

A Reflexive Thematic Analysis Concerning Highly Valued Food

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Abstract

Prior research has studied food safety and nutrients, but not food values. Therefore, we aimed to clarify individuals' perceptions of highly valued food to apply them to dietary guidance. Thirteen individuals participated in this study (three men and ten women) with the most common age group being 40-50 years old, and a reflexive thematic analysis was conducted. Four themes related to highly valued food were generated: safe and reliable, necessities for sustaining life, satisfying the desire for self-actualization, and things with social value. We revealed that the high value-added view of food extends from personal values, such as safe and reliable, to social values, such as e-mails contributing to the community. It is necessary for nurses to consider these four values of food as well as dietary guidance when educating patients about non-communicable diseases to reflect patient-centered dietary guidance that respects the patient's values.

Publication History:

Received: December 22, 2022

Accepted: January 02, 2023

Published: January 04, 2023

Keywords:

Non-communicable diseases,
Dietary guidance, Highly valued
food, Reflexive thematic analysis,
Qualitative research

Introduction

The major risk factors for mortality worldwide are hypertension (accounting for 13% of deaths), smoking (9%), hyperglycemia (6%), physical inactivity (6%), and overweight and obesity (5%). These risk factors contribute to an increased risk of non-communicable diseases (NCDs) such as heart disease, diabetes, and cancer [1].

In addition, eight risk factors (alcohol consumption, smoking, hypertension, high body mass index, high cholesterol, high blood sugar, low fruit and vegetable intake, and physical inactivity) are responsible for 61% of the loss of healthy life resulting from cardiovascular disease and death. In addition, these eight risk factors are responsible for more than three-quarters of deaths from ischemic and hypertensive heart disease as well as cardiovascular diseases [1]. Therefore, diet is related to the development of NCDs, and dietary and nutritional approaches are key to NCD prevention [2].

When nurses advise people about their diets in the context of NCD prevention, they often focus their education on nutrients such as salt content. However, several studies have suggested that it is not enough to simply advise or educate patients [3]. In addition, it is difficult for nurses to effectively promote health behaviors if their only education is to convey the knowledge about diet and nutrition necessary to prevent NCDs.

Freeland-Graves and Nitzke [4] introduced "How Dietetics Professionals can Communicate Effectively" to promote more effective diet education. This method includes "promoting a wellness perspective and an enjoyable eating pattern as part of an overall healthful lifestyle" and "tailored messages to meet individual needs" to help dietary professionals communicate effectively [4]. Food and nutrition professionals also have responsibilities such as being culturally sensitive and communicating food and nutrition information tailored to the needs and preferences of the target population [5]. Therefore, focusing on cultural and individual needs in dietary education is as important as educating people about nutrients.

Inherent in the culture and needs of the individual are the values that the individual has about food. In this study, highly valued food refers to individuals' subjective knowledge, awareness, interest, and

behavior toward food that they consider valuable. Food comprises any ingredients, processed foods, dishes, or seasonings. Even if the nutrients in food ingredients are high, the final nutrients are often influenced by the way the food is prepared; for example, raw vegetables may become canned juice and lose vitamins owing to the processing method.

We used qualitative research methods to explore individuals' perceptions of highly valued foods. Qualitative research has become increasingly popular in medical research and related studies [6]. By focusing on answering "why" and "how" questions about events, qualitative research allows for the generation of rich data and the exploration of behaviors related to "real life" [6].

The significance of this study is that the values that individuals have for food can be clarified so that effective dietary guidance can be provided. Respecting the values individuals have for food will lead to "promoting a wellness perspective and enjoyable eating patterns as part of a healthy lifestyle" [4]. Thus, we aimed to identify the highly valued food held by people living in the community to help nurses provide dietary guidance that respects individual values.

Methods

Research design

Since we aimed to identify highly valued food from participants' point of view, we employed Kuper et al.'s [6] qualitative research method, which allowed us to make meaning out of the data by using inductive analysis. Although highly valued food is an individual value, it is assumed that a common theme appears repeatedly. Therefore, we

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Citation: Oka M, Yoshii H, Matsumoto M, Matsui H, Shirato N, et al. (2022) A Reflexive Thematic Analysis Concerning Highly Valued Food. Int J Nurs Clin Pract 9: 369. doi: <https://doi.org/10.15344/2394-4978/2022/369>

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sought a method to clarify common themes that repeatedly appear in qualitative research. According to Braun and Clarke [7], thematic analysis is a method for systematically identifying, organizing, and offering insights into patterns of meaning (themes) across a dataset. It is used to identify and understand commonalities. Furthermore, among thematic analysis, reflexive thematic analysis is an interpretive approach based on the subjectivity of the analyst and is characterized by the fact that the data are recursively checked many times. In this study, reflexive thematic analysis was used to repeatedly confirm that the inductively identified themes were consistent with the participants' interpretation of the data and to find common themes. Data collection and analysis followed the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist [8].

Researcher characteristics and reflexivity

The interviewer for this study was a female professor at Gunma University (Ph.D.) with sufficient experience in interviewing. The relationship between the interviewer and the participants was established in the first meeting. However, since the interviewer lived in the same area as the participants, the interviewer was aware of the characteristics of the participants' regions and food culture.

Participants

Participants were intendedly recruited from agricultural production organizations in regional cities in Japan. We believed that agricultural producers are aware of the quality of food and have a strong interest in food. Inclusion criteria were as follows: being engaged in the production of agricultural products regardless of their years of experience, understanding the contents of the study, providing consent, and agreeing to have one's voice recorded with a digital voice recorder. The exclusion criterion was participants withdrawing their consent. Regarding sampling, Braun and Clarke [9] emphasized that there is no saturation of data or themes. Therefore, sampling saturation was not confirmed in this study.

Data collection

Data collection was conducted from March 1–April 2, 2021. Representatives of agricultural production organizations recruited prospective participants using a flyer. After distributing the flyer to 14 participants, the purpose of the study was explained and consent was obtained from 13 participants (10 women). One participant refused to be interviewed because he was “not good at speaking.” Concerning age, two participants were in their 30s, four were in their 40s, four were in their 50s, two were in their 60s, and one was in her 80s.

Before the interview, we recorded participants' temperature, checked their physical condition, disinfected their hands and fingers, wore masks, and ventilated the room. Semi-structured interviews were conducted according to the interview guide. The content of the interview included questions such as “What kind of food is valuable to you?” Since all participants agreed, their narratives were recorded with notes and a digital voice recorder. The first author conducted face-to-face interviews once per person at participants' homes or workplaces. We assessed the basic attributes of the participants (sex, age, production history of agricultural products, etc.). Questionnaires were distributed and collected immediately. A coding tree was later used to provide feedback to two representatives of the participants to confirm that there were no modifications. The researcher did not ask participants for additional comments.

Data analysis

The data analysis was conducted from April 27–May 25, 2021. Data processing and analysis were conducted based on the six phases of reflexive thematic analysis [7,9-11]. The collected interview content was anonymized by assigning A to M symbols for each participant. The analysts were MO, HY, and MM. All interviews were transcribed verbatim, and the transcripts were read several times by the analysts. The analysts generated the codes, reviewed them, and named the themes. Regarding reliability, Braun and Clarke [9] stated that they did not measure the reliability of coding; therefore, we did not perform reliability measurements in this study.

Results

The following four themes were generated for the highly valued food products.

Theme 1: Safe and Reliable

All participants said that safe food without pesticides and additive-free food were valuable:

I don't buy anything with pesticides on it because safety is important to me, including the effects of drugs. I also don't buy things that are colored because I value safety. I eat things that are handmade and that I know the maker of, because I feel safe without additives. I don't like to eat things that have additives in them. (Ms. F)

From the narratives such as this, the theme *safe and reliable* was revealed as highly valued. It became clear that *safe and reliable* means that high valued food is safe because it is free of chemical substances, such as pesticides and additives, and that it is safe because the maker and what goes into the body are known.

Theme 2: Necessities for Sustaining Life

Participants said that high valued foods (e.g., high nutritional value) made them feel better when they were eating them. From these narratives, it was found that high valued foods restore or maintain participants' physical condition, are good for the body, and have high nutritional value:

If you eat one salted plum a day, you will feel better. My grandmother used to put smoked salted plums in my porridge when I had a cold. It is also effective when I have a bad stomach. Salted plums are good. I also eat foods that are in season. Seasonal foods are very nutritious. (Ms. M)

Several participants also talked about high valued food as something that the body naturally desires, or as a barometer of physical condition. Mr. J and Ms. A talked about good food as something that the body naturally desires. In other words, high valued food makes one feel a change in one's body:

When I was hungry, I felt something when I went to the rice-ball corner of a convenience store. As I was looking at all the different kinds of rice balls, I felt that I wanted to eat a salted plum rice-ball today. Naturally, my hands reached the rice balls, I think it's because my body wanted it. (Mr. J)

From these narratives, it became clear that high valued foods are those with high nutritional value, those that improve one's physical condition, and those that the body desires. Foods with high value satisfy individuals' basic needs and are necessary to sustain life.

Theme 3: Satisfying the Desire for Self-actualization

Many participants said that they chose to eat what they liked and what tastes good. They perceived the value of things that enriched the palate through taste:

Fresh produce is delicious; so, I choose local vegetables. After all, the one that is freshly picked is the best. (Ms. G)

Some participants also spoke of the value of foods that enriched their minds and lives. Participants said that some foods were valuable even just by looking at them (without tasting them):

When my son was born, I soaked the plums in liquor and made plum liqueur. As time goes by, the color of the plum liqueur changes. It is fun to watch the changes in the plum liqueur and feel my son's growth. When my son turns 20, I want to drink that plum liqueur with him. I think there is such a thing as a highly valued food. (Ms. I)

From these narratives, it was found that valuable foods are those that satisfy the desire for self-actualization; that is, the personal satisfaction of enjoying deliciousness and enriching one's mind and life.

Theme 4: Things with Social Value

Some participants said that food that can contribute to the community in which they live is valuable. They responded that a high valued food product can contribute to the local community by purchasing it:

I want to support the region where I live. That's why I eat the vegetables that the local people and farmers are working hard to grow. There's a section in the supermarket that sells local vegetables, right? I go there and try to buy vegetables that are grown by local people. I want to contribute to the local community, and I think such food is good. (Ms. F)

Some said that high valued food can contribute to the country in which one lives. Others said that since they are Japanese, they should eat Japanese food and that there is value in eating food with a sense of Japanese tradition.

I want my country to be prosperous; so, I buy Japanese domestic food. I choose Japanese food over imported food. I think that I can contribute to the country where I live. (Ms. D)

Some participants said that food could be a trigger for them to talk with strangers. They also said that high valued food can bring people together, making them want to share it with their family and others.

Good foods make me want to share it with others. I think that is what good food is. By talking about the ingredients, I think that not only ourselves but also others will be happy. I believe that good food can do good to others. (Ms. K)

It became clear that foods that are valuable to people also have social value that includes increasing local production for consumption and contributing not only to oneself but also to others.

Discussion

Four themes related to highly valued foods were generated. First, we discuss *Theme 1: Safe and reliable*. Food safety is extremely important to people. In their study of 220 people, Lusk and Briggeman [12] reported that 34.2% rated safety as the most important food value. Furthermore, food safety was considered about twice as important as nutrition and taste.

Participants also wanted products that were safe and free of pesticides and other chemicals. For example, there is a report that the increase in chemicals owing to pesticides can cause various health and environmental problems such as pesticide poisoning in farmers; cardiopulmonary, neurological, and skin disorders; and fetal deformities, miscarriages, and reduced sperm count in applicators [13]. The health hazards caused by pesticides are widely known, and people consider foods that are free from pesticides to be safer. Ingredients, nutrients, and additives are important clues for conveying health information [14]. Thus, additives played a major role in food safety and were regarded as important health influencing factors.

Consequently, highly valued food is safe because of the absence of chemical substances, such as pesticides and additives, and a sense of relief that comes from knowing what goes into the body. Since all participants said that high valued food is "*safe and reliable*," this theme is the basis of highly valued food and was a common value for participants.

The second theme, *necessities for sustaining life*, includes things that make one feel well and that the body desires. In previous studies, healthy and unhealthy foods have been specifically defined by differences in food additives, nutritional value, food packaging, manufacturing, and processing methods [15]. However, this study revealed that high valued food is something that the body naturally desires. It may be possible to add that a subjective evaluation of healthy foods, such as the desire for salty foods when sweating profusely [16], are what people experience as positive physical change.

The third theme was satisfying the desire for *self-actualization*. An analysis of consumers' preferences for locally grown foods showed that quality and freshness were the most important factors when purchasing produce [17]. This shows that local food and freshness are closely related. Furthermore, freshness and taste are most frequently used to evaluate food quality [14]. According to Lusk and Briggeman [12] taste is, on average, the second most important food value, after safety. From these findings, personal satisfaction with enjoying freshness and good taste is related to highly valued food.

Ms. I said that *food with a high value-added view is satisfying just by looking at it without eating it*. Others said that *highly valued food is linked to the joy of living*. From these narratives, it became clear that highly valued food enriches people's lives. This has not been reported in previous studies and is a new finding.

The fourth theme was *things with social value*, and it is clear that foods with high added value are those that have value as a contribution to the community and as a means of communication. Lusk and Briggeman [12] suggest categorizing the value of food as either personal (naturalness, taste, price, safety, convenience, and

nutrition) or social (traditional consumption patterns, place of origin, fairness of the parties' interests in production, appearance, and environmental impact). Suzuki et al. [18] examined the value of food produced in earthquake-affected areas, which was classified into three main categories: taste, freshness, and nutritional value, significantly influenced consumers' decisions to purchase food; value related to food safety; and social values related to consumers' willingness to perform certain social activities, such as Japanese consumers' intended purchasing behavior. These contributed to the reconstruction of disaster areas [18]. The results showed that the social value of supporting disaster-affected areas was more important for the residents of areas close to the disaster-affected areas than for the residents of distant areas in terms of their value for food rather than safety and personal values. Therefore, highly valued food makes a regional contribution to social value.

In contrast, Lusk and Briggeman [12] stated that origin is ranked last in average importance and that environment, equity, and tradition are the least important food values. Although social values are also important in food values, the degree of importance is not very high. Moreover, different cultures prioritize different food selection factors [19]. For example, Dr. Cockerham [20] states Americans' eating habits as reflecting attitudes toward both appearance and health, while those of West Germans are more closely related to the control of health rather than appearance. Thus, it is necessary to consider the importance of highly valued food by country and culture while considering both personal and social values.

It was also found that *things with social value* was related to social relationships. It is already clear that food stimulates communication because it is a non-verbal means of sharing meaning with others [21]. However, Ms. K. stated, "*I think good food can do good to others.*" This implies that we can provide happiness to others through food. This study revealed that food is not only a tool for expressing one's intentions but also has the value of making people feel bonded with each other and makes them feel happy.

Concerning the health behaviors of people with NCDs, those who value the meaning of food as *necessary for life support* may be more likely to engage in health behaviors than their counterparts. However, *things with social value* may not necessarily correlate with individuals' health behavior. A person who emphasizes the value of *things with social value* over health may consume a local, salty specialty such as a Japanese pickle. If that person thinks, "This pickle is very salty, but I can contribute to my residential area by eating it," it may be difficult for them to stop the unhealthy behavior of eating that local product. From nurses' point of view, it may be difficult to accept the sense of value that even a local product with high salt content can contribute to the community in which they live. However, this may be because nurses have focused on providing knowledge concerning NCD prevention without considering the values of individuals.

Clinical Implications

Nurses tend to provide nutritional knowledge for the prevention of NCDs during dietary guidance [22]. However, the clarification of highly valued food allows us to recognize the importance of dietary guidance that considers people's distinct values toward food, including safety, self-actualization, and social values. By providing dietary guidance that considers the current four themes, it may be possible to implement targeted dietary education that reflects individuals' personalities.

Limitations

One of the limitations of this study is that there is a bias that the participants may be producers of agricultural products and have a strong interest in food products; therefore, the view of highly valued foods may be unique to those that produce agricultural products. Hence, it is necessary to conduct a similar study among the general public and compare the results. In addition, the study included older participants with no young people in their teens or twenties, most of which were women, which limits generalizability. It is necessary to clarify the sense of highly valued food among men and women of all ages and to pursue a sense of highly valued food that can be universally applied.

Only highly valued foods that could be used for dietary guidance were clarified, and the method of dietary guidance that incorporates highly valued food was not clarified. For practical applications, it is necessary to explore methods of dietary guidance that incorporate highly valued food and to examine methods of incorporating the values of people who receive dietary guidance, which could lead to the prevention of NCDs and promote health.

Conclusion

The following four themes were found to be related to highly valued foods: safe and reliable, necessities for sustaining life, satisfying the desire for self-actualization, and things with a social value. It was clarified that highly valued food has both personal and social values.

Conflicts of Interest

The authors declare that there are no conflicts of interest.

Acknowledgments

We thank all those who participated in this study.

Ethical Considerations

Participants were informed of the purpose, methods, protection of personal information, and that participation was voluntary. Their consent was obtained in writing. This study was approved by the Gunma University Ethical Review Board for Medical Research Involving Human Subjects (no. HS2020-214).

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the Gunma University Center for Food Science and Wellness (<https://www.cfw.gunma-u.ac.jp/>) [grant number620606035].

Data statement

The datasets generated and/or analyzed during the current study are available from the corresponding author on reasonable request.

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