



Factors Influencing Nutritional Behavior: An Explanatory Model

Alexandra Sept*

Gender Studies in Science and Engineering, Technical University of Munich, Germany

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***Corresponding author:** Alexandra Sept, Gender Studies in Science and Engineering, Technical University of Munich, Arcisstreet 21, 80333 Munich, Germany. Tel: +498928924248; Email: alexandra.sept@tum.de

Abstract

Nutritional behavior differs not only between statistical factors like gender and age. Preferences and aversions caused by social and cultural conditions such regional cuisine, as well as individual and social circumstances, living conditions, status passages and developmental task belong to the multidimensional construct of nutrition.

As nutrition is mostly investigated from a scientific point of view, it is important to identify social factors in order to integrate them into future research. With the help of biographical interviews and nutrition diaries with young adults from 18 to 25 years, mid agers and elderly from 65 years on, it was possible to find out, that for each age group the motives and factors for nutritional behavior are different. For adolescents various changes in living conditions such as moving out of parents' home and the influence of the peer group and social media represent the main factors for changing eating habits and food consumption. Middle-aged adults face other challenges regarding such as family formation, career and reconciling them. With increasing age, elderly have to face the challenges posed by physical decline, health restrictions and social conditions such as diseases, intolerances or widowhood.

The aim of the project was to collect socio-cultural explanatory patterns for the nutritional behavior of different groups of people in order to be able to integrate them into direct product development for food and into the design of nutrition and healthy eating information campaigns and recommendations.

Keywords: Food Habits; Food Science; Food Sociology; Nutritional Behavior; Risk Factors

Introduction

According to the French sociologist Marcel Mauss, nutrition can be seen as a total social phenomenon [1]. On the one hand, the intake of food is a biological necessity that affects all living creatures on earth and is therefore common to all human beings. On the other hand, individual nutrition is as unique as a fingerprint. Different scientific disciplines are investigating the question why we humans eat, what and how we eat. The basic eating habits differ not only between different continents, countries and regions, but also between different age groups.

Temporal conditions and trends also have an effect on nutrition; for some years now, there is a de-dramatization, de-temporalization and de-naturalization of nutrition [2]. This means that the trend is towards an aestheticization of food and meals are less tied to times of day and seasons. In addition, globalization means that the procurement of food is less tied to regional cultivation possibilities and consumption is less tied to domestic structures, as the increase in to-go products shows. In addition, a pluralization of nutritional styles can be observed [2]. Furthermore, gender is a relevant factor influencing nutrition [3, 4]. This is evident because women show more health-conscious behavior than men [3, 5] and men are less well integrated in health-promoting offers than women [6].

The literature proves the simultaneity of unhealthy nutritional practices as paradoxical independence from

incorporated nutritional knowledge. This means that the existing knowledge about the organization of healthy and varied nutrition is not transferred and implemented in everyday life. [7].

Whereas natural science disciplines tend to focus on the question of different nutrients, physiological requirements, etc., cultural and social science disciplines tend to focus on the reasons for and factors influencing nutritional behavior [8, 9].

However, even there are differences in approaches and attempts at explanation, between cultural and social science disciplines such as educational science, psychology, history, anthropology and sociology [10, 11]. One example is the study "Why we eat what we eat -The Eating Motivation Survey", which should contribute to the understanding why people select certain food items in everyday life from a psychological perspective [12]. This present study combines and complements existing explanatory models from various disciplines by means of a qualitative study with persons between 18 and 85 years of age.

Material and Methods

The data was collected within different studies, which were carried out through several studies at the professorship for gender studies in science and engineering and subjected to an extra secondary analysis. The research design is qualitatively set up, as this allows for a more in-depth examination of individual factors, needs, evaluations and relations and allows for a better understanding of interrelationships [13]. Between March 2019 and August 2019 biographical individual interviews were conducted with different target groups. The individual interviews took place in university buildings of the Technical University of Munich and were rewarded with an expense allowance. The acquisition of participants was based on a database of the enable-cluster and public calls for application for participation. A total of 49 persons aged between 18 and 85 years were interviewed, 57% of them were female and 43% male.

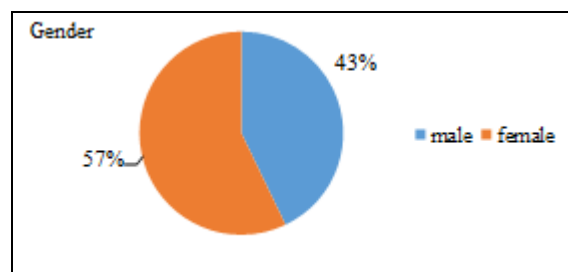


Figure 1: Gender of the test persons.

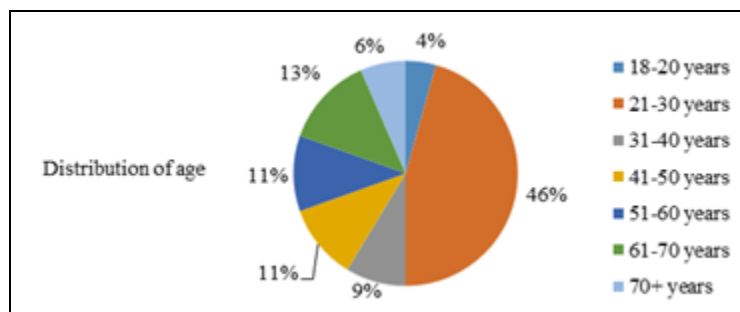


Figure 2: Distribution of age of the test persons.

The guidelines for the individual interviews were based on results from previous studies with focus groups and individual interviews on the topic of "nutritional behavior". The interviews lasted between 45 and 60 minutes. After all interviews were conducted, they were transcribed, categorized and coded with the evaluation program MAXQDA. The evaluation was based on a qualitative content analysis according to Mayring.

Results and Discussion

Using previous models of nutritional behavior and the results of the qualitative interviews, a new explanatory model was developed that illustrates the basis on which nutritional decisions are made. The living situation of the person, which is determined by material and immaterial resources, such as the physical conditions like age and gender, are decisive [14-16]. The state of health is also determinant for the living situation in which the individual finds himself. Living situation in this context means not only education and

employment but also income, housing situation, marital status and leisure time behavior. These individual and socio-demographic characteristics lead to the formation of habits regarding nutritional behavior and the development of the taste. Nutritional behavior here does not only mean the choice of food, but also decisions and habits regarding the preparation, cooking and follow-up of meals, including purchasing and the consumption situation (persons participating, place of meal intake, time frame, etc.) [17].

The following excerpt illustrates the influence of the family situation on eating habits:

"Now it's like this, since the children have been here we eat a warm lunch".

The importance of socio-economic status can be demonstrated by this statement on the influence of unemployment and available financial resources:

"When I was unemployed I had less money and then I couldn't buy the insanely healthy products. Because normally I always buy everything fresh at the market, but you can't afford it if you don't have enough money".

External Stimuli

The choice of food, the preparation of the dishes and the table manners depend on external stimuli. These include the economic situation in which the individual finds himself, the ecology as well as the existing society, its policy and its culture [18]. This creates opportunities, which, in addition to supply and demand, also generate marketing, traditions, laws and trends and thus directly influence eating behavior. Among the external stimuli and the existing society is also the social environment that shapes individual nutrition. This becomes clear from the following examples:

"However, the flat mate always made sure that the candy and snack cabinet was full, and accordingly, I helped myself very extensively.

"Girls always talk like this: "That's too much sugar, it makes you fat", and stuff like that. So everyone has eaten less."

Economy and ecology determine nutritional behavior through the supply, availability, price and marketing of food, as well as through aspects such as cultivation possibilities, biological and/or regional origin and sustainability. The following extracts are examples of this:

"When I go to the supermarket, I see: Okay, there is something on offer, where I just need to stock up or something like that - like, I don't know, rice or something else that is on offer, then I just buy it there as well".

"My parents live in the countryside in Hamburg and accordingly there are a lot of farmers around who have their own vegetables and they are still very keen to buy as much fresh produce as possible".

Internal Signals

The inner signals are the biological and physiological needs that cause hunger and satiety. Depending on gender, age, state of health and physical activity (leisure activities, physical work), different needs are thus constituted for each individual. Mental needs are also among the inner signals that determine nutrition. The following quotations underline the importance of different taste perceptions and emotional effects of food:

"When I feel bad, I eat unhealthier... And I also eat more sweets. Chips, simply unhealthy things. And when I feel better or when I feel good, then I also have an increased desire for healthy things, like fruit or something like that".

"When the children are in bed, after dinner, to relax".

"It's not a conscious decision that I'm in the mood for potatoes. Somewhere in my subconscious, potatoes are coming from. (Laughs) And then there are potatoes. So I just try to listen to my body and not worry too much about it".

Rational Attitude

Finally, the rational attitude also decides on nutritional behavior. Like external stimuli and internal signals, they are directly related to socio-demographic and personal characteristics. Thus, not only age, but also the level of education distinguishes between knowledge about nutrition, awareness of nutrition and experience. These determine nutritional behavior through beauty and body images, efforts to avoid diseases, the conscious consumption of health-promoting foods or the tolerance of food. Experiences made with food and which are reflected accordingly are just as formative for nutritional decisions as a basic awareness of healthy nutrition and special knowledge about the nutrient composition and effect of food:

"Somehow I noticed that there is so much meat and so it is heavy in my stomach. And somehow it doesn't feel so good".

"Because I know that regular meals are important".

"Well, I mean, I'm just Google-reading different articles. They say that you can get iron from spinach, for example, if you don't take it from meat or something like that. I'll find out about that stuff".

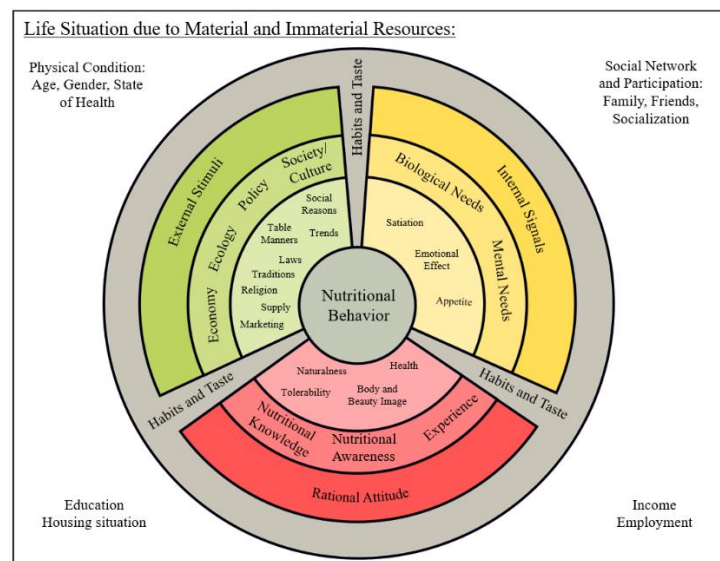


Figure 3: Explanatory Model for Nutritional Behavior.

Conclusion

In summary, it can be stated that dietary behavior cannot be explained solely on the basis of sociological, psychological or economic approaches. It is necessary to combine them in order to provide a comprehensive explanation. Habits and tastes emerge from the material and immaterial resources of the individual and have a direct influence on eating behavior. Moreover, they interact with external stimuli, internal signals and rational attitudes, which in their diversity lead to nutrition being as individual as a fingerprint. The consideration of these relations and effects in product design, promotion and nutritional campaigns and programmes contributes to a target group-specific approach for healthy nutrition.

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