can offset eating less on the following one, as can shifting the focus from one food category to another on a regular basis. Another study discovered that the concept of balance is multifaceted, expressing variability in meal structure, balancing beneficial meals and less nutritious ones, combining healthier eating habits with periodic slip-ups, and balancing pleasure with dietary or health concerns. It was frequently contrasted with the idea of "excess" and was linked to ideas of right and good. In a study of youngsters, one child's description of healthy eating as "to have a well-rounded meal such as pasta, chocolate, and eggs" revealed that the meaning of the word "balance" is unclear. Participants in the survey frequently cited balance along with the ideas of variety and moderation. According to a study conducted in Australia, the idea of tolerance was used to address perceived ambiguities and contradictions surrounding healthy eating. People could defend any dietary decisions by using the idea of moderation. Both laypeople and health experts "struggle with their understanding of a moderate diet" and doubt the validity of the idea, according to a lay journal study that also observed confusion and polysemy. Some medical professionals also had strong opinions about the word because they thought it weakened dietary advice. Moderation was also emphasised in the qualitative research of senior citizens in Britain. The respondents agreed that it was morally right to abstain from overindulgence and that it was essential to consume food in moderation in order to avoid gaining weight.

Last but not least, research on women found that middle-class women valued balance and moderation more highly than working-class women in their judgements of healthful diets. The studies discussed in this section demonstrate the various connotations that the words "balance" and "moderation" have. Additionally, research indicates that despite the term "balance" having a wide range of meanings, dietary advice and health experts are not usually aware of or considering this range of meanings; instead, they frequently assume a more narrow, singular definition⁸.

4. CROSS PERCEPTION OF WEIGHT LOSS AND HEALTHY EATING

According to a few studies reviewed in this article, there may be some correlation between people's attitudes toward healthy eating and their views on dieting for weight loss. According to a qualitative study conducted in the UK, individuals actively employed the ideas of moderate and good food to conceal their weight loss attempts and make them more acceptable in society. McKie et al. additionally stated that participants' conception of nutritious eating included worries about weight gain that arose around the subject matter of moderation in their study of people over 60. According to the research on children, some of the conceptions of being thin and fat were naturally linked to the ideas of good eating⁹.

Finally, a study with males and females revealed that diet for losing weight was referred to as good eating habits, such as "eating much lettuce or fruits or vegetables," "I believe it has a greater connection with healthy eating," and "I believe it has everything to deal with healthy eating." It is unknown what the effects of combining good food with dieting for weight loss will be. While some authors argue that since calorie restriction for weight loss in young people might, in fact, represent healthy eating behaviour, we shouldn't be as concerned about it, others warn that eating healthy communications may encourage unhealthy eating patterns and obsession with weight. The causes and implications of the convergence between people's beliefs of nutritious eating and fasting for weight loss require further study^{8,9}.

Meat, fruits, and veggies were among the very often stated foods when discussing how the public conceptualises a healthy diet. The qualities and components of food played a significant role in how people perceived healthy eating. The notions of moderation, diversity, and balance frequently appeared in respondents' opinions of healthy eating. However, studies looked at how respondents understood these concepts, and Several of the responses did not detail how the researcher interpreted the participant tales and used coding to find these thoughts. Meanings vary rather than being constant when reporting coding systems. The public's ideas of healthy eating are significantly influenced by diet recommendations, which also favour vegetables and fruits over meat, restrict salt and fat, promote variety, and encourage moderation. These recommendations are quite consistent across all of the research nations looked at in this analysis. The present dietary recommendations do not mention other facets of

healthy eating, such as the value of its freshness, unprocessed and homemade meals, cutting back on sugar intake, or the concept of balance. Among other essential dietary recommendations, the categories of cereal items and dairy products were not notably reflected in people's perceptions of eating healthy⁹.

According to a few studies, foods high in carbohydrates, such as breads, cereals, pasta, pulses, and potatoes, are included in the definitions of a healthy diet. Additionally, Canadian data revealed that the group of grain products is rarely discussed. Even less frequently is the group of milk products addressed in relation to a healthy diet. Studies focusing on kids and teens discovered that dairy was more frequently included in their ideas of healthy eating than it was in adults' conceptions, with the exception of one research where teenagers rarely cited dairy products. When discussing milk products with adults, the idea of consuming low-fat dairy products was most frequently brought up.

Additionally, the majority of research could have evaluated more precise impressions related to numbers, serving sizes, and portion sizes. Although most people believe that fruits and vegetables are crucial to a healthy diet, they might not be aware of the recommended daily intake. Future study directions should be explored based on the fact that such ideas themselves are capable of having many different interpretations and meanings. Additionally, more studies must be done on how people actually live out their ideas of balance, variety, and moderation.

5. THEORETICAL FRAMEWORK OF KNOWLEDGE, ATTITUDE AND PRACTICE MODEL

It is a theoretical framework that helps analyse further steps that need to be taken while performing a KAP study for the said topic, i.e., perception of healthy eating. This gives us a brief idea of how to proceed further and an account of our work to study and perform.

Knowledge tells us about the individual's ideas related to healthy eating. How much do they know vs. how much should they know? It is a quick and easy way to go through individual's daily approaches to healthy eating and the perception in their mind.

Then comes the attitude, which means how much they are interested to know and to follow healthy eating for a healthier lifestyle. A person's attitude towards a thing only decides how much we should teach them further and how much they will follow further in their life. It can

be changed if guided wisely. We cannot force them to change their attitude, but they may start following a healthier diet by stating correct and reliable facts.

Last but not the least is the aspect of Practices. How much do they really practice healthy eating in their day-to-day life? Only some consume 100% healthy food throughout the day. However, by the theme of practices, we can quickly analyse their health status just by knowing their healthy eating practices.

So, KAP study can be challenging but can result in very accurate results. Not only in review papers but also by studying many research papers on KAP study, it can be justified that yes, KAP study should be performed while studying the practices and knowledge of a person for a vast topic like healthy eating as it can help us to give very reliable results¹⁰.

5.1 Role of Knowledge in achieving healthy eating

01. Knowledge favours teenage food preferences, the efficacy of eating healthily, and the perceived health effects of unhealthy eating. Even while a large majority of teenagers—between 88% and 95% in past studies—report that eating healthy is essential, a variety of other factors affect what they decide to eat. Health issues frequently battle with flavour and price when young adults and adolescents choose their diet. According to a qualitative study conducted in Hong Kong, teenagers from low-income homes are more likely to eat unhealthily because it is more economical and they enjoy the taste. It is essential to look into the potential conflicts between taste, health, and other considerations while making dietary decisions¹¹.

02. Recommendations for diet

- a. Knowledge in common = proportionate amounts of dietary groups. Example: Low sugar, oil, and salt; food pyramid
- b. Knowledge gap insufficiency = recommended serving size or allotment each day. Like lunchboxes with 3-2-1 servings and salt levels.
- c. Inaccuracy = underestimating the advised serving sizes. Using an apple as an example

03. Health outcomes of healthy eating

- a. Knowledge in common = visible short-term results. A few examples are weight, skincare, a sore throat, or constipation.
- b. Knowledge gap insufficiency = special advantages to eating vegetables and fruits. Such as detoxification, skin care, and pain relief.

04. Nutrient content of food

- a. Knowledge in common = sources of nutrients, salt, sugar, and fat in food. Such as calcium and protein
- b. Knowledge gap insufficiency = options for healthy snacks, including yoghurt, almonds, and fruits.

05. Access to healthy meals

- a. Knowledge in common = Improper culinary techniques for preparing food for restaurants and takeaways.
- b. Knowledge gap insufficiency = wholesome cooking techniques. For instance, strategies to detect healthier restaurant dishes, such as boiling and steaming¹².

5.2 Role of Attitude in Eating Healthy

01. Due to the regional differences in cooking methods and eating customs, there have only been a few qualitative studies on healthy eating among adolescents in Hong Kong. In the qualitative study conducted by Chan et al., all twenty-two adolescents between the ages of 13 and 15 had a general awareness of healthy eating concerning the recommended FV portion sizes and instances of foods and eating practices that were healthy and unhealthy. Their views on eating healthily, however, were not explored. Siu et al. studied the difficulties faced primarily by low-income households and discovered that health is not prioritised when dining out compared to price and flavour.

02. Expectations for a healthy diet's results

- a. Shared perspective: The need for weight control and the unpleasant effects of bad eating habits
- b. Insufficient attitude gap means positive results from healthy eating habits.
- c. Inaccuracy: Young individuals do not need good eating; only older adults do.

03. Food tastes: • A prevalent attitude is a fondness for junk food

- a. Lack of an attitude gap results in placing health above other choices. Consider taste and practicality.
- b. Inaccuracy = perceived poor flavour of a nutritious meal

04. Confidence in one's ability to adopt a healthy diet

- a. Common attitude = evaluating health based on body type
- b. Insufficient knowledge of food preparation techniques and healthy eating habits due to the attitude gap¹³.

5.3 Role of Practices in Eating Healthy

Food practices include grocery shopping, meal preparation, and eating habits, and healthy practices help people adhere to dietary recommendations. The amount of fat, sugar, and salt absorbed from commonly consumed foods, such as instant noodle dishes, packaged products, confectioneries, and soft beverages, should be limited [20]. In addition, make sure you get at least five servings of FV daily. These routines should also include picking healthier cooking methods for meals at home and in restaurants. Regional health authorities have offered some ideas on how to cook wholesome meals at home, when dining out, and when snacking. The use of organic spices and herbs as a finishing touch for home-cooked meals, asking for different portions of dipping sauces and desserts when dining out, eating no more than twice between two main meals, and choosing low-fat cooking techniques like boiling and simmering are few examples of healthy lifestyle decisions. Even though eating at home is common in Hong Kong, most youths need to consume more fruits and vegetables, primarily because they are pricey and need nutrition knowledge. They also remark on eating too much salt and sweets. Teenagers' propensity for routine snacking is another problem in this area, with sizable percentages in Malaysia and China, respectively, reporting daily snacking. Despite several healthful options, most people pick snacks on foods with empty calories¹⁴.

01. Grocery shopping for healthy food

- Practices in common = not eating in the habits of reading nutrition labels or health claims
- Practice gap insufficiency = reading nutrition labels to determine healthy alternatives and accompanying parents for grocery shopping.

03. Eating home-prepared meals

- Practices in common = parents preparing meals, eating ready-to-eat or easy-to-cook foods for breakfast, eating grains, vegetables, and meat for lunch and/or for dinner.
- Unhealthy = Adolescents use unhealthy ingredients when cooking for themselves.

04. Eating out in restaurants or consuming takeaway food

- Practices in common = eating out or consuming take-away food for lunch after school.
- Practice gap insufficiency = frequent eating out with friends or family

- Unhealthy = availability of unhealthy eating options, occasionally buying unhealthy takeaway.

05. Fruit- veggie consumption

- Practices in common = Eating fruits and veggies once a day at home with parents preparing ready-to-eat food.
- Practice gap insufficiency = preparing food themselves, preparing a variety of fruits and veggies on more occasions.

06. Snacking

- Practices in common = infrequently eating and buying snacks, eating snacks available at home.
- Practice gap insufficiency = serving healthy food and homemade drinks as snacks.
- Unhealthy = unhealthy snacking habits. E.g., more than three times a week¹⁴.

6. TOOLS FOR KNOWLEDGE, ATTITUDE AND PRACTICES STUDY

- Study area:** Study area is taken in which the study is performed. There can be as small as 50 participants or can be as large as 300-500 participants. It depends upon the interest of people in participating in the study without any forcing or violence. We can take study areas such as schools, organisations, universities, offices, NGOs, etc., depending upon the need of the topic.

2. Data collection:

Phase-1 Semi-Structured Interviews: These kinds of interviews are generally taken by framing knowledge, attitude, and practice questions with the ease of the participants. The level of the question should be set as low and must take care of the socio-demographic systems of the organisation and people there.

Phase-2 Questionnaire survey: A particular set of questions is formed in the questionnaire survey in which an equal number of questions are asked for knowledge, attitude, and practices. The language of the questionnaire must be taken under the participants' preference. To assess the degree of agreement among respondents on the mentioned topic, a Likert scale with five points (Likert, 1931) questions (1 = strongly disapprove, 2 = disapprove, 3 = in doubt, 4 = agree that, and 5 = significantly agree) and yes/no responses were used.

3. Data analysis:

Quantitative analysis: Data are quantified as part of

quantitative analysis using some statistical analysis. Statistical methods, including statistical regression, multivariate evaluation, significance testing, etc., are frequently used in quantitative analysis.

Quantitative research, which involves gathering and analysing data in numbers for statistical analysis, is the antithesis of qualitative research.

Qualitative analysis: To better comprehend ideas, opinions, or experiences, qualitative research entails gathering and analysing non-numerical data (such as text, video, or audio). It can be utilised to uncover intricate details about a situation or to spark fresh study concepts^{15,16}.

CONCLUSION

It is crucial to comprehend the Knowledge, Attitude, and Practices (KAP) underlying young people's eating habits to comprehend their viewpoints on food. It helps combat unhealthy eating and decreases the ratio of many diseases due to an unhealthy body. Adolescent obesity can be avoided by encouraging good eating habits; families may play a big part in this. A recent nationwide survey of 696 Chinese teenagers (aged twelve to seven-

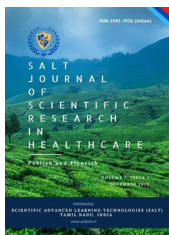
teen) revealed that social attitudes and nutrition knowledge were two critical predictors of food preferences. Everyone requires a healthy diet. However, depending on the person—whether it is a newborn, a child in development, a woman who is pregnant or breastfeeding, or an older person—the requirements change. Age, gender, physical activity, the body's nutritional requirements at different stages of development, and other factors all affect a person's diet differently. While adult heights and weights reflect progress toward optimal health, children's heights and weights reflect a person's stage of physical development.

Additionally, a Canadian study documented the growth of "the should syndrome," a morality centred around fruits and vegetables. Studies indicated that older responders had more excellent fat, sugar, and salt knowledge. Research on women found that middle-class women valued balance and moderation more highly than working-class women in their judgements of healthful diets. The studies discussed in this section demonstrate the various connotations that the words "balance" and "moderation" have.

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