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Institutionen för livsmedelsvetenskap

## **Reasons to Believe- Reasons to Buy** - Factors influencing the consumers' choice when buying probiotic products

*Emelie Elmlund & Mirjam Ros*



Självständigt arbete · 15 hp · Grund G2E · Agronom-Livsmedel

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-Factors influencing the consumers' choice when buying probiotic products

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# Summary

The purpose of this thesis was to describe what factors influence consumers' choice when buying probiotic products. Functional Foods have been predicted a bright future on the food market but so far the concept have not been embraced by the consumers. The reasons for this are many and not clearly understood.

Positive health effects are what set a functional food product apart from traditional food stuffs of the same type. One reason for the slow market of Functional Foods might be that these health effects are often difficult to communicate to the consumer. Health claims are strictly regulated through legislation and since the effects cannot be experienced directly by the consumer coupled to the consumption the reasons for believing are few. It is important for the producer to know what the consumer expects from the product and to be able to communicate these properties to the consumer. This study was performed as an assignment from Valio AB as a step in their intention to introduce a probiotic product on the Swedish market.

A qualitative approach was used in this study and the interviews were performed via focus groups. Three different clean focus groups were held in Uppsala and Stockholm with participants from three different consumer segments. We interviewed young adults without children, families and adults with grown children. During the focus groups we discussed questions coupled to what makes the participants believe in probiotic products and what makes them buy these products.

The thesis was based on established theories such as the Total Food Quality Model and the results from the focus groups showed that knowledge to a great extent affects the participant's attitude towards probiotic products. Taste and health were the quality dimensions that were most important to the interviewed participants, however the production dimension also played an important role to some participants. Participants also expressed the importance of who the sender of the information was regarding the function of the product. Overall we could find evidence in the focus groups that corresponded to the model we used and we draw the conclusion that the launch of a new product on the Swedish market would benefit from a closer communication between the consumer and the company when it comes to how and why the product work. Also we find that a selection of juice products would probably work better since the groups we talked to all expressed unwillingness to purchase non-Swedish dairy products.

# Sammanfattning

Syftet med denna avhandling var att beskriva vilka faktorer som påverkar konsumenternas val när de köper probiotiska produkter. Functional Food har förutspått en ljus framtid på livsmedelsmarknaden men än så länge har konceptet inte anammats av konsumenterna i den utsträckning man hoppats på. Skälen till detta är många och ännu inte helt klarlagda.

Positiva hälsoeffekter är vad som särskiljer Functional Food från traditionella livsmedel av samma typ och en orsak till den långsamma marknaden för Functional Food kan vara att dessa hälsoeffekter ofta svåra att kommunicera till konsumenten. Hälsopåståenden används men är strikt reglerad genom lagstiftning och eftersom hälsoeffekterna inte kan upplevas direkt av konsumenten vid konsumtion kan skälen för att tro på produktens effekt utebli. Det är således viktigt för tillverkaren att veta vad konsumenten förväntar sig av produkten och att kunna kommunicera dessa egenskaper till konsumenten. Denna studie utfördes på uppdrag av Valio AB som ett steg i deras avsikt att införa en probiotisk produkt på den svenska marknaden.

En kvalitativ forskningsmetod användes i denna studie och vi använde oss av så kallade fokus grupper. Tre olika och rena fokus grupper hölls i Uppsala och Stockholm med deltagare från tre olika konsumentgrupper. Vi intervjuade unga vuxna utan barn, familjer och vuxna med vuxna barn. Under fokusgrupperna diskuterade vi frågor kopplat till vad som gör att deltagarna tror på probiotiska produkter och vad som får dem att köpa dessa produkter.

Avhandlingen bygger på etablerade teorier såsom Total Food Quality model och resultaten från fokus grupperna visade att kunskap i stor utsträckning påverkar deltagarens inställning till probiotiska produkter. Smak och hälsa var de kvalitetsdimensioner som var viktigast för de intervjuade deltagarna, dock spelade produktionsdimensionen också en viktig roll för vissa deltagare. Deltagarna uttryckte också att det var viktigt med vem avsändaren är av informationen kring produktens funktion. Sammantaget vi kunde hitta bevis i fokus grupperna som motsvarade den modell som vi använt och vi drar slutsatsen att lansera en ny produkt på den svenska marknaden skulle gynnas av en närmare kommunikation mellan konsumenten och företaget när det gäller hur och varför produkten fungerar. Vi uppfattar det också som om att ett juice sortiment skulle fungera bättre än ett mjölkbaserat sortiment då de flesta deltagare uppfattar begreppet "Svensk mjölk" som ytterst viktigt.

# Abbreviations

EFSA	European Food Safety Authority
EU	European Union
FOSHU	Food for Specified Health Use
GDA	Guidance Daily Allowance
HULK	Households food purchase and eating habits
IBS	Irritable Bowel Syndrome
LAB	Lactic Acid Bacteria
LGG	<i>Lactobaccillus rhamnosus GG</i>
WHO	World Health Organization

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# 1 Introduction

*“Man must eat what one needs, but in reality one chooses what one enjoys. Health can therefore only be promoted if one likes what one needs”*

Martin Pyke “Människans föda”  
(Rydqvist & Winroth, 2004, p 112, translated)

Humans need nutrition as stated in the quotation above. But food is not only a source of nutrients it also holds cultural and social importance. Food contributes both with pleasure and worry and it occupies our thoughts more or less everyday (Rozin *et al* 1999). One main attribute of food is the relationship between food and health. What we eat affect our health, both in the short run and long term.

Health as a concept is almost as hard to define as food, but WHO (World Health Organization) has tried to verbalize the intuitive sense of what health is in *“A state of complete physical, mental and social well-being, and not merely the absence of disease”* (WHO, 2011). According to this definition health is not only a question of only physical well being, but also mental and social stability is needed.

Perhaps the most prominent food related health problem is overweight and obesity. Nearly half of the adult population in Sweden are overweight according the Health and Human Service Department (2009). Even more concerning is that 15-20% of the children in Sweden are overweight and 3-5% obese. Overweight affect the life quality and is estimated to shorten the expected lifespan with 6-7 years in the general population (Nationella Folkhälsoenkäten 2010)

Food is not only related to weight issues and nutrition. Food influences a person through other factors such as allergies and symptoms in the gastrointestinal tract. In our stressful society many desires a so called “quick fix” for problems like IBS (Irritable Bowel Syndrome) and symptoms such as flatulence and irregular bowel movements. The Swedish Institute of National Public Health showed in a survey 2010 that 29% of adult females in Sweden reported having stomach or gut related trouble (Nationella Folkhälsoenkäten, 2010). For adult men in Sweden 20% reported to have these types of problems. The problems were more common for older individuals then for young adults. Of the females in the survey 4% reported to have severe problems and 3% of the men reported to have severe problems.

When it comes to food and health many different parties are involved. Not only the individual are responsible for what food related choices he or she makes, but the society and the industry are also important players on the food market.

The final decision of what to eat and in what quantity is in the end the individuals own responsibility but the consumption pattern is strongly influenced by other factors. The society influences the consumer’s choice through laws, taxes and political agendas. The agricultural policy in the EU subsidizes unhealthy products and renders especially fruits and vegetables in an unprivileged position where the prizing is high according to Gunnar Ågren at the Swedish Institute of National Public Health (2006). Also norms and cultural attitudes influence eating habits.

The general food dealer has a responsibility when it comes to what goods are sold and how they are promoted in the store, both considering how different food stuff is displayed and given special prices. Commercials in TV and magazines often promote fast foods and different types of easy cooking products and according to Gunar Ågren (2006) at the Swedish Institute of National Public Health. The problem with those kinds of products is that they often are high in fat and sodium or have low nutritional value.

More and more companies see the possibility however, in selling healthy products that also helps the consumer overcome or ease symptoms induced by our society such as high cholesterol and IBS. Functional Foods are defined as “*products with an active ingredient promoting health in the individual*” (Blücher, 2005). The concept was created in Japan under the name of FOSHU (Blücher, 2005). The initiative came from the Japanese government as an attempt to solve the problem with increasingly ageing population in Japan. After the birth of FOSHU the concept was adopted in the USA and Europe, but now under the name of Functional Food (Blücher, 2005). Functional Foods has been predicted a bright future on the food market since it might help with food related health issues. But the predicted future has not been as bright as expected. Consumers have not embraced the products and the concept of Functional Foods to the extent that the industry hoped for.

## 1.2 Problem

Consumer’s choice of food is a very complicated procedure which depends on many different factors which interact with each other. Research shows that knowledge and attitudes affects consumer acceptance and choice of Functional Foods (Urula & Lähteenmäki, 2004).

The main way for producers to communicate with consumers is through marketing. One cause for the slow increment of the functional food market is believed to be the strict regulation of marketing Functional Foods by the EU (Grunert 2002). A functional food product is often seen as being a part of the group Functional Foods, but consumers also regards them as being part of the traditional group of food it belongs to. A way to set the product apart from the traditional food stuffs in the group is to point out the positive health effects of the functional food. It is often hard for the consumer to directly link intake of a particular product to a positive health effect, especially in the short run (Urula & Lähteenmäki, 2004). This is why it is so important for the producer to communicate these health effects to the consumer. The consumer is in many situations almost entirely omitted to what information the producer sends out which causes a problem when the communication is restricted through legislation or when the consumer feels mistrust towards the food industry.

The dairy industry is a food industry that is relatively research intensive and health oriented. Valio AB is a Finnish dairy company with a history going back to the 4<sup>th</sup> of July, 1905 when 17 smaller dairy companies signed an agreement and joined a cooperative with the aim of exporting high quality butter products (Valio, 2011). Today the company is the largest dairy company in Finland and it started a branch in Sweden 1994. In Sweden Valio is most known for high quality low lactose and lactose free products, although the company produce a wide range of dairy products (Valio, 2011).

Valio AB has decided on four cornerstones in their work for promoting wellbeing for the consumer. This means that the company works for:

- Products that are high in quality and promotes well being.
- Cooperation that allows focus on the consumers needs.
- Co workers that are competent, motivated and goal oriented
- A chain of production that is ethical and financial lasting

One way to offer consumers food related wellbeing is through probiotic products. Probiotic products are a type of Functional Foods that are defined as *different kinds of food products enriched with added microorganisms which could give positive health benefits in the gastrointestinal tract* (Salimen *et al*, 1999). The microorganisms can be bacteria or yeast, but primarily LAB (Lactic Acid Bacteria) is used.

Probiotic products are proven to relieve stress related problems in the gastrointestinal tract (Blücher 2005). Valio AB has worked with research and development in the area of probiotic dairy products and the company has tried to market the yoghurt *Gefilus* containing the bacteria strain LGG (*Lactobacillus rhamnosus GG*) which are shown to help with symptoms in the gastrointestinal tract (Valio, 2011).

### 1.3 Aim

This study aims to describe how knowledge and attitudes affect consumer choice of a probiotic product. What are the *reasons to believe* and *the reasons to buy*?

The study is performed with the use of focus groups where probiotic products are discussed. The topics that were discussed were as follows:

- Do you believe that probiotic products work?
- What is it that makes you believe in the product?
- Why do you buy probiotic products?

The answers received from these questions above will hopefully help with the marketing of Valios *Gefilus* yoghurt in Sweden.

## 2 A theoretical perspective

Chapter 2 provides a theoretical view of consumer food choice of Functional Foods. The chapter starts with an introduction to the concept of food quality and consumer segments. Next a description of how knowledge can affect food choice is presented. Knowledge is strongly linked to attitudes which are discussed next. Finally the Total Quality Food Choice Model and its different parts are described.

### 2.1 Definitions of food quality and consumer segments

#### 2.1.1 Food Quality

Food quality can be said to be made up by both an objective part and a subjective part (Grunert 2005). The objective part regards the physical properties of the product and are said to look at quality from the manufacturers point of view. The subjective part on the other hand looks at quality from the consumer's point of view and regards how the consumer perceives the food stuffs quality. This study looks at quality in a subjective way and hence how the consumer perceives the food quality. The challenge for the producer lies in translating the consumer's desired quality of the product into physical attributes of the product and then be able to communicate this to the consumer (Grunert 2005)

#### 2.1.2 Consumer segments

Consumers are often divided into consumer segments. This can be done in many different ways and by different criteria. Consumers can be divided into five different segments according to their food-related lifestyle (Brunsö *et al.*, 2002). What type of food-related lifestyle a consumer has depends according to Grunert on how the consumer shop for food and cook meals, value different quality dimensions and their different purchase motives. The five consumer segments are as follows:

- The uninvolved food consumer
- The careless food consumer
- The conservative food consumer
- The rational food consumer
- The adventurous food consumer

The *uninvolved* food consumer is not particularly interested in food and do not pay attention to quality dimensions apart from the convenience dimension. They perceive and process very few quality cues and are not particularly interested in price. They do not plan their meals and often consume a large amount of snack. The uninvolved food consumer is often single, living in a big city with a part- or full-time job and low to average wage.

The *careless* food consumer resembles the uninvolved food consumer with the exception of having an interest in novelty and often having a higher education level and higher income.

The *conservative* food consumer is interested in the taste and health dimension and not so much in the convenience dimension. The conservative food consumer value security and tradition high and try to fulfil these values through the food purchase. They often live on the countryside and have a low level of education but a high income in average.

The *rational* food consumer is very interested in the taste-, health-, convenience- and production dimensions of food quality. The rational food consumer perceives and process a lot of quality cues. The rational food consumer values security and self-fulfilment and tries to fulfil these values when purchasing food. The rational food consumer is often a female who

lives in a city of medium size and has a family. The level of education and income differs from one country to another.

The *adventurous* food consumer is very interested in new recipes and cooking. The preparation of a meal is something that involves the whole family. They are interested in the taste dimension and not so much in the convenience dimension of food. They often live in a big city and are rather young with a big family. Both their education level and income is high. Self-fulfilment is a purchase motive for this segment.

## 2.2 Knowledge

Knowledge affects how much and what type of information the consumer takes in and also how he or she perceives the information. It is not only important that the information reaches the consumer but he or she must also believe in the information. The credibility of the source of information is crucial since it is how the consumer perceives the information that matters in the end (Urula & Lähteenmäki, 2004). Believing in the information about the product is likely to increase the consumer's consumption of probiotic products (Urula & Lähteenmäki, 2004). A positive health effects is what sets a functional food product apart from traditional products in the same food category. Health effects are often difficult for the consumer to experience for themselves. Consumers may not be able to directly link the intake of a particular food product to positive health effects, especially in the short run. Health is a so called credence characteristic of the functional food product. Credence characteristics can not be experienced by the consumer as for example taste can. Because health effects can not be experienced directly, information is very important when consumers perceive health quality of the functional food (Urula & Lähteenmäki, 2004).

Knowledge is strongly linked to cognition which together with affect and conation are three factors that interact when an attitude is formed. Attitudes are discussed in the next section.

## 2.3 Attitudes

Attitudes are positive or negative evaluations of a person, situation or object. They are believed to be learned and therefore attitudes are said to be changeable. An attitude is said to be made up by the three components of cognition, affect and conation (Ajzen 2005, p 20).

*Cognition* regards a person's perception of and thoughts about an object and depends on the consumer's knowledge of the object. This knowledge is gained from information from different sources as well as personal experience.

*Affect* regards a person's feelings towards an object. Feelings can be positive, neutral or negative and can take many different forms. Feelings are formed both during processing of advertisement for a product and during the consumption of the product. A person's general mood state also plays an important role. How a person is feeling before he or she processes an advertisement or consumes a product plays a great role when the consumer forms his or hers attitude towards the product.

*Conation* regards a person's intention to perform a particular behaviour connected to an object, for example the behaviour to purchase a product. A positive attitude towards a product does not necessarily lead to the consumer purchasing the product if the attitude towards this

behaviour is negative. A positive attitude towards purchasing the product is likely to show greater correlation with the actual behaviour than an attitude to the product will.

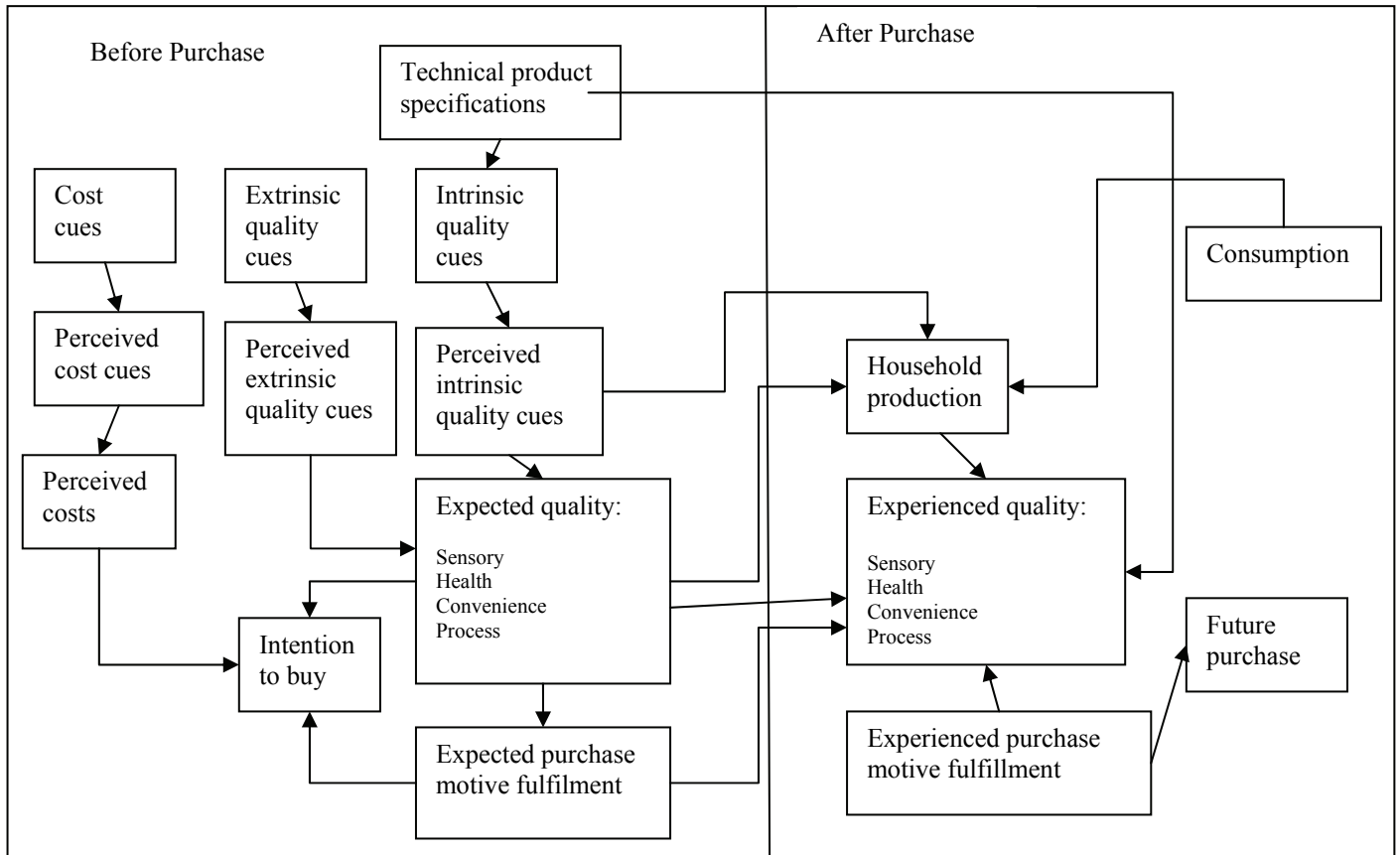
Attitudes can be learned through experience or knowledge and beliefs. Attitudes may be influenced by family and friends or by personal experience. Mass media and direct marketing may also influence attitudes. Factors that are common to affect consumer's attitude towards Functional Foods are sociodemographic factors such as gender, education, income, age, nationality, if you have children or not (Verbeke 2003). That is why we often divide people into consumer segments, discussed in section 2.1.2. Attitudes towards health, naturalness and novelty play a big part in consumers' choice of Functional Foods (Urula & Lähteenmäki, 2004).

Consumers form attitudes towards cues which are used to evaluate the expected quality of a product. The expected quality is according to the Total Food Quality Model (Grunert 2005) together with price and expected purchase motive fulfilment what affects the consumer's intention to buy a product. The Total Food Quality Model is discussed further in the next section.

## 2.4 The Total Food Quality Model

According to Grunert (2002) consumer food choice depends on quality expectations made before the purchase and quality experience after the purchase. How these coincide will shape the consumer's satisfaction with the product.

The Total Food Quality Model was created by Grunert and colleagues in 1995. The Total Food Quality Model is divided into two major stages being before and after the purchase. The model links a purchase motive to life values which the consumer tries to fulfil through the purchase. The Total Food Quality Model is presented in Figure 2 on the next page.



**Figure 2.** *The Total Food Quality Model (Grunert 2005 p 373)*

The Model shows how quality expectations are shaped prior to the purchase and after the purchase by various cues. The cues can be either intrinsic- or extrinsic cues. Intrinsic quality cues deals with the physical appearance of the product. Like visual attributes such as colour, texture etc. Extrinsic quality cues are said to regard everything else such as price, brand, advertising claims, the type of store the product was purchased in and so on (Grunert 2005). The expected quality of the product is used to see if the purchase will fulfil the consumers purchase motive (Grunert 2005). The expected purchase motive fulfilment together with expected quality and perceived cost affects the consumer’s intention to buy the product. The Total Food Quality Model is said to have a horizontal and a vertical dimension which are discussed in the sections below.

#### 2.4.1 The horizontal dimension

The horizontal dimension of the Total Food Quality Model moves over time and describes how consumers perceive quality before and after the purchase (Grunert 2005). Before the purchase the consumer uses the intrinsic and extrinsic cues to forms quality expectations. After the purchase the consumer has a quality experience. This quality experience depends on factors such as meal preparation, sensory characteristics and situational factors such as time of the day and general mood of the consumer. Both the expected and experienced quality depends on many different factors which not all are controllable by the producer.

#### 2.4.2 The vertical dimension

The vertical dimension of the Total Food Quality Model explores the relationship between quality cues and purchase motives and values. The vertical dimension builds on the means-

end approach which states that consumers make decisions based on the possibility for these to lead to a desired outcome (Grunert 2005). The consumer purchase motive is linked to the aim of fulfilling life values which are shown in table 1.

**Table 1.** *Schwartz Life Values* (Schwartz, 1992)

<b>Life Value</b>	<b>Explanation</b>	<b>Example</b>
Power	Social status, control or dominance	Wanting respect and approval from others
Achievement	Success and competence	Wanting to influence others and show competence through social standards
Hedonism	Pleasure and gratification	Enjoying food, doing pleasant things
Stimulation	Excitement and challenge	Wanting to live a varied life, enjoying novelty
Self-direction	Independent thought and action	Wanting to be self-sufficient, valuing one's own worth
Universalism	Care for nature and people	Wanting equal opportunity for all, care for the weak
Benevolence	Care of familiarity	Wanting to protect people close
Tradition	Respect for culture and religion	Being humble and moderate, respect for tradition
Conformity norms	Self-possession of actions that go against norms	Being obedient and not upsetting others
Safety	Safety of nature and people	Protection of oneself and others, health, protection of one's country

Schwartz list of life values is used in the Total Food Quality Model (Grunert 2005). Urula and Lähteenmäki showed in a study performed in 2003 that consumer's link use of Functional Foods to wellbeing of oneself, control over one's health and life and feelings of being a better person (Urula & Lähteenmäki, 2004)

#### 2.4.3 Four major food quality dimensions

According to Grunert (2005) there are four major food quality dimensions:

- Taste and appearance dimension
- Health dimension
- Convenience dimension
- Process dimension

*Taste* has through history played and still does a central role when it comes to how people perceive food quality (Urula & Lähteenmäki 2004). Consumers experience taste but before this they use other cues to form expectations of taste. This can be cues such as price and appearances or previous experience or recognition of brand. Consumers may use brands to draw conclusions of quality based on previous usage of products from the brand.



*Health* is a dimension that both deals with the functional qualities of food but also with the safety and risks involved with food. The health dimension of food quality can often not be experienced by the consumer and is a credence dimension. Health can from a consumer's point of view be divided into healthy eating and food safety. Since the health effects of food can not be experienced as a direct effect of consumption consumers use other cues to form an opinion of the health quality dimension of the food. Consumers often use cues as low fat content, naturalness and a little processing as attributes that show a high health dimension (Grunert 2005).

*Convenience* is a dimension dealing with the saving of time and physical and mental energy. *Process* is another dimension which has become more important over the last years due to consumers increasing awareness of naturalness (Frewer *et al.*, 2003). Process is in the same way as health a credence dimension since the consumer only can rely on the producer and other sources and not form an opinion based on experience.

The quality dimensions interact with each other and consumers use cues from one dimension to form opinions about another dimension, for example use of the colour of food stuff may lead to expectations about the taste. How the dimensions interact changes from product to product. Consumers also interact the price of the product with the four quality dimensions mentioned above. The price of the product is the main cost for the consumer and is evaluated against the quality for the consumer to form an opinion if the quality is worth the price.

## 2.5 Theoretical delimitations

Food choice is a very complicated process and several different theories exist on how consumers make food choices. The Total Food Quality Model has several limitations mainly because it is such a broad theory. This wideness of the model is of course useful in the sense that it makes the model applicable on many different food types and decisions. However the wideness of the model leads to limitations when studying very specific types of foods and decisions. Our study concerns consumer's choice of probiotic products which is a rather specific type of food product.

Our study focuses on the stage when the consumer forms his or hers expected quality of the food. The stage after the purchase could not be studied in the focus groups and therefore this stage was left out. Since we did not have enough information about the participants, their lifestyles etc, we have chosen not to divide them into consumer segments which also is a limitation.

### 3. Method

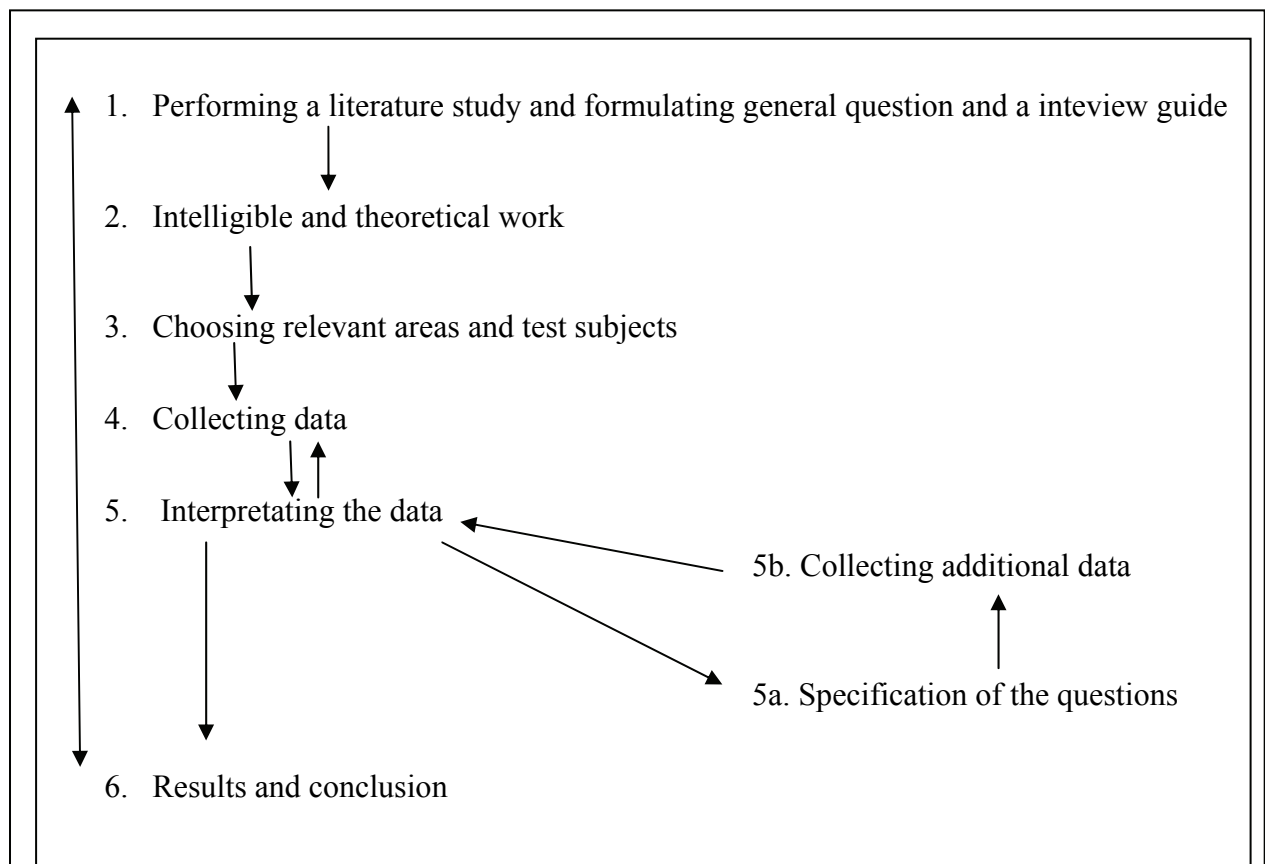
Chapter 3 explains the method used in this thesis. The chapter provides a basis for how the work was outlined and what delimitations was made.

#### 3.1 Outline of the research process

Knowledge about marketing in relationship to probiotic products are not extensively researched as are seen in the literature review done. This study is made with a qualitative approach in order to gain contextual understanding of the consumer’s perspective on probiotic products. In general the qualitative research is inductive and interpretive which means that the study focuses on understanding what the social environment means for the perception of a certain subject.

The result generated in this study can not be said to apply in general since it only studies the qualitative aspects of a small group but may be well suited for using in discussions or as the basis of more extensive studies. The results are also strictly interpretative. Interpretative studies are recommended by Sandberg (1994) when human actions are studied since social interactions are difficult to record in a complete way with quantitative means. A qualitative study also has the advantage of revealing the consumers perspective in a way that quantitative studies does not (Holmberg, 1996).

According to Bryman (2001) there are some general steps in all qualitative research that must be considered which are described below and illustrated in Figure 3. The entire process is iterative with a constant back flow of information.



**Figure 3.** The main steps in a qualitative study (Picture based on Bryman 2001 page 252 with minor modifications).

The following subheadings explain and contextualize how the main steps in a qualitative study were implemented into our study.

### 3.2 Performing a literature study and formulating general questions and an interview guide

All studies must start with the formulation of the general questions the researcher wants answered. In a qualitative study it is important that the questions are general and leave room for discussion since too specific questions would prevent nuances and perspectives from being uttered. In this study we wanted to explore the knowledge and perception of probiotic products in some general consumer segments. The exploration of consumer knowledge aimed to broaden the concepts introduced in Chapter 2 and discover what factors influence the final decision to buy a product. An interview guide was done according to Bryman (2001) and Warren & Xavia Karner (2010). The questions are freely translated from Swedish and are divided into three main questions with additional probes.

The first main question aims to reveal factors connected to the trustworthiness of the product. This is important in order to establish a relationship between the consumer's trust and information from the company and others (Such as family/friends and the social environment). This is linked to knowledge of the product since it influences how a person perceives the different cues in the Total Food Quality Model.

- ***Do you believe that probiotic products work?***

Knowledge about a product's properties and effect on health is the basis for believing in the attributes a product is said to have. The knowledge is coupled to the health dimension in the expected quality section and in order to discover what factors are involved a second main question was established.

- ***What is that makes you believe in the product? If you don't believe, what influences that opinion?***

A useful probe in order to create some context to the question is:

- *How did you come in contact with probiotic products for the first time? What made you want to try it out yourself?*

The third main question is linked to discovering which cues are the main factors for when consumers form intentions to buy.

- ***Why do you buy probiotic products?***

The following questions are used as probes for revealing nuances in the main question.

- *Do you buy the product for your own personal use? Or do you buy it for someone else? In that case, who?*
- *Do you buy probiotic products at any particular situation? For example when you are sick or are going to perform sport?*
- *How often do you buy probiotic products?*
- *When you buy a probiotic product, how do you want to feel?*
- *If you have done a purchase you were not satisfied with, why did you feel unhappy with your purchase?*

**Figure 4.** Interview guide with general questions and probes for the focus groups.

Figure 4 shows what questions were used for the interviews with a short explanation to why they were chosen.

Our study also includes a literature review which was performed in order to gather information regarding consumers' behaviour when buying food products, in particular probiotic products. A literature review is essential in order to give an understanding of the field today and in a historical perspective. Reviewing the published material make sure the study is relevant and confirm the criteria of authenticity is fulfilled via triangulation as mentioned in the beginning of Chapter 3. The literature review resulted in several peer reviewed articles from academic journals dealing with social sciences and primarily market science, but also books within the field of qualitative analysis methods was recovered. Since the literature review also is an iterative process material found in the beginning might only have served as a platform in order to find more relevant literature. The so called snowball technique (Ridley 2008) refers to the method in which one article or book leads to the accumulation of more relevant literature via the references attached within the text.

According to Backman (2008) there is three ways in which a literature review is done. It deals with consultation, manual search and database search in order to orientate within a field. Primarily this study relays on material found when searching different databases provided by the Swedish University of Agricultural Sciences. Databases such as Jstore and Elsevier were of greatest importance when finding literature and key words such as "probiotic", "focus groups", "qualitative methods", "probiotic foods", "consumer awareness", "purchasing" and several combinations between the key words was used during the search. Overall the field seems to be small and relatively unexplored so we seldom used limitations within the search. Limitations in published years were though of great importance and no articles older than 5 years were included. Some books dated back to the 1980s but the information retrieved from them deals primarily with background info to qualitative studies and methods within the field of marketing. Some literature were found after consultation with the supervisor and fellow students but also some manual searches were done by inventory the library on Swedish University of Agricultural sciences, Ultuna in Uppsala.

Overall the literature review revealed that the field of marketing in relation to probiotic products are not extensively researched. Instead the triangulation leads to the conclusion that the theory should be based on the Total Quality Food Model. The Total Quality Food Model served as a platform in the iterative process of embellishing the existing model with additional factors. In order to create a context and explain the basis for the Total Quality Food model we use *Knowledge* and *Attitudes* from the point of view of Urula (2003) and Ajzen (2005).

In order to find more nuances to the general Total Quality Food model focus groups was used. Focus groups are a qualitative method which provides a deeper understanding for what the impact social environment has on a particular question when individuals are interviewed in groups. The method is not a new one and has been used extensively within the field of market research for since the 1950s according to Kvale (2009). The method gained in popularity the last years (Bryman, 2001) and is now accepted for studying social interactions.

In general a small group is interviewed in a relative unstructured way when performing a focus group. According to Bryman (2001) the number of participants is regarded as optimal around 6 to 10 since to many participants would cause difficulties when controlling the group. It is also a question of resources. Too few participants would not yield a nuanced picture of the question studied. Few participants could be desirable if the individuals interviewed have some extended knowledge in the area (Bryman, 2001). The groups are lead by a so called group leader whose role is not to control but to guide the conversation in the wanted direction. A group leader asks open questions and make sure all participants are involved. It is also

desirable to have second group leader which take rough field notes and controls the recording devices.

### 3.3 Choosing relevant areas and test subjects

The study should be based in relevant areas and with relevant test subjects in order to obtain reliable results. The area in which the study took place is Uppsala, Sweden. Uppsala is the fourth greatest city in Sweden with 197 787 inhabitants (SCB, 2005) For the focus group containing families with children the participants was inhabitants of Västerhaninge, a suburb to Stockholm with a population of 14 060 residents 2005 (SCB, 2005) The participants for the focus groups were divided into three different groups and the sampling was done on a non-representative basis:

1. Young adults without children
2. Families with children
3. Adults >50 years

The number of participants in each group was not determined in advance since it was expected to be hard to recruit test persons for the focus groups. The group of young adults consisted of 6 participants and the family group consisted of 4 persons. In the groups with adults>50years we assembled only three participants. The focus groups were clean groups and the recruitment was done by personal contacts and posters advertising for participants. The posters were placed at SLU and a home for elderly (Ekeby, Uppsala). By only advertising for participants in a few selected places, all where one might expect to find the desirable group, some sample variables were held constant such as residential area and a minimum consumption of probiotic products of once a month. Also the snowball technique was used and the first participants were asked if they knew someone who might be interested in participating in a focus group which led to further recruitment. A first contact was made via e-mail or phone. Primarily it was personal contacts who lead to the assembly of participants in the groups.

### 3.4 Collecting data

The interviews were performed according to the guidelines described by Bryman (2001) and recording devices such as a video camera and a dictaphone was used. The role as a group leader was alternated between us two performing this study and in general the interviews took approximatively 40 minutes. All participants were asked to write down three main reasons for buying probiotic products and the papers were kept for the data analysis.

The sessions were held at SLU in Uppsala for the students or in the homes of the participants. The environment was known to all persons and this gave rise to feeling of safety and recognition. In order to establish a relaxed and comfortable feeling during the interviews some coffee, cold drinks, fruit and cookies were brought to the focus groups. As a reward for participating in the interview the participants received coupons valid for buying products from Valio AB.

### 3.5 Interpreting data

Interpreting data is done by the researcher and are therefore strictly interpretative and not valid in general. The interpretation is based on what kind of data was collected and not all data are used. It is up to the researcher to determine what is relevant in the data collected.

The data was analyzed via qualitative content analysis, a classical method for analyzing all kind of quantitative data no matter where it originated from. The method as a whole aims to reduce the text into small analytical units which contain all relevant material for the study (Flick, 2006). A procedure for using the method was developed by Philipp Mayring (Flick, 2006) and the procedure divides the method into working phases. There are three different approaches when using this method. In this study an approach called *summarizing content analyzing* was used and the most important part here is called *paraphrasing* and aims to summarize the text and condense it so that no overlapping statements and phrases are left out.

The first defines the material and the interviews were divided into categories and important parts and themes was picked out and highlighted. Those parts were picked based on their ability to answer the questions asked in the study.

The second part aims to analyze the situation in which the data was collected and hence gives some contextual framework to the analytical units. When doing this the researcher must consider different aspects such as how the material was collected and from whom and if there was some environmental factors that might play a part and so on. In this study it is important to remember that the participants all have different backgrounds and live in different life stages which might influence their perception of probiotic food products. In the third part the material is characterized from how the material was recorded. This means that Mayring holds factors such as using a protocol or if the questions are more or less general to play an important role when interpreting a text. In the next part the researcher must define the text from the principle of “what one actually wants to interpret out of them” (Mayring 2000, p 45). When all these parts are clearly defined the analytical units from the text are created.

Some limitations of the method developed by Mayring (2000) is that if the categorization of the themes of the text is done strictly based on pre-formed theories the depth and underlying meaning of the text might be lost. This can especially be a problem when using *paraphrasing* since that means that some text are replaced by shorter paragraphs and words. As with many methods for text analyzing this method are time consuming and demands careful decision making from the interpreter.

### 3.6 Intelligible and theoretical work

Once the data is collected and interpreted the next step is to form a theory based on the data. The optimal outcome is when new relations and concepts can be formed from earlier research. As seen in the model one aspect that separates qualitative research from quantitative is that in the field of qualitative research the theory is based on the findings from the study. A quantitative study on the other hand aims primarily to verify the proposed hypothesis based on established theories from earlier studies.

In this study already established theories was used as platforms when we uncovered different factors that influence the reasons for buying and believing. No new theory was generated by

this study but the results can serve as a starting point for further research in this area. The factors we suspected to uncover when the main questions was created were all based on earlier studies and literature in the area of marketing and human behavior.

### 3.7 Results and conclusion

There are no differences when writing a report between a qualitative or quantitative study. The researcher must, as in all scientific writing, be aware of the importance of *trustworthiness* and *authenticity*. This is the criteria a qualitative text is judged from according to Guba & Lincoln (1994). The trustworthiness is divided into four different parts:

- a. *Credibility*. This means that it should be a clear connection between the results and theory created. In this study the results rested on established theories which were enhanced with the new results.
- b. *Transferability*. It is desirable if the study can be replicated in other studies. Since social environments cannot be “frozen” this criteria can sometimes be hard to achieve.
- c. *Dependability*. Can be compared to reliability. The study must account for all aspects and phases in the research process.
- d. *Confirmability*. The study should be possible to confirm and the researcher should be as objective as possible.

According to Guba & Lincoln (1994) authenticity are reached by using one out of two approaches when working with qualitative studies. One is *respondent validation* which is the process through which the researcher confers the results and coordinates them with the persons involved in the study. *Triangulation* is another technique which ensures the authenticity. The term means that more than one source of information is used when working with the pre-studies. Overall working with qualitative studies requires careful planning and an understanding of what criteria that must be fulfilled since the result is interpretive.

### 3.8 Quality assurance in the research process

Consumers make several decisions when buying a food product. This study deals with some important factors associated with probiotic products and their marketing. Since several studies focuses on general behaviour when consuming food items it is desirable that a more product specific study are performed. The study includes a literature review and is followed by focus groups where four different groups were interviewed.

In order to establish trustworthiness and authenticity in the study all participants was asked to supply us with their contact details. When the data was analyzed a copy was sent out to all participants for confirmation regarding what was summarized. Also the completed work was sent out. Not only was the contact details collected. The participants all filled in a form (see Appendix 1) were they answered questions about age, family situation, current work and education and if they practices sports. In the literature review triangulation within the area was reached through repeated searches on the databases supplied by SLU and via consultation

with the supervisor. The snowball technique generated some information and overall the articles and books found in the beginning were discarded for more relevant literature.

The study is done on the request from the Finnish dairy company Valio AB. The company attempts to establish a stronger brand on the Swedish market and are therefore interested in what makes the consumer buy a probiotic product. The consumer segments investigated was chosen on the request from Valio AB and may not represent all types of consumer's opinions in the area of probiotic food products.

### 3.9 Delimitations

Focus groups are an excellent tool for acquiring information in market research since it helps reveal the participants views in the question researched. It also allows the researcher to acquire a lot of data in a very cost-effective way (Bryman, 2001). The method has some limitations according to Bryman (2001) which should be mentioned such as the lack of control and the accumulation of waste quantities of data. Analyzing the data can also be troublesome since small details easily are lost when translating the data into results. Organizing a focus group is not easy either since it demands that the participant devote time and commitment, which the participants not always possess in excess. When performing a focus group participants sometimes have a tendency to take over the discussion and some individuals do not express any opinions at all. It is important to make sure that everyone is allowed to speak.

Overall several delimitations were done in the study performed. Only probiotic dairy products were chosen and we primarily focus on probiotic in the form of LAB. When performing the focus groups the participants were all chosen according to the consumer segment requested from Valio AB. The groups all represent different life stages and it is interesting to see if the reason for believing and buying differs between the groups. An extra group was included with adolescents studying in upper secondary school since we expected that they might have a different view of probiotic products. Overall the groups should cover most consumer segments but is not enough to draw general conclusions.

The questions cover the requested areas but do not extend over all aspects of probiotic dairy products. The focus is on how the consumer perceives the products and what feelings are involved when consuming probiotic products.

The literature review was narrowed down to include articles and books from social sciences such as marketing, economy, psychology and natural sciences in the form of food science and probiotic products. Articles older then 6-7 years were not included although some books were written in the 90's. The older literature was strictly used as an introduction to qualitative methods since we have a background in natural sciences and food science.



## 4 Results

Chapter 4 provides a presentation of the results gained from the focus groups. The results are presented separately for the students at SLU, the families with children and the adults >50 years. The answers given by the participants are linked to knowledge, attitudes and purchasing factors under different headlines.

### 4.1 Students at SLU

The sessions were held at the campus at SLU. The atmosphere was relaxed but focused with a flowing and easygoing conversation. Overall the participants bought probiotic products for themselves and one female student had problems with her stomach and bought probiotic products at least 1-2 times a week. Others bought such products a few times a month or once a week.

#### 4.1.1 Knowledge

One student mentioned that health claims were important when she considered buying a probiotic product and another said that she wanted proof that the products are safe to consume. We asked the students where they had first heard about probiotic products. Most participants mentioned commercials on TV but one female said that she first came in contact with probiotic products when going abroad as a child. Two students were introduced to the products during their childhood by parents.

All students believed probiotic products to work in general. Most agreed on that probiotic products should be ingested on a regular basis in order for it to work. One said she based her opinion on positive personal experiences. It was important for the group to have some research backing the product claims up. The students said that they would rather pay more for a thoroughly researched product than for a less expensive product that had not been researched as extensively. *“The commercial is directed from the company”* said one female and the student followed up with saying that the information about a product would feel more trustworthy if it came from a medicinal doctor.

#### 4.1.2 Attitudes

The students all expressed positive attitudes to probiotic products. They all thought the products worked and felt positive feelings when thinking of the product.

#### 4.1.3 Purchasing factors

We continued to talk about packages and environmental effect of the products since the students during the interview mentioned the package and factors related to it from time to time. They all agreed on that a screw stopper was preferred. Most of the student liked big packages the best, but one expressed an opinion about liking smaller packages which she could carry in her purse. She also liked plastic packages since she believed them to be more resistant to damage. One female then said that she did not like plastic since she felt that they were less environmentally friendly. Overall the group however felt that design was more important than the environmental effect of the product. The package should be designed with a nice picture and *“be the opposite of Eldorado”* (a low price brand in Sweden).

Buying probiotic products was a force of habit for many of the participants. One female claimed however that she saw probiotic products as a luxury product which she bought when

she traveled or wanted to celebrate some occasion. *“I buy it to indulge and celebrate a little. If I travel somewhere it feels good, walking around with it in my hand”*

We asked them how they wanted to feel when they purchased a probiotic product and the discussion circulated around feelings such as wanting to make a good purchase and that the product should be worth the price. They all wanted to feel like the product worked and would help them. One female said that she wanted to feel like: *“Now I have done something for myself and it feels good”* Two of the students had consumed such products when growing up and felt like the products brought back memories. They said it felt like home

When the interview started the participants arranged their reasons for buying probiotic products. The exact presentation of answers can be seen in appendix 2 but in general the students considered their own belief that the product works and gives positive effects in them as most important. Also the taste and price level was important. The students were rarely unhappy with a purchase but if they were a short expiration date was often the reason. Also they sometimes disagreed with preferences of taste and consistency.

When the students talked about brands they said that consumers of dairy products are very patriotic towards Swedish brands. The participants also talked about a high degree of local patriotism in consumers when discussing dairy brands within Sweden. They said that they often bought products familiar to them from their childhood. They tried to buy locally produced products but the force of habits was sometimes too strong though and they often ended up with their childhood brand. An example of this thinking is: *“If you are born in Milkoland then...”*

The students felt that it could be hard to launch a foreign dairy product on the Swedish market since the concept of “svensk mjölk” are so deeply rooted in the Swedish population. *“I think a juice assortment would be easier to launch in Sweden since “Svensk mjölk” is so deeply rooted”*

## 4.2 Families with children

The session was held in the home of two of the participants in Västerhaninge, a suburb to Stockholm. The atmosphere was relaxed and jovial with a lot of jokes and laughter. The participants bought probiotic products for themselves and their families. The purchase of probiotic products was not on a regular basis but always linked to illness or stomach disease in the family.

### 4.2.1 Knowledge

The families first heard about probiotic products via commercials but this did not make them want to try it themselves or believe in it. Instead they expressed a willingness to believe if they saw a positive effect in themselves. Advice from family and friends could have an effect but commercial would never make them buy probiotic products. They felt that marketing only caused the products to be more pricy. Commercial was a mean for companies to trick consumers into buying needless products. Especially commercials directed towards children were a hot topic. Their general skepticism toward probiotic products was based on that they did not see a need for the product. *“I think that the effect is marginal, because the amount is so small in those products”* said one male and referred to the bacteria added. The participants believed that the products gave some effect if they were ingested regularly or if you lived an unhealthy life with a poor diet. One male expressed a belief that probiotic products could boost the body after a period of illness and that it at least could do no harm.

When we asked what information would make them believe the participants all agreed on that they wanted neutral and clear facts and research from independent scientists and medical doctors. They also mentioned the National Food Administration as a good source of information. *“If somebody explained how it works, these effects. But not in a TV commercial and not by any company. But maybe if a doctor said it”*

The main problem for some participants was that they did not believe the consignor of the information since they felt that the companies only wanted them to buy their product

#### 4.2.2 Attitudes

The participants had in general a negative attitude towards probiotic products. When asked if they thought probiotic worked the general opinion were negative but one male said: *“When you are sick, you are willing to try anything”*. In general the group expressed very negative attitudes towards commercials.

#### 4.2.3 Purchasing factors

A too hip design only seemed to make the families less willing to buy a product. The more design the higher price was the general opinion.

*“We usually buy Yoggi I think, without all those pretty pictures, it only makes it more expensive and that makes me angry” (followed by a laugh)*

We investigated further by asking how they wanted to feel when buying a probiotic product. One male wanted to feel that he had made a bargain and another stated that he did not look for a specific feeling, rather he searched for a solution to the discomfort caused by illness in pure desperation. *“I am not looking for a particular feeling, it is usually just in wild panic”*

*“I know it is not logical thinking but I associate it (meaning milk) with cows, open fields and idyll”*

When the participants was asked to sum up and categorize their reasons for buying probiotic products they all mentioned stomach flu as the main and in some cases only reason. The exact presentation of answers can be seen in Appendix 2. Taste came up as a reason but seemed to have little meaning compared to illness.

Two participants pressed on the importance of the product being effective. They wanted it to help them. If they had experienced a bad purchase they often felt that the taste felt “chemical” and “artificial” and consistency felt slimy. *“The taste is a little artificial. It feels artificial the whole thing”* As in the first group, the concept of “svensk mjölk” came up for discussion. The whole group expressed an unwillingness to buy any kind of food that was not from Sweden. They said that they aimed to buy locally produced food and that they at least always wanted food from Sweden. Especially dairy product seemed to be more important than other food items. *“I refuse to buy milk from anywhere else but Sweden. Especially milk feels really important since it involves such large volumes” “There is no reason to purchase from anywhere else but Sweden”*

The group talked about marketing these kinds of products and came to the conclusion that they felt that “probiotics” was not a good main marketing argument that would work for most consumer segments. There are other values they felt had more physical impact such as less sugar. Also good quality raw material and Swedish origin of the product was mentioned as important factors when marketing the product.

## 4.3 Adults >50 years

The group was held in the home of two of the participants in Sunnersta, Uppsala. The atmosphere was calm and relaxed. The participants bought probiotic products for themselves about 3 times a week.

### 4.3.1 Knowledge

One of the participants came in contact with probiotics for the first time when she had undergone an antibiotics treatment many years ago. Her ex-boyfriend whom is a naturopath recommended her to try probiotic products and she followed his advice. Another participant had learned from his daughter about probiotics. The female of the couple had first experienced probiotic products in her childhood since her mother often consumed such products when travelling. She had also sold different types of probiotic products to her clients at her skin-therapy center.

All the participants believed probiotic products to work, primarily because of their own positive experience with probiotic products. The male mentioned his daughter's bachelor thesis as one of the reasons he believed probiotic products to work.

In general they all wanted information from scientific sources although they were not particularly critical towards information from companies. *"The industry can surely develop and describe new product. But it always feels better if someone independent is behind. Companies are not scrutinized in the same way."* *"The credibility increases if it is done by someone independent."*

### 4.3.2 Attitude

The participants expressed a positive attitude towards probiotic products in general. They had positive attitudes towards how they perceived and believed the product to work. They also had rather positive attitudes towards the food industry.

### 4.3.3 Purchasing factors

When asked how the participants wanted to feel when making a purchase of a probiotic product they talked about doing something good for themselves and wanting to feel healthy. *"I at least think when I take the product from the shelf, this is good for me. Now I care about myself."* One of the participant said that when she started to buy probiotic products she had those feeling of doing something for her. But now the purchase was only done on routine and she did not feel anything in particular.

When the participants were asked to sum up and categorize their reasons for buying probiotic products they mentioned favorable effects on stomach and intestines as the main reason. Taste and price also came up during the discussion.

In general the group had not done any particular purchases they were unhappy with. One male mentioned that sometimes the taste was not as good as he had expected. Also they expected the product to last longer than it does.

As with the other groups we discussed the concept of "Svensk mjölk" and the participant were not particularly fond of the idea of transporting perishables long distances. *"I think it is a bit crazy to import milk. I think about the transportation and that we should favor Swedish famers."*

## 5 Analysis

Chapter 5 provides an analysis of the results from the focus groups. The chapter starts with an analysis of the participants' knowledge of Functional Foods. Next the participants' attitudes are analysed and finally factors that influence the participants' purchase of probiotic products are analysed.

### 5.1 Knowledge

In general the groups showed a clear connection between their level of knowledge and their acceptance of the concept of probiotic products. The students with background within food science and biotechnology all have a high level of knowledge and also are very open to probiotic products and use it on a regular basis. One student had a background in animal science but had a personal interest since she suffered from an anxious stomach. The opposite was seen in the group with families. Their general knowledge was low since none of them had any education or occupation within the field. They did not either have any special interest in food and health. An overall low acceptance of probiotic products could be seen in the group and they had a tendency to reject anything that was promoted via commercials. It is important to point out that the two families had a relationship to each other since they were neighbors. This might have affected the general opinion of the group.

The adults >50 years had another approach to the subject. They possessed a high knowledge but not as high as the students and they all embraced probiotic products as something good and healthy. The male admitted to have been influenced by his daughter that wrote a bachelor thesis in the subject of probiotic products. His partner had a special interest in food and health and said she had not only sold probiotic products to her clients at the skin therapy center, but also fermented her own milk for personal use during the years. This highlights a strong interest and a high knowledge.

Almost all participants are educated on college level and should therefore be expected to demand neutral and hard facts to back up their beliefs. All groups also pressed on the matter of getting reliable facts before forming a strong belief. During the interview with the family one male started to talk about how he did not actually believe that probiotic products work since he had not seen any hard facts, but continued by saying that he probably just had not been exposed to the facts. They all admitted to wanting to believe but felt that they did not trust companies to have the same agenda as consumers which undermined the product itself.

It was clearly seen that the source of information was important of how the participants perceived the message and if they believed in it or not.

A trend that we saw in all groups is that the intention to buy was strongly increased with the level of knowledge in the field. The beliefs were funded mostly in knowledge and no participant could say that their acceptance of probiotic products was funded by other factors than the accumulation of knowledge.

## 5.2 Attitudes

The consumers' attitudes are divided into three different parts which are explained in Chapter 2.3. Knowledge strongly influences the attitudes via cognition.

*Affect:* Most feeling revolved around wanting to feel healthy and doing something for yourself. If this was experienced by the consumer the intention to buy increased. Also childhood memories was mentioned, especially in the group with students which all had relatively recently moved from home in order to study. Some products and brands seemed to bring back memories and feelings related to "home". In relation to this an obvious patriotism towards local brands and products was noted. This was mostly seen with the students and in the families it revolved more around buying locally produced items related to their current home. One male said that he felt like milk from Sweden gave him the feeling of open landscapes and cows grassing. Adults>50 did not show this tendencies as strong.

*Conation:* Especially adults >50 talked about the force of habit. They bought probiotic products regularly since they always wanted it to be available at home. Also some students felt the same but here the low income was an obstacle to buy as often as they wanted. The families only bought probiotic products in relation to illness, their intention to buy was based more on a sudden need.

*Cognition:* As already mentioned, cognition is strongly related to knowledge. Different interests and educational levels all lead to different beliefs. All groups are alike in the fact that they all demand reliable sources of information but a difference can be seen when it comes to how the participants react towards commercials. If a participant has a pre-formed opinion of how they perceive a product they react less negatively towards commercials. Students said they got curious and wanted to know more when they saw a commercial whilst families reacted negatively. They stated they were less likely to try a product if they saw it in a commercial. This highlights the problem a producer meets when trying to launch a new product or reach out with information to a consumer. A producer can almost only communicate via marketing and when the consumer concludes that commercials are made in order to convince them into buying needless products, the producer-consumer relationship might be troublesome.

## 5.3 Factors influencing purchasing

### 5.3.1 Intrinsic and Extrinsic factors

When it comes to different aspects of the intrinsic factors of probiotic products it was generally more important for students and families with design and the environmental effect from the package. Adults>50 said that this did not concern them, as long as the package fulfilled its function. Students agreed on that the design increased their intention to buy more than an environmental perspective, even though this was important to them. According to the participants they wanted less design and "*To hip and flashy design only makes the product more pricy*".

Some discussion about attributes such as the screw stopper and whether "Brick" or "Gable Top" was aired, but in general no one saw it as the main intrinsic factor.

Some important extrinsic factors which came up with all groups are the problem with non-Swedish brands. Most agreed on that they tried to buy only Swedish products, and preferably

locally produced products. Especially milk and meat products seemed hold a higher importance for the consumer. This could cause problems if a Finnish company aims to break new ground in the Swedish market, but as was suggested by the student group, one approach would be to launch a non-dairy product. Most participants mentioned the concept of “Svensk mjölk” as the main influence to why the consumer is conservative towards foreign brands. The environmental effect of transporting perishables was mentioned in the adult >50 group. Transportation and animal rights legislation was important to the families and they felt worried about the usage of antibiotics in livestock throughout Europe.

Another approach which came up was the constant belief from the consumers that Valio as a brand only market low lactose and lactose free products. In these groups few participants had realized that Valio have other products under their brand.

As suggested in the Total Food Quality Model, price acts as a weigher which sometimes determines whether the consumer buys a product or not. For students it was important to get their money’s worth whilst the adult>50 group believed that the price level was fair when it came to probiotic products. The families considered the products to be over-priced, but still bought them if they had the intention of buying. To make a bargain was however mentioned several times with the families. One might expect this to be linked to the different economic situation the different groups experienced.

### 5.3.2 Horizontal dimension

The factors influencing the expected quality before a purchase are mentioned in earlier sections. One female student and an adult female expressed that probiotic products often are convenient in a way that they are easy to use as snacks or breakfast substitute if time is short. The products were suited for this by not demanding cooking and through feeling healthier than many other types of snacks. They also provided a calm feeling to the stomach and felt filling in general. The families said that these products was well suited for eating whilst recovering after illness, since they were quick, easy and energy dense.

### 5.3.3 Vertical dimension

The groups showed incidences for some of Schwartz’s life values. Almost all the participants bought probiotic products with the wish of doing something good for themselves and being healthy. This can be linked the value of *security* in the aspect of health and not being physical ill. *Hedonism* could be seen in the student group and in the adult >50 group where the participants saw probiotic products as a way to indulge and spoil oneself. One student said it was a luxury product. These statements can also be linked to *Self-direction* with the aspect of believing in one’s own worth.

Several groups try to fulfill *power* in the sense of social recognition. This was done by trying to buy only Swedish products and locally produced products. In general we conclude that by buying the “right” kind of products and avert from only a price focus the consumer elevates to what is socially desirable in today’s society. This could be seen in all groups since the most intense discussion revolved around being aware of the Swedish market and the implications of not buying Swedish produced items. This could also be related to the wish to fulfill *achievement* since we conclude that by buying conscious products the participants could display their extended knowledge or educational level to others. Healthier products and probiotic products are often more expensive and being able to buy this kind of products could be a way of showing an advantage in wages.

The wish to buy environmentally friendly and healthy products in all groups point at a general wish to display *universalism*. The participants all wanted to protect the Swedish market against foreign brands which is linked to the values *benevolence* and *safety*.

The student group also displayed some degree of local patriotism and admitted to buying brands and products familiar to them from home. One male was born and raised on a dairy farm and felt especially strongly about only buying milk products from Sweden this can be linked to value of *tradition*.

In the families some types of *conformity norms* was displayed. All participants in the group agreed that probiotic products did not work but they still bought the products. Whilst the discussion moved forward some of the participants indicated that they might feel differently about the products then what was first said, but they seemed to avoid the subject since the group as a whole had agreed otherwise. We suspect that probiotic products might be categorized as “unreliable” or “humbug” in some groups and if one participant displays this attitude others might follow.

#### 5.3.5 Four major quality dimensions

*Taste and appearance dimension:* The groups talked about taste as an important factor that increased their intention to buy, but also as a factor that could decrease the intention to buy. A bad taste experience often leads to consumers from the focus groups stopped buying a particular product. Also the texture of the product was important. A male in the group with families claimed a non favorable texture actually made him stop buying a certain yoghurt.

*Health:* One of the main factors that came up in all groups. It was considered extremely important that the products was healthy and had facts that backed the claims up. Some participants saw no reason for buying such a product if they were not sure that it was good for them. Although one male in the group of families was concerned over the fact that probiotic products could create a need if the consumer did not have a need for probiotic products for starting to consume such products, most participants focused on the health aspect.

*Convenience:* This factor was most clear in the families group. Their purchases were mostly done in pressured situations and a purchase could sometimes depend upon the availability of the product entirely. The group with students and adults >50 also mentioned that probiotic products are a convenient substitute for breakfast or as a snack when time is short.

*Process:* The process of the product played a part when it comes to where the product was manufactured. As mentioned earlier these consumers all agreed on the importance of buying Swedish products and protecting the Swedish farmers.



## 6 Discussion

Landström *et al.* (2009) showed that uncertainty about what Functional Foods actually were and a lack of knowledge of the effects influenced how the consumers trusted the product. The same trend can be seen in this study when looking at the amount of knowledge the participants had regarding probiotic products and whether or not they had a positive or negative attitude towards these products.

The empirical findings of this study also coincide with the findings of Verbeke in 2005 when she in a study showed that independent sources of information was seen as the most reliable sources and that a belief in the health claim enlarged the acceptance of Functional Foods.

Many participants pointed out that they would believe in the product more and trust the marketing if the same was said by a medicinal expert. In a study done by Landström *et al* (2007) it was noted a general less positive attitude in doctors and practising nurses then from dieticians regarding Functional Foods. In relationship to their more negative attitude they were less likely to recommend such products to their patients.

Taste was rated as an important factor for our studied groups. In a study done by Hekmat & Reid (2006) probiotic yoghurt was compared to regular yoghurt in a blind sensory panel and they saw no statistic difference between the samples. They concluded that added LAB did not affect the flavour of yoghurt and hence we believe that when our participants talk about taste they refer to dairy products in general. Instead Hekmat & Reid (2006) saw a higher hedonic rating on high fat yoghurts and when the flavouring did not exceed 11 (w/v) %.

## 7 Conclusions

The problem with a strict legislation of health claims is that it prevents proper communication between the manufacturer and the consumer of probiotic products. The consumer seldom experience a direct health effect when consuming probiotic products and the lack of information of possible health effects reduce the reasons for the consumer to believe in the product drastically. In this study the participants pointed out that they wanted information about how and why the product worked. The trustworthiness of the information was of great importance to the participants and they ideally wanted information from neutral sources such as the National Food Administration. Today this communication is prevented by legislation and in June 2011 did EFSA throw out Valio's request for an approved health claim regarding *LGG* (EFSA throws out, 2011).

The participants expressed feelings of doing something good for themselves and treating themselves when buying probiotic products. The health and taste dimension were of great importance for the participants in this study when buying a probiotic product. Also the production dimension played an important role when it came to the decision of buying a dairy product. During the study the idea came up that a probiotic juice assortment might be embraced more easily by the Swedish consumers, since the concept of Swedish milk is so deeply rooted in the mentality of Swedish consumers.

## 7.1 Further research

We propose that the study are extended to include more consumer groups and more participants in the focus groups in order to clearly establish what factors influence the choice of a probiotic product. Preferably a further study with more focus groups should be performed. In our study we only have the results from three focus groups. The groups could also include more than 4 participants. It would also be interesting to look into the opinions of people with a different cultural background since they are often overlooked as a consumer segment. Also participants that exercise on a regular basis and participants with documented symptoms in the gastro intestinal tract should be studied. This study has only scratched the surface of what consumers find important. Therefore this study is a good base for further research and we have begun to explore the marketing behind a specific product, especially when it comes to probiotic products.

If a follow up are to be performed it is important to mind some biases found in our study. For example the recruitment needs to be done under a longer period of time since it was hard to find participants. Perhaps it could be a good idea to talk to people face to face in a store when people buy a probiotic product. Recruitment on gym and at hospitals could be used to find participants that exercise and have symptoms which could benefit from probiotic products.

Since we had trouble with the recruitment the groups was small and consisted mostly out of personal contacts. This could have influenced some answers if the participant wished to give us “correct” and “interesting” answers.

### 7.1.1 Laddering technique

Another possible approach in order to obtain more results is by using the so called *Laddering technique*. This technique is extensively used when researchers wish to investigate brand equity and market forces (Chen *et al* 2002). It is also used more and more when studying consumer behavior. The technique includes an interview with a set of questions order in a hierarchy. The interviewer uses probes in order to establish “why” the participant expresses every opinion (Chen *et al* 2002). The Laddering technique is used to try and find out the underlying reasons for purchasing a product (Wansink 2003). The results from an interview performed with laddering technique can preferably be presented in a hierarchical map. The hierarchical map links attributes of a product to consequences which in turn are linked to values. Often many consequences are revealed during the interview and questions are continually asked until a value is revealed. The consequences are often used when making the marketing plan for a product (Wansink 2003). The laddering technique uncovers more then what might be seen in a focus group and therefore it is a good complement to what has been done in this study.

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# Appendix 1: Personal questionnaire for participants



**Namn:** \_\_\_\_\_

**Ålder:** \_\_\_\_\_

**Kön:** Man  Kvinna

**Hushåll:** Bor ensam  Familj  Vem/vilka \_\_\_\_\_

**Sysselsättning:**

Studera  Inriktning \_\_\_\_\_

Jobbar  Yrke \_\_\_\_\_

Pensionär  Tidigare yrke \_\_\_\_\_

Vad tycker du om att göra på din fritid?

\_\_\_\_\_

Hur ofta och vad tränar du?

\_\_\_\_\_

Tillåter du att material från denna fokusgrupp används i vårt kandidatarbete och publiceras på epsilon (SLU uppsatts bas på internet)

Ja  Nej

Om du vill ta del av våra resultat

Mail: \_\_\_\_\_

Adress: \_\_\_\_\_

# Appendix 2: Purchasing factors listed by participants

Detailed empirics of what factors are listed by the participants in this study as most important when purchasing a probiotic product.

## Students at SLU

### Individual A

1. Taste, especially the consistensy
2. A filling/wholesome juice. It is a quick and easy breakfast
3. Healthy

### Individual B

1. I see positive effects in myself
2. Believe that the product works (commercial?)
3. Price in relationship to taste

### Individual C

1. It gives a good feeling in my stomach
2. It is healthy. It gives added value because of the good bacteria
3. The taste. ProViva Raspberry/Pomegranate is so good

### Individual D

1. Health claims (something I believe to work)
2. A good price
3. Good design on the package

### Individual E

1. The believe that probiotic works
2. Taste
3. Price and package

## Families with children in Västerhaninge

### Individual A

1. Stomach flu
2. Stomach flu
3. Stomach flu

### Individual B

1. During or after illness
2. Taste
3. Before a holiday abroad

### Individual C

1. Stomach flu
2. When the kids are sick

3. Stomach flu

#### Individual D

1. Stomach flu
2. Stomach flu
3. Stomach flu

## Adults >50 years

#### Individual A

1. Favorable health benefits
2. Taste
3. Price

#### Individual B

1. It is a good start to your day
2. Healthy bacterias (promotes health and heals)
3. Taste

#### Individual C

1. Good for your stomach and intestine
2. It makes me feel good
3. Good pricelevel

# Appendix 3: Background information of participants

## Young adults without children

The age ranged from 21 to 23 years old and all participants was female and students. They all lived in Uppsala and two of them shared the household with a partner or a friend. Three of the students studied subjects related to food science and one studied animal science and one biotechnology. They were not first year students and three of them worked currently on their bachelor degree. They were overall active on their sparetime although one stated that she never worked out, at least not on purpose. At the most one female worked out five times a week and another female trained horses on a daily basis. Three of the students worked out at gyms and practised running.

## Families with children

The participants in this group consisted out of two married couples living in Västerhaninge, a suburb to Stockholm. Their age ranged between 31-33 years and one family had a son, aged 3. The other family had two boys aged 4 and 3. One female worked as a librarian and the other as a economy assistant. One male was an officer and the other chief information officer at a company in Stockholm. One family worked out on a regular basis (3-4 times a week) while the other did not. They all enjoyed spending time with family and friends on there spare time.

## Adults>50 years

The group consisted out of a couple with children who have left home and a single female without children. The age ranged from 53 to 63 years and all participants was residential in Uppsala (The suburbs of Sunnersta and Sävja). The females worked both with beauty and health as a scin therapist and a massage therapist. The female working with physio had only recently started her own business and had worked as a school teacher and at a conference establishment earlier. The male worked as deputy head of division at SGU (Sweden's Geological Investigations). All participants were active but the couple did not exerise on a regular basis. They were active via walking, biking and their work. The single female practised walking, biking and skiing several times a week.



I denna serie publiceras större enskilda arbeten motsvarande 15-30 hp vid Institutionen för Livsmedelsvetenskap, Sveriges lantbruksuniversitet.