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The first steps to becoming consumers

**How preschool children's surroundings impact on their food
consumption behaviour.**

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Doctoral dissertation

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1. Introduction

Today's Alpha generation is raised in a drastically different way than a couple of decades ago. With the growth of smart phones and tablets, a completely new generation arises, whose entire life is completely interlinked with technology and the media, allowing them to grow up in a completely different world than we did. In this new, exciting world, children almost instinctively know how to use these innovative devices, however with numerous new beneficial changes, come various new risks and difficulties.

Not only has the way we use different sources of media shifted in the past decade, conservative family structures are also loosened continuously. Divorce rates and the number of patchwork families are steadily increasing, so are the number of working mothers. Which ultimately means, children spend more time in preschool with their peers and various other caregivers than their parents, allowing newer forms of influence to have an effect on them. While the increased presence of brand names in our society has led to intensified brand awareness and preference among children at earlier ages (Dotson and Hyatt, 2005). Finally, the way families purchase and consume has also shifted over time, allowing children, even as small as preschool level to be taken more and more serious as consumers. McNeal (2007) underlined that in recent years the number of parents who consulted with their children prior to purchasing products for the whole family steadily increased. Hence, the media increasingly addresses children as independent consumers, creating a viscous cycle. The degree to which a child becomes brand loyal derives of the interaction of familiarity and marketing stimuli. Loyalty results from recurrent visibility of a product, which often comes from the observation of parents, exposure to brands in various forms of media and exposure to other children's environments (Paul, 2002).

Simultaneously, it is important to highlight, that although children's media consumption has been studied in the past, the specific focus on preschool aged children has been rather rare, leaving room for various new academic results in this specific field. Furthermore, linking food consumption behaviours with consumer socialization is a novelty for this specific age group. Especially peer influence on preschool children is a topic that is vastly

understudied in the field of academia so far, even though the changes mentioned above in the past decades resulted in a great shift from a solely family dominated influence regarding children consumer behaviour. The main reason for aiming to focus largely on the influence of food consumption and therefore eating behaviours of children derives from the assumption, that this is the major field, where even preschool aged children have a say in what types of products their family should select. Furthermore, there is currently a growing child obesity epidemic in Europe, which is strongly catalysed by the unhealthy foods marketed to them. According to Vidra (2019) Europe has been hit hard by this epidemic, as it is currently the region with the second-highest obesity prevalence worldwide. Obesity is considered one of the major public health challenges of the 21st century due to its severe health effects (Vidra, 2019). Therefore, action is needed to counteract the growing trends.

The current study has several practical implications. It is important to understand what factors have the greatest influence on preschool aged children today, as this can be great aid in developing policies to protect children in the future. Additionally, understanding how advertisers market foods to children is crucial in order to focus on beneficial outcomes, such as how to favourably influence dietary choices (Boyland et al., 2011). It lies in the responsibility of the advertising companies and decision-makers to protect the future generations and to ensure that they develop in an adequate and healthy manner. The current study aims to help find ways to decline the current child obesity epidemic and help children feel less overwhelmed in great array of marketing efforts aimed at them currently. Schools as well as preschools for that matter, are currently the best possibilities to reach children and their families for nutrition education, preschools should provide a supportive environment, aiding children to make healthy food choices (French, Story and Fulkerson, 2002).

On a personal note, as a mother of two children, one of which is currently in the preschool age, I can very much relate to the current dissertation topic. I have furthermore chosen to specialize in the field of young children's education by obtaining a preschool teacher and a preschool management degree prior to starting the current dissertation. It was only during these studies, where I became more and more aware, not only how different this specific age group is in terms of various developmental aspects in regards to elder school children, that allows them to perceive various marketing efforts completely differently. Writing my thesis for those two degrees also made me realize how extremely

understudied this specific age group is, even though it is time to take them serious as the next generation of consumers. Although research on the consumer behaviour of children has been studied in the past, not enough research has been found in the literature about the relationship between children's environment and the way it effects their food consumption behaviour, this dissertation will hopefully aid to fill this gap.

1.1 Objective and structure of the dissertation

Taking the factors above into consideration, the present study aims to explore in which ways the environmental and social surroundings of children influence them in their current food consumption patterns, in what ways their brand awareness and brand preferences evolve on the road to becoming individual consumers. In connection with my research, I defined four objectives, the first two are related to the literature review, while the second two are related to empirical research. These research objectives form the basis of the research questions and later the novel scientific results.

The first objective related to the literature review is to examine the literature regarding the role environmental and social surroundings have on the individual consumer and buyer behavior of children. I consider consumer socialization as predominantly important as it allows us to understand the way a child acquires the behavior deemed appropriate by society, amongst others the learning process of how to become a consumer in our society. Ultimately, understanding these processes by which children acquire consumption related-skills is important not only the filed of marketing but also in public policy formation (Ward, 1974). Linked to the first objective, is the second objective to present and cluster all the factors and their relating models influencing food consumption behaviour of children. The importance of this is that while the literature regarding consumer socialization is extensive, there are major gaps when it comes to analysing this specific age group. What is more, the aspect of peer influence as well as the internet on this age segment is completely understudied too. In order to fill these gaps, the presentation and systematization of models examining how consumer socialization influences the purchase and decision-making processes are an important goal of the literature part of my dissertation.

Two further objectives are related to the empirical research. The third objective is to create a conceptual framework that presents the factors influencing the food consumer behaviour of preschool children and to test these with qualitative and quantitative data. My aim is to create the basic structure of the framework based on the relevant information of the models known from the literature, especially focusing on the influencing factors of the socialization agents. My goal is not to create a total model, as an aspect of human behaviour and decision making is looked into. Therefore, the complexity of this makes it practically impossible. Rather, I would like to construct a framework that is novel in this field and can be used as a starting point to build more theory in this matter. According to Colquitt and Zapata-Phelan (2007) theory testing is principally important because some of the most intuitive theories introduced in the literature end up being unsupported by empirical research. The current dissertation aims to building theory by examining the effects of consumer socialization that have been the subject of prior theorizing but have not been thoroughly tested in the form of a prior empirical study. Ideally, by doing this, the dissertation will be able introduce new factors that add to existing theory in order to describe how the influencing process unfolds. In my research, I examined each part of the framework separately, in both my qualitative and quantitative research, the results lead to a modified more precise theoretical model that is presented in the final chapters of the dissertation.

Finally based on the findings of the empirical research and the novel scientific results, the paper also aims to suggest ways to modify and enhance policies currently applied in Hungary. Aiding policymakers as well as parents can help fight against numerous important factors such as childhood obesity and limiting the amount and type of marketing efforts children are exposed to on a daily basis. Being a mother of two this is something I have always been very passionate about. As I believe, the children of today are exposed to a great amount of harmful media as well as other marketing efforts that can vastly influence the way they consume food products reaching all the way to their adulthood.

In order to support the outlined research objectives, I will describe the main theoretical approaches regarding consumer socialization as well as consumer behaviour in preschool children in Chapter 2. The presentation of the consumer socialization literature is particularly important because it allows the reader to understand how consumers evolve

in society, enabling them to be effective members of society (Ward, 1974). The dissertation also aimed to include Hungarian literature regarding the current topic, however it has to be noted that the current range of Hungarian literature is rather narrow, consequently the current dissertation also aims to contribute to this. The empirical chapter will focus on children in consumer society, their eating behaviour as well as all environmental influences they might encounter altering their food consumer behaviour. The empirical section is rounded off by the initial conceptual framework, as well as the research questions.

Chapters 3-4 will detail the empirical researches on this topic, covering methodologies applied during the research and the results thereof. As mentioned previously, the empirical section will mainly focus on the way the different environmental stimuli impact the influence of food consumption the reason for that this is the field where children's opinions are often taken into account by parents, furthermore urgent action is needed regarding the regulations of this issue to help combat childhood obesity. The various environmental differences are analysed and compared through various primary studies in order to receive a general idea how exactly the environment as well as social surroundings influence preschool aged children. The results of the pilot studies as well as the qualitative and quantitative studies are summarized in Chapter 4. Finally, Chapter 5-6 will present the discussion and conclusions of the dissertation. The evaluations of results and their practical implications as well as the limitations of the research. As a result, the dissertation will provide useful, practical information, through which the characteristics of the food consumer behaviour of Hungarian children can be better understood.

2. Theoretical Background

2.1 Children in Consumer Society

There is an expanding involvement of children in consumer society. In order to underline the extent, the marketing expenditures targeting children are a good measure to mirror this trend. The expenditures in the United States increased in 1983 from \$100 million annually to \$15 billion in 2004 (Schor, 2005). A possible explanation for this trend is that although researchers began studying children and their preferences in the 60s, it was only in the 90s that marketing scholars developed a range of qualitative techniques, such as the analysis of picture drawings, ethnographic studies and observation of children to understand their consumption on a deeper level (Cook, 2009). Children add value to companies in the present as consumers who make purchases of their own, as influencers of their parents and as future loyal customers (Hofmeister-Tóth, 2003). Thus, new, nontraditional ways to reach children are continuously on the rise.

Another reason why children are constantly more involved in consumer society is the recent trend that mothers participate increasingly in the labor force. According to Schor (2005) from 1969 to 1999, the working hours of single parents' increased by 297 per year, while the working hours of married mothers' increased by 576. Whereas the time that is available for children declined 22 hours a week. This is one of the reasons, more children are exposed to a harmful amount of media, and with it commercials. An early exposure to advertisements introduces children to consumer society at an increasingly early age.

Another factor is related to the shift in parenting styles in the last centuries. A rather strict and conservative parenting style that included corporal punishment has shifted to a more permissive approach (Dávila Blázquez, 2016). Today, children's desires are taken more seriously; children are becoming influencers in family purchases. Technological advances have contributed to this, as children are often the experts on how to use certain technical devices in the household. Furthermore, social changes such as higher divorce rates and the increase of single-parent households also increase the involvement of children in consumer society in earlier stages. According to McNeal (1992), children who live alone

with a single parent take on more responsibilities becoming the only person their parent can discuss purchases of household goods.

Finally, children are exposed to consumer society at earlier stages due to the expansion of media to children. Children networks as well as streaming and online video providers such as YouTube become more dominant factors in the lives of children. In the beginning, some networks did not contain advertising, but this has changed since. Today, the media increasingly addresses children as independent consumers, creating a viscous cycle. Starting with licensed cartoon characters, that accompany children wherever they go, from toy stores, to clothing shops to supermarkets, which they automatically recognize from their television and tablet screens. Now, even children toys, websites and animated films convey product placements (such as Barbie dolls dressed in a Pepsi shirt, or Cinnabon being promoted in DreamWorks “The Bee” movie).

So far, we have explored the reasons why children get involved in consumer society, which inevitably highlights why it is relevant for researchers as well as marketers who want to work with this specific segment to understand more about the process of children becoming consumers. In order to do so, it is first vital to outline how the current thesis defines the age group selected. As preschool aged children can be interpreted as various age groups depending on what country. Furthermore, it needs to be outlined what cognitive, emotional and social developmental phases occur within this segment.

2.1.1 Delimitation of Preschool aged children

The following dissertation examines preschool-aged children, who are also named “kindergarten” children in certain parts of the world. The current dissertation will from now on refer to these children as pre-school children. These children are typically between the age of 3 to 7. Depending on their date of birth, children in Hungary who are born after the 30th of August, have to stay in preschool for a year longer than their peers. These children can only start school at the age of 7 unlike in other countries such as the UK, where children typically start school at the age of 5. Due to this, the age group analysed further in this dissertation will be from this age group mentioned above.

It is important to note, that although these children are only a few years apart in age, they are in very different stages of development. Developmental studies have provided

substantial evidence that the development of attentional and executive functions is a multistage process in which various components mature at different times, beginning in infancy and continuing at least until adolescence (Welsh & Pennington, 1988). Thus, the entire dissertation will always focus on mentioning the specific age of the children analysed especially in the qualitative section.

One of the most important theories regarding the cognitive development of children is Piaget's stages of cognitive development (Piaget, 1970). Marketing researchers often consider his theory when analysing children's development as consumers, as it explains observed patterns of behaviour in various ages. The theory proposes that children's development can be defined in 4 stages. In the sensorimotor stage, which takes place amid birth and the age of 2. In this stage, accomplishments are coordination of sensory perceptions and basic motor behaviours. Infants increasingly become conscious of the presence of an external world, with which they start to interact (McAlister and Cornwell, 2010).

At the age of three, regarding cognitive development, children know their name, age, and gender. They can follow two to three step instructions. They understand the concept of "two" and can memorize a sequence of numbers. Most children can sort objects by colour and shape, having lively imaginations and fantasy. Regarding emotional and social development, by the age three, children experience an extensive range of emotions. They can separate their parents and express their affection. They comprehend the concept of mine and yours. They identify if person is a boy or girl (Pope and Pellegrino, 2014). According to Piaget (1970) the age from 3 to 7 is the so called "preoperational stage". At this stage, children use words and movements to denote reality; however, the representation is egocentric as children cannot distinguish the points of view of others from theirs (McAlister and Cornwell, 2010).

Four year olds regarding cognitive development, can say their first and last names. They comprehend the concept of counting and better understand concepts of time. They can name a few colours and know the difference between things that are the same and different. They are conscious of their gender and comprehend that events are connected. They know the difference between reality and fantasy. Regarding emotional and social development, children view themselves as whole people, with a body, mind, and feelings.

They are conscious that they can be hurt physically and can work together with other children (Pope and Pellegrino, 2014).

Regarding cognitive development, five year olds know their address and phone number. They identify most letters of the alphabet and can count to ten or more. Five year olds also know what household objects are used for. In terms of emotional and social development they want to please and be liked by their friends. They come to an understanding to rules mostly, play diverse games and are growing more independent. Their language development allows them to hold a meaningful conversation and can use the future tense. Finally, in terms of sensory and motor development, children can duplicate geometric shapes. Draw a person with a head, body, arms, and legs and write a few small as well as capital letters (Pope and Pellegrino, 2014).

Six year olds in terms of cognitive development can tell their age, count to and comprehend the concept of 10. They are learning to express themselves on a high level through words, are learning to write and are starting to grasp cause-and-effect relationships. They start to understand the concept of time. Regarding emotional and social development, they remain to have fears. They want their parents to play with them, but a shift begins to satisfying these needs with friends. They typically like to play with friends of the equivalent gender and start to recognize the feelings of others. They develop a sense of humour (Pope and Pellegrino, 2014).

Finally, concerning cognitive development, most seven year olds start to show a preference for learning style. They solve basic math problems using items and reflect problems using only one factor at a time. Regarding emotional and social development, they turn out to be more aware to the feelings of others. They develop friendships, usually with other children of the same gender and start playing in bigger groups. Regarding language development, the children in this age have a tendency to talk a lot in situations where they are comfortable. They also pronounce words correctly and are becoming better readers. Regarding sensory and motor development, most children are becoming more coordinated in activities that use the large muscles. They use safety scissors effortlessly and can draw a person with twelve parts (Pope and Pellegrino, 2014). The third stage of Piaget's (1970) cognitive theory also appears at this age and lasts until approximately the age of 11. The concrete operation stage is when children first employ in mental operations that allow them to combine, separate, order, and convert actions and

objects. Though the fourth stage is the formal operational stage, which takes place from the age of 11 to 19 years. This is when adolescents can think methodically and analytically about the logical relations within a problem (McAlister and Cornwell, 2010). The fact that preoperational children have a tendency to consider only one single dimension, while children in the operational stage are capable of abstract thinking and can take several dimensions into consideration makes a large difference in the way they perceive certain things such as advertisements for example. The ability to distinguish advertising from programming is a well-known example of this distinction: younger children can recognize an advertisement based on length while older children actually understand the selling intent behind these advertisements (John, 1999).

Another important developmental theory that needs to be outlined when discussing children is Selman's (1980) theory on the social development of children. The theory of development of Social Perspective (also known as Role-taking theory), which is partially built on Piaget's theory, outlines children's growing ability to understand others' feelings and perspectives, as a result of cognitive growth. The theory outlines five different stages that children go through. The egocentric stage (3-6 years) is the first stage where children are only aware of their own perspective. In this stage, the child is unable to understand why a social action occurred. The child also lacks relating perspectives. In the social informational role taking stage (6-8 years) children become aware that others may differ in their views, but they consider this a result of having different information and nothing else. The children in this stage still lack integration ability. In the self-reflective role taking stage (8-10 years) children understand that others may have different perspectives due to different opinions. Children can however put themselves in the position of others. In the mutual role taking stage (10-12 years) children are able to differentiate, at the same time, their own perspective and others perspectives. In addition, children can take the view of a third-person and view a situation from their perspective. In the final social and conventional system role taking stage (12-15 years) children understand other people's perspectives in relation to the social environment they belong to (Selman, 1980).

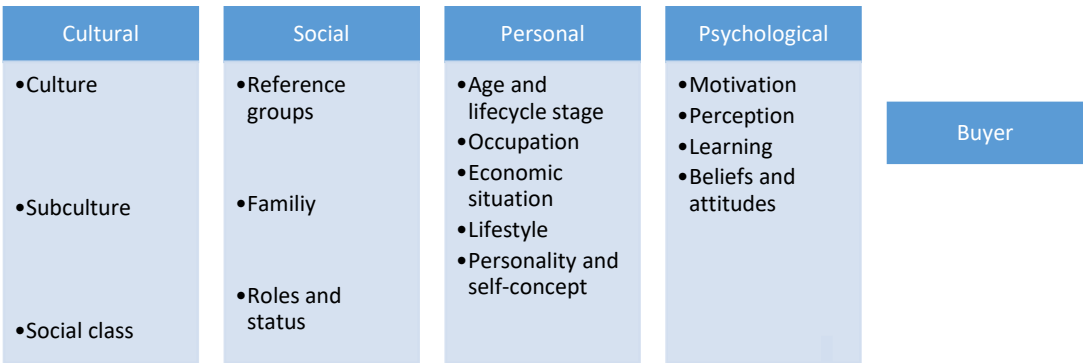
The current generation of preschool aged children are also defined as the Alpha Generation. The term Generation Alpha was created by McCrindle and Wolfinger in 2009, which describes the preschool generation regarding their media usage. According to them, anyone born after 2010 falls into this category. Unlike prior generations, which

have merely used technology, what makes the Alpha Generation exceptional, is that they will spend the majority of their everyday lives submerged with technology (McCrindle and Wolfinger, 2009). Another term used to describe this generation was derived by Prensky (2001), who referred to them as “Digital Natives”. As these children are all “native speakers” of the digital language of computers and the internet. The knowledge and skills of the alpha generation regarding information technologies are different to those from earlier generations (Tootell, Freeman and Freeman, 2014), due to this, it is even more important to analyse this generation’s development and behaviour thoroughly. Having discussed the most important traits of this specific age group, the question arises how consumer behaviour is developed in young children of this age segment.

2.1.2 The consumer behaviour development of preschool aged children

Consumer purchases are influenced strongly by cultural, social, personal and psychological characteristics shown in Figure 1. below. Kotler and Armstrong (2010) define culture as the most basic cause of wants and behaviour. Whereas subculture is defined as a group of people with shared value systems based on common life experiences and situations. Finally, social class also is part of the culture section and are defined as people who share similar values, interests, and behaviour while having similar occupation, income, education, wealth, and other variables. Social factors incorporate groups; where a person belongs to, and has a direct influence on the person. Family members can strongly influence buyer behaviour, being the most important consumer buying organization in society (Kotler and Armstrong, 2010).

Figure 1: Factors influencing consumer behaviour



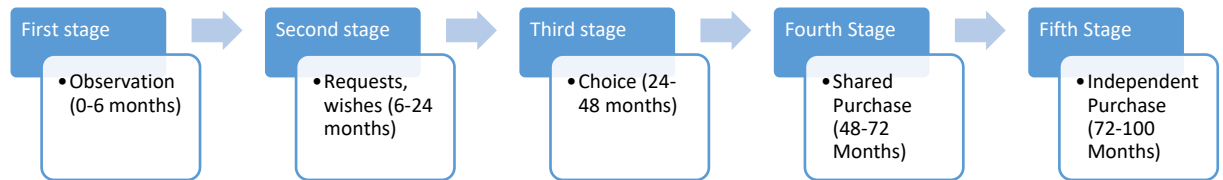
Source: Kotler and Armstrong, 2010, page 131.

Personal factors also influence consumer behaviour. Age and life cycle stage can influence for example tastes in food. Occupation, economic situation and lifestyle also have strong effects especially in terms of what the consumer can afford to purchase. Personality and self-concept can influence the consumer buying behaviour within the personal factors group. Finally, psychological factors also have different affects. A person's motivation varies depending on the needs that are already met by the individual consumer. Lastly, perception, learning as well as our beliefs and attitudes play a role in our purchasing decisions (Kotler and Armstrong, 2010)

Living in an advanced society, new-borns must learn the necessary patterns of consumer behaviour if they want to obtain goods to meet their needs. On the one hand, children learn through observation, on the other by actively participating in purchases and consumption processes. Figure 2. below depicts the five stages of becoming a consumer, where by the age of 100 months, children have greater market potential than their parents (McNeal, 2007). As Figure 2 depicts, children between ages 2 to 3 are in the choice stage. The child's highly developed motor skills, muscles and memory encourage it to reach, grab and take, from others, the refrigerator, the pantry and the store shelves. The child starts requesting and demanding from parents. According to McNeal (2007) the request rate at a store is about 12 to 15 per visit, therefore this is the stage parents first start saying „no” to these requests. The social skills of the child are beginning to increase, thus the child can now read the mothers voice tones and facial gestures and knows when it can bargain and plead. In the fourth stage from age 3 to 4 the number of requests increases. At this point another action is likely to occur at around 60 months, that accompanies these requests, the child will start to learn that it takes money for their parents to get the items in the store. Therefore another set of objects, gradually represented in the child's mind of coins and bills increases. The child is starting to re-create grocery store visits at home as a part of play. Finally, in the fifth stage the child makes a number of co-purchases with the parents at the toy store, vending machines, restaurants and grocery stores. By the time, the child goes to school; it will request doing this on its own. According to McNeal (2007) as soon as the child is old enough, the parents permit them to choose the brand that is most satisfying to their needs. At first children only express their requests in the form of body language, but later they also orally give voice to their desires. Escalante de Cruz et al. (2004) found that brand loyalty can be established by 2 - 3 year olds. Before children

are capable of reading, some children already begin to make requests explicitly for named branded products (Escalante de Cruz et al., 2004).

Figure 2: The first 100 months of becoming a consumer



Source: Pólya, 2008, page 9.

Valkenburg and Cantor (2001) have attempted to define consumer behaviour from infancy to 12 years of age. According to Valkenburg and Cantor (2001) children are able to feel desires and preferences, they are also able to search to fulfil them, they are capable of choosing and even making a purchase, and they are also able to evaluate the product and its substitutes. The authors argue that the development of consumer behaviour occurs in four phases and that in each phase, one of the four characteristics of consumer behaviour emerges. The preschool age covers three of the four phases; infants and toddlers (age 0–2): feeling wants and preferences, pre-schooler’s (age 2–5): nagging and negotiating, early elementary school (age 5–8): making the first purchases as well as independent store visits without their parents, elementary school age (age 8-12): conformity and fastidiousness. In the final period of ages 8-12, the opinions of peers play an increasingly important role. Children's eye for detail and quality advances, enabling them to critically evaluate and compare products. However, how do children evolve in their knowledge of consumer society and their relationship with purchases? The answer is given by theories of consumer socialization of children in the following section. These theories help comprehend the way children relate to brands and how children consumer behaviour evolves over time.

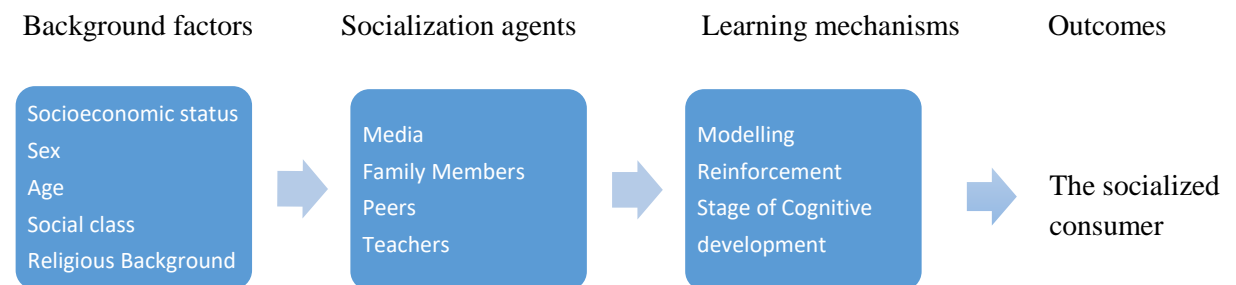
2.1.3 Consumer socialization of children

Consumer socialization is defined as “processes by which young people acquire skills, knowledge, and attitudes relevant to their functioning as consumers in the marketplace” (Ward, 1974, p. 2). Early research on consumer socialization consistently shows that there

are three major socialization agents that influence children's consumer behaviour (Dotson and Hyatt, 2005). These factors include media exposure, family as well as peer influence (Ward, 1974; Moschis and Churchill, 1978; John, 1999). This was also underlined by Mowen (1987), who made these socialization agents one of the main components of his model.

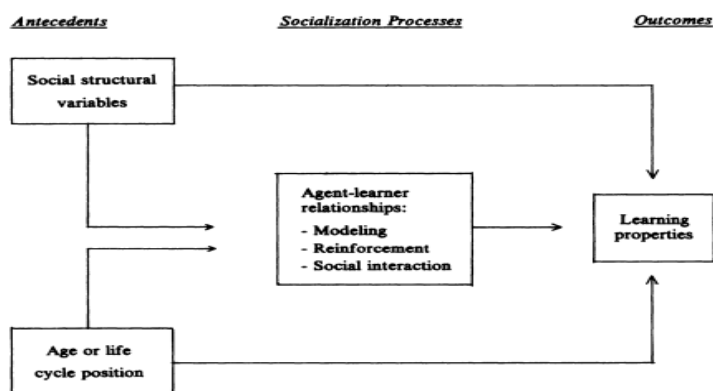
According to Mowen (1987), consumer socialization is based on three components (as seen in Figure 3.). Background factors (environmental factors such as socioeconomic status, gender, age, and religion), socialization agents (those who have direct influence on consumers such as parents, siblings, peers and teachers), and learning mechanisms (processes through which the child gathers and stores information such as operant conditioning and modelling). However, it remains unclear, which of these socialization agents have the greatest impact of forming children as consumers. Early literature states parents play the dominant influence role until the child reaches adolescence, then peers become the preferred source of information (Moschis and Churchill, 1978).

Figure 3. Modell of Consumer Socialization



Source: Mowen, 1987, In: Pólya, 2019, page 102.

Figure 4. Conceptual model of Consumer Socialization



Source: Moschis and Churchill, 1978, page 600.

Consecutively, of the earliest and most popular models of consumer socialization was proposed by Moschis and Churchill (1978). The model is rather similar to that of Mowen (1987) only here the main elements of the model are classified into antecedent variables, socialization processes, and outcomes (see Figure 4.).

Social structural variables, age or life cycle position are antecedent variables, these may affect the consumer learning properties (thus the outcome) directly as well as indirectly through their impact on the socialization processes. The socialization process incorporate the socialization agent and the type of learning actually operating. The impact of four consumer socialization agents-parents, mass media, school, and peers-is investigated. The learning of consumer behavior involves a wide variety of properties (attitudes, skills, knowledge) which are referred to as consumer skills (Moschis and Churchill, 1978).

Based on Piaget's theory of cognitive development and Selman's theory of development of Social Perspective discussed in the previous section, John (1999) constructed a three-tiered model of consumer socialization stages in children: the perceptual stage (ages 3 to 7); the analytical stage (7 to 11); and the reflective stage (11 to 16). The perceptual stage is described by "perceptual boundness" due to the fact that at this stage children's attention focuses on single dimensions of objects and events, this restricts their decision-making skills as consumers. Children in the perceptual stage understand brands on a superficial level, their choices are made on one single attribute (i.e. colour of packaging). This develops in the analytical stage, where children develop the ability to analyse products according to more than one dimension at a time, their consciousness of advertiser techniques as well as brands becomes more refined. During the analytical stage, children learn to realize that commercials are created to sell products, but may not understand that they try to manipulate them as consumers (Hofmeister-Tóth and Nagy, 2011). Children think more before making a choice. Complex strategies start being developed by children at this stage in order to obtain what they desire (John, 1999).

Dotson and Hyatt (2005) previously studied how the consumer socialization process works with today's children. Crucially, according to their paper, a more recent research on consumer socialization processes is needed and the traditional assumptions of the consumer socialization model need to be reinvestigated. The main reasons for this being, that today children are playing a greater role in household decision making, while today

there are radical changes in the media usage within households. These recent trends indicate a need for updated empirical consumer socialization research. At the same time, shopping, as a source of influence on young consumers, seems to be a major activity for children. In addition to spending less time with parents and more time with peers, children are increasingly affected by peer pressure regarding popular brands. Recent studies also found, that reverse socialization exists, where consumer socialization occurs from children to parents (Ekström, 2007). To explore this phenomenon further, the following subchapter will discuss the ways children influence their parent's purchases.

2.1.4 Children's role in family decision making

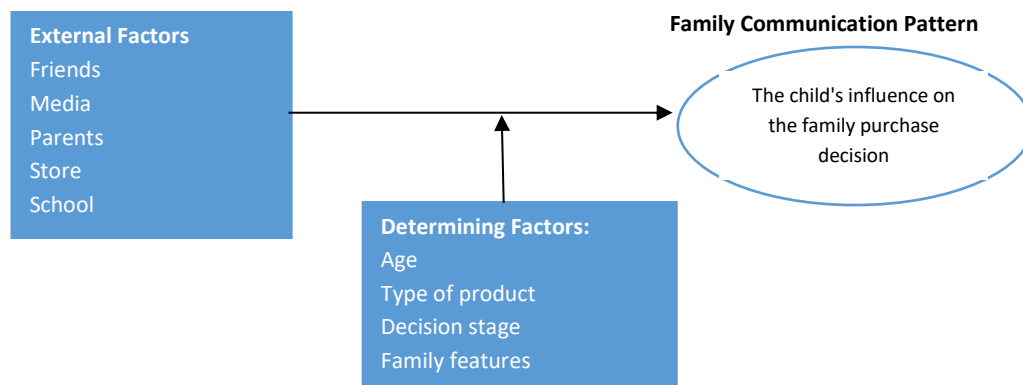
Children play a crucial part in the consumer market by influencing the purchases of their parents'. Some of the reasons for the vast increase in this phenomenon are the fact that parents are having fewer children, the increasing number of one-parent households and parents having children at later life stages. According to Koschate-Fischer et al. (2018), first-time life events (including welcoming a child to the family) lead to higher levels of innovativeness, on the other hand, they decreased the variety seeking tendency and price consciousness (Koschate-Fischer et. al, 2018), thus welcoming children into the family almost instantly changes the way families consume.

The theory about children's influence is vital as it helps explain the role of the children in family decision making. Mikkelsen and Nørgaard (2006) define the children's influence as "children's active and passive attempts to achieve parents' permission to participate in family decision-making thereby achieving specific results" (Mikkelsen and Nørgaard, 2006). According to Pólya (2008) there are two ways to influence the purchase of a parent: either directly when children are actively involved in the purchase or decision-making process and request specific products and brands.; or indirectly, when parents know what the child wants and try to purchase accordingly without direct interaction with the child (Mikkelsen and Nørgaard, 2006). One important theory in this matter is the resource theory proposed by McDonald (1980) that laid a solid basis in family decision making research. 5 types of resources from which family members may derive power are proposed; normative, economic, affective, personal, and cognitive resources. Normative resources refer to the family's values and norms. Economic resources is the control

expressed by the income earner. Affective resources include interpersonal relationships while personal resources traits such as physical appearance and role competence. Finally, cognitive resources refer to the intelligence each family member. Parents usually exercise the normative and economic resources, while children use the affective and cognitive resources in family decision making.

According to Ward and Wackman (1972), children's attempts to influence purchases may decrease somewhat with age depending on the type of product, but a mother's yielding to request increases with age. These findings were partially incorporated into one of the models regarding children's influence on their parents' purchase decisions (found on Figure 5). The model by Verhaegen, van den Bergh and De Pelsmacker (2001) depicts the factors determining the strength of a child influence. According to the model, five different external factors lead to the child influencing the family purchase decision; friends, media, parents, stores and school. The authors also propose four determining factors; child's age, product type, decision stage and family features that can affect the level of influence.

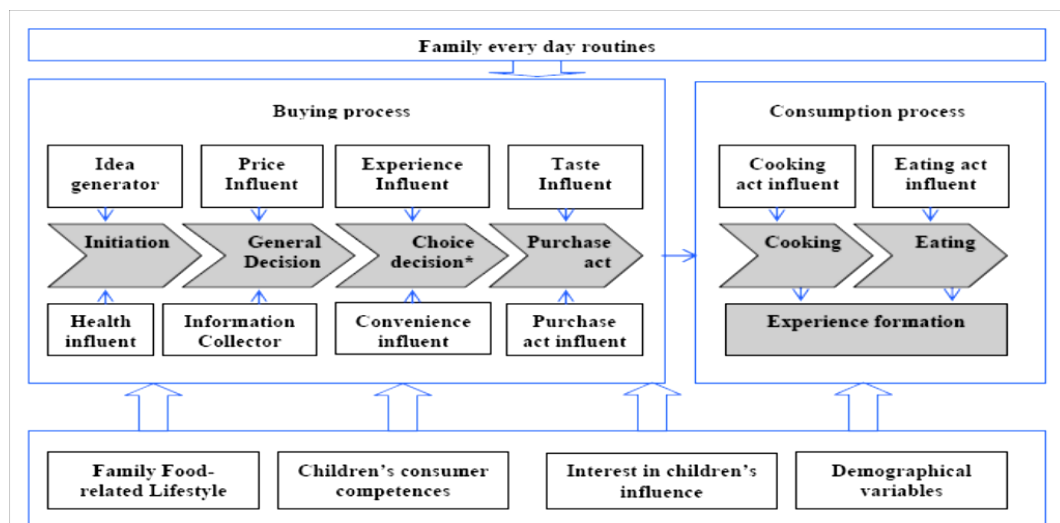
Figure 5: Factors determining the strength of child's influence



Source: Verhaegen, van den Bergh & De Pelsmacker, 2001. In: Hofmeister-Tóth, 2003, pg. 139.

Figure 6 below depicts the family food model from Mikkelsen and Nørgaard (2006). The model separates the family decision making-process into two parts, the buying process and the consumption process. According to the authors, children have more influence at the initial stage of the decision process, decreasing progressively as the decision narrows (e.g. the child has less say in how much to spend on the product).

Figure 6: The family food model in relation to children's direct participation and influence



Source: Mikkelsen & Nørgaard, 2006

The model in Figure 6. uses daily routines to investigate the decision-making process. The primary findings in the study were that children participated and gained influence on several decision stages during food purchasing and that family everyday routines are an explaining factor of children's influence on family food decisions (Mikkelsen & Nørgaard, 2006).

Children have a strong influence, not just at home, but also in the shopping environment. Influencing increases immensely when children learn to express which product and brand they want. By the age of 2 children express influence on 45-47% of the routine purchases (McNeal, 2007). The way children impact their parents consumption has been studied in the past, however the studies are mainly limited to in-store observations, within these product requests have been observed vastly (Thomas and Garland, 1993; Buijzen and Valkenburg, 2008; Gram, 2015; Page et al., 2018), while none of the papers focused solely on the preschool age group. The study by O'Dougherty et al. (2006) studied the decision-making processes of adult shoppers around food purchases when young children are present. In half of the observations, a child initiated a request; half of these requests were for sweets or snacks. The other requests granted were fruits and vegetables, dairy, pre-packaged meals and breads. Nearly half of those adults gave in to the child's request. Brands and marketing techniques appeared to be a factor in one-fourth of the requests (O'Dougherty et al., 2006). Prior to this study, Thomas and Garland (1993) found, that shoppers on their weekly grocery shopping spent nearly one-fourth more, and took 10%

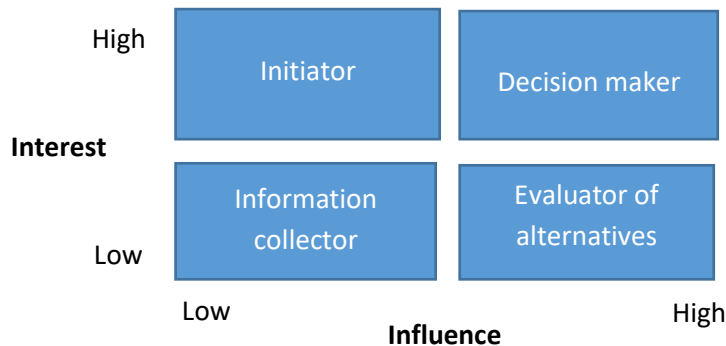
longer when children were with them (Thomas and Garland, 1993). Page et al. (2018) analysed more than 33,000 observations of shoppers across four grocery stores. The study found, contradicting evidence to previous literature (Thomas and Garland, 1993). The results indicated that when children accompany their parents shopping, the parents purchase more items, but also their time available to shop decreases. Families with at least three children were more likely to take a child with them shopping compared to families with at least one child. The paper suggests that perhaps more persuasion attempts take place in the home environment. The paper also highlights, that children may not have influence over the quantity, price, or categories of items purchased, instead their influence is restricted to the specific brand chosen (Page et al., 2018).

Depending on the food product type, children may have different influence over the family buying decisions. For products related to the child, like toys, the influence is higher. In previous studies, children have been found to have greater influence in purchase decisions for products such as snacks (Ahuja and Stinson, 1993) and cereals (Berey and Pollay, 1968). However, it has to be noted that this study was also conducted on schoolchildren. Berey and Pollay (1968) study also suggested, that the child influences consumer decisions based on their assertiveness and the mother's level of child centeredness.

Based on previous secondary data (Mikkelsen and Nørgaard, 2006; Walia Sharma and Dasgupta, 2009) as well as own experience, a typology of influence mechanisms was created below in Figure 7. The typology aims to present the different forms of influence children have on their parents. Four different forms are displayed varying from high to low level of interest as well as influence. The information collector gathers information on various products and their attributes through various forms of influence to then discuss this information with their parents at a given point. The level of interest in often low information is merely shared without a form of persuasive intent, the same is true for the level of influence. The initiator on the other hand causes a dialogue in order to begin a favored items buying process, thus the level of interest is high, how over the level of influence stays low. The evaluator of alternatives gets to choose between two or more possible products currently debated for purchase, the parent often initiates this, thus the interest level stays low, however the level of influence is high. Finally, the decision maker has the final say about the purchase of a variety of products. The decision maker gets to

decide about the factors such as taste, color, quantity, brand but even the product. Both level of influence and interest is high.

Figure 7: Typology of influence mechanisms of children



Source: Own construction

To conclude, the current section clearly displays, that when families buy and consume food, parents are not the only participants and decision-makers (Mikkelsen & Nørgaard, 2006). Due to this, is important to explore the what extent children of this age have developed awareness for certain brands and to what extent preschool age children prefer certain brands over others.

2.1.5 Children's brand awareness and brand preference

Brand awareness according to Valkenburg and Buijzen (2005) is one's active and passive knowledge of a particular brand. Research on the brand awareness of young children has focused on two aspects of brand awareness: brand recognition (knowing the brand) and brand recall (remembering the brand). Both brand recognition and recall are important when making purchase decisions. Consistent with Aaker (1991), who claimed brand awareness can be differentiated into four different levels that are depicted in below in Figure 8. These four different levels of the awareness pyramid help establish brand awareness about brands among consumers. Furthermore, according to Valkenburg and Buijzen (2005) to make a decision for a specific brand in the retail environment, only recognition is required since the various alternatives are next to each other on the shelf. Due to this, the current dissertation will focus on recognition, as according to Valkenburg and Buijzen (2005), children's capability to recognize brands starts earlier in development

than their capability to recall these brands. Another concept that needs to be defined as it reoccurring in the current dissertation is brand preference. Chang and Liu (2009) define brand preference as the bias a customer holds toward a particular brand.

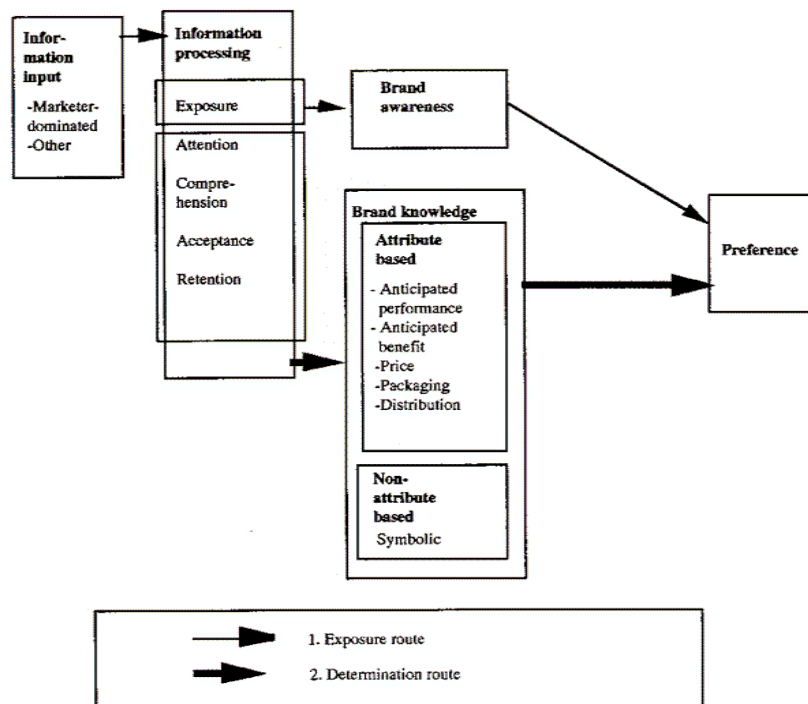
Figure 8: The Awareness Pyramid



Source: Aaker, 1991 In: Latif, Islam, & Noor, 2014.

In terms measuring brand awareness, Forman et al. (2009) was the first to propose the International Brand Awareness Instrument (IBAI). In order to analyze brand awareness, the study introduced 30 different flash cards with logos to the children. For the recall task, children were asked to identify the name of the brand. For the recognition task, children selected the picture they believed matched the brand. Children were marked based on their responses. Though Forman et al.'s (2009) approach mainly focused on how the branding condition of children aged 4- 6 affect their calorie consumption and thus their BMI. The IBAI, has since been adapted in various countries such as the Australia (Turner et al., 2015), India (Vecchio et al., 2014), Chile (Vecchio et al., 2013) and Georgia (Vecchio et al., 2017). The Australian version (Turner et al., 2015) was conducted on a population of 7 to 11 year old children, thus it is not further discussed in the current dissertation, however this version included more variables that were later on adapted by the current dissertation such as television and internet consumption. Furthermore, all other international adaptations of the study were conducted with children from the age of 3 to 10 (Vecchio et al., 2013; Vecchio et al. and Vecchio et al., 2017), and they solely adapted Forman et al.'s (2009) brand recognition and recall using the logo flashcards, no further questions were asked of the respondents. The results of the studies only highlight that brand recognition and recall increase with age.

Figure 9: The conceptual model for different routes to preference.



Source: Thjomoe (1995)

In order to understand how brand preference is formed from various possible routes, Thjomoe (1995) introduced the conceptual model for different routes to preference (Figure 9). The literature suggests two main routes of forming preference. The first route is the "exposure" route, that says exposure to a certain brand creates preference for it. The second route is the "determination" which is the cognitive information processing process, here preference is created by the processing of product attribute information. The determination route is made up of information exposure, information processing, brand knowledge formation, and the formation of brand preference. Suggesting consumers analyze chosen segments of received information, weight it and then calculate preference based on the brand's overall calculated utility. While the exposure route including brand awareness, does not include knowledge about the product beyond the product category it competes in.

In the past, numerous papers dealt with the brand preferences of primary and secondary school children (Chan, 2006; Halford et al., 2007; Boyland and Halford, 2013). However, once again preschool children remain understudied, even though by the age of 2, children already make consumer decisions instead of random choices (John, 1999). Kim, Williams

and Wilcox (2016) found, that traditional media advertising expenditures positively relate with brand sympathy for children and mothers, while product placement relates positively with children's brand sympathy but not with mothers' brand sympathy. Even though ad spending on traditional media is effective for both audience groups, it may have stronger effects on mothers' brand perceptions. Additionally, children seem to have a greater influence on mothers' brand preferences and mothers appear to have less influence on children's brand preferences (Kim, Williams and Wilcox, 2016). A further study by McAlister and Cornwell (2010) on brand symbolism and the brand recognition of 3 to 5 year old children focused on whether the children are capable of identifying brands of non-food and food related industries. The most frequently recognized was fast food brands (over 90%). The brand most commonly recognized by the children was McDonald's, followed by other fast food brands, as well as soda and toys. Whereas clothing brands showed one of the lowest rates of recognition. Overall, the children were more likely to recognize children's brands. In the same study, children could recognize car brands well. This can be explained, as toy cars children play with are produced as replicas of real cars (McAlister and Cornwell, 2010).

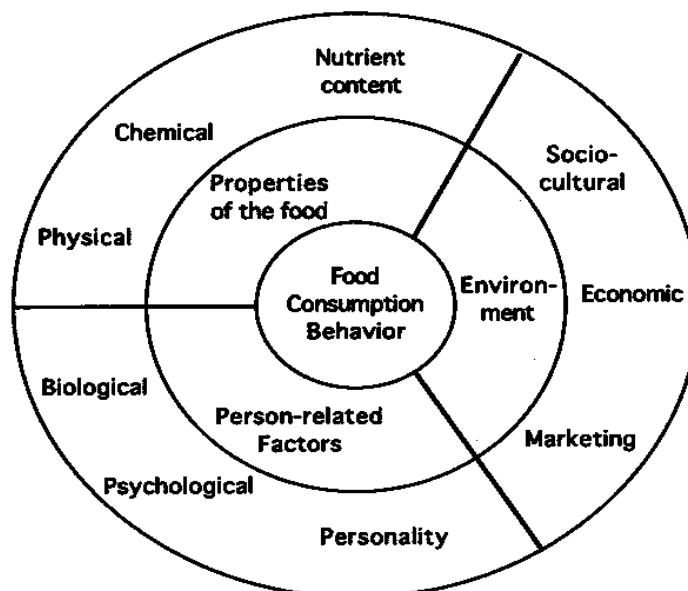
In their paper, Hite and Hite (1995) look into when consumers first begin to choose familiar brands. The paper examines dependence on visual and non-functional brand attributes such as brand name and packaging, in comparison to functional product attributes such as taste of children ages 2-6. Perceptual brand attributes highly influenced children's ratings and choices. Brand effect accounted for more than half of the explained choice variation. Children of all age groups depend on brand cues rather than on taste in basing their judgements. Brand reliance, reflected in choices of name brands in familiar, advertised packages was particularly evident among the younger sub-samples of two- to five-year olds. Two- and three-year-olds chose the name brands in a ratio of 10:1 over store brands; four- and five-year-olds chose national brands in a ratio of 2:1 over store brands. Study findings point out that even young children rely on non-functional perceptual brand attributes when choosing among brands. Interestingly, children rated the actual store product as better tasting (Hite and Hite, 1995). Subsequently Wang et al. (2010) investigated when brand awareness in children influences their brand preference. The research studied the development of 3-7 year-old children's brand awareness by using preference judgment on fictitious brand names. The result showed, that children 5 and

older, have a preference for the product of which they have high brand awareness, however the younger children did not (Wang et al., .2010).

2.2 Eating behaviour in preschool-aged children

Children's food choices and eating behaviour are shaped by numerous factors; some are endogenous to the individual child while others are environmental. These environmental factors include the foods made available to children as well as the modelling of food behaviours by caregivers, who choose most of the food that the family eats (Harrison, 2005). Steenkamp (1993) proposed a taxonomy of determinants of food consumption behavior. Distinguishing three factor types: properties of the food, environmental and finally, person related factors (see Figure 10 below). Properties of food include physical and chemical properties, as well as nutrient content, such as physical form, proportions of macronutrients, fibre, energy value and specific substances (e.g.: sugar). The food properties affect food consumption behavior mainly by their sensory effects. At the same time, factors related to the person include personality as well as biological and psychological factors. Environmental factors include socio-cultural, economic (income and price), and marketing factors. Properties of food, however, is a section that will no longer be discussed in this dissertation, as it reaches beyond the scope of the current paper, thus the rest of the chapter will focus solely on environmental and person related factors.

Figure 10: Taxonomy of the Determinants of Food Consumption Behaviour



Source: Steenkamp, 1993.

One of the main reasons why it is important to understand the eating behaviours of children, is that certain eating behavioural patterns can not only influence consumer behaviour, but also lead to early child obesity, while others lead to children being underweight. A study by Webber et al. (2009) underlines that satiety responsiveness and slowness in eating and food fussiness showed a graded negative association with weight, whereas food responsiveness, enjoyment of food, emotional overeating and desire to drink were positively associated (Webber et al., 2009). The type of food consumed also plays an important role in the health of children and affects their eating behaviours. A study by Wardle et al. (2003) on the acceptance of vegetables and fruit in children showed that daily fruit intake and daily vegetable intake was mainly associated with knowledge of the national recommendations, positive self-efficacy, positive liking and preference, parental modelling and demand and bringing fruit to school. These factors were associated fairly consistently with daily fruit intake across all nine European countries, implying that a rather uniform intervention strategy to promote fruit can be used across Europe. Studies such as the one above, clearly show, that we need to further clearly understand the eating behaviour process of small children and the different factors associated with them in order to make valid recommendations for decision makers in the future, to further promote healthy eating behaviours. In order to further understand these connections, the following two sub-chapters will look into the person-related as well as environmental factors in connection with food consumption behaviour.

2.2.1 Person-related factors determining food consumption behaviour.

Factors related to the person include biological factors such as age, gender and body weight. Psychological factors incorporate psychological reasons for acceptance or rejection of foods, in children these are usually closely tied with emotional aspects. Finally, several personality traits can determine different types of food consumption behaviour. The ones closely tied to the preschool aged group are presented in the following sub-chapter.

2.2.1.1 Biological factors

Age is one of the biological factors linked to the person-related factors determining food consumption behaviour. Interestingly, literature shows, that even at this young age there can be differences in food as well beverage consumption. Parents of 174 children aged 1-6 years from Stockholm, completed the Swedish version of the Child Eating Behaviour Questionnaire. The behaviour scales overeating, food responsiveness, enjoyment of food and emotional undereating decreased with age, while food fussiness increased with age (Svensson et al., 2011). There are also age related differences in beverage consumption of children. According to Garriguet (2008) at ages, 1 to 3, children drink less water than milk, by ages 4 to 8, the amounts are equal. Consumption of milk drops at older ages, and starting at age 4, boys drink more milk than girls do. Boy's daily consumption stabilizes at about one and a third servings of milk a day, but for girls, a second drop occurs in adolescence. At ages 1 to 8, boys drink more fruit juice than do girls. Fewer than 10% of children aged 1 to 3 had a regular soft drink the day, while boys average daily consumption of regular soft drinks climbs to 68 grams, among girls, to 47 grams (Garriguet, 2008).

Another biological factor linked to the person-related factors determining food consumption behaviour besides age is gender. Gender differences in eating habits do exist in adults, the differences in food choices appear to be partially attributable to women's greater weight control involvement and partly to their stronger beliefs in healthy eating (Wardle et al., 2004). However, different reasons may apply in why there are differences in the eating behaviour of children. Findings in this specific field are contradicting; as initial research on the gender differences in the eating behaviours of children showed eating habits in an early age are similar, regardless of the child's gender (Lytle et al., 2000; Wilson, 2000; Perez-Rodrigo et al., 2003; Svensson et al., 2011; Moroshko and Brennan, 2013). Other studies found numerous differences, a study of Rydell, Dahl and Sundelin (1995) found that approximately one third of both boys and girls are fussy eaters. However, Marchi and Cohen (1990) found that fussy eating is more common in girls than boys. In addition, boys identified as fussy eaters were more likely to exhibit tantrums than both fussy girls and non-picky children. A study by Jacobi et al. (2003) found girl picky eaters had a decreased energy intake at 5.5 years compared with 3.5 years, in contrast to boy picky eaters and all non-picky eaters in whom energy intake increased. Finally, parents of fussy boys were more likely to offer a reward to encourage eating (Mascola,

Bryson and Agras, 2010). A study by Guelinckx et al. (2015) described the intake of beverages in children in 13 countries. Findings showed, that water and hot beverage intake is slightly higher for girls than boys, while total intake of milk, juices and soda was higher for boys. There were also significant differences within certain countries.

Studies on food preferences in children further showed that girls liked fruit and vegetables more than boys did whereas boys liked fatty and sugary foods, meat, processed meat products and eggs more than girls did (Wardle et al., 2001b; Cooke and Wardle, 2005). Busick et al. (2008) explored whether parent food purchases effect the willingness to identify and taste fruit and vegetables in preschool-aged children. A significant difference was found when the children were separated on basis of gender and the group means were compared on the basis of willingness to try the fruit/vegetables offered. There was also a significant age-by-gender interaction in the number of foods disliked, with younger boys disliking more foods than girls, whereas in the older groups this effect was reversed (Cooke and Wardle, 2005). Haycraft et al. (2011) rated girls as significantly more emotional than boys and boys as significantly more active than girls. There were no other significant differences between girls' and boys' age, temperaments or eating behaviours in the sample (Haycraft et al., 2011). A Canadian study of 3 year olds suggested that girls had a significantly greater ability than boys to delay responding to eating impulse. The girls impulsive responding toward a sweet reward predicted increased consumption of palatable fat and higher body mass index. The study's findings suggest that in girls, the quality of fetal growth may contribute to impulsive eating. This may promote an increased intake of fats (Silveira et al., 2012). Yavas and Abdul-Gader (1993) confirmed, that Saudi grade 5-8 girls liked food adverts significantly more than boys. It has been concluded, that regarding boys, television viewing while eating a meal contributes to increased energy intake by delaying normal mealtime satiation and reducing satiety signals from previously consumed foods (Bellissimo et al., 2007). Boys and girls brand knowledge seemed to be alike as both genders received the same exposure to information and entertainment (McNeal, 1992).

Finally, according to Steenkamp (1993) there is a positive relationship between food consumption and body weight. This was underlined by a study on 4 year olds by Jansen et al. (2011). Cross-sectional data on the Child Eating Behaviour Questionnaire, Child Feeding Questionnaire and BMI was studied for 4987 children in the Netherlands. Jansen

et al. (2011) found, that higher levels of children's food responsiveness, enjoyment of food and parental restriction were associated with a higher mean BMI. Emotional undereating, satiety responsiveness, fussiness and parents' pressure to eat were negatively related with children's BMI.

2.2.1.2 Psychological factors

Besides biological factors, psychological factors also need to be considered when discussing person-related factors determining food consumption behaviour. Psychological factors include the reasons for acceptance or rejection of foods. These can be sensory affective (such as liking of sweet tastes), anticipated consequences (these can be either physiological (such as nausea,) or psychological (such as feeling guilt)), and ideational (rejected primarily because of our idea or knowledge of what they are or where they come from). There are four types of rejection/acceptance: distaste/good taste, danger/beneficial, inappropriate/appropriate, and disgust/transvalued (Steenkamp, 1993).

Picky eating, also known as fussy eating is characterized by an unwillingness to eat familiar foods or to try new foods, as well as strong food preferences, it is usually classified as feeding difficulties commonly found in children. It is also a type of rejection closely linked to the psychological factors determining food consumer behaviour. The consequences of picky eating may include poor dietary variety during early childhood which can lead to numerous other issues such as obesity (Finistrella et al., 2012) and eating disorders (Marchi and Cohen, 1990) as the children often have a decreased willingness to try new foods, which can often result in a lack of food variety intake. Amongst others, vegetable and fruit intake are lower within picky eaters (Horodynski et al., 2010) and thus a lower consumption of minerals and vitamins (Cardona Cano et al., 2015), as well as a lower intakes of whole grain products (Galloway et al., 2005). Although these children often consume a higher amount of snacks and sweets that are mainly higher calories (Tharner et al., 2014). On the contrary, picky eating can also lead to a decrease in overall food consumption and therefore to reduced energy intake (Cardona Cano et al., 2015; Volger et al., 2013), which can lead to a higher risk of being underweight and thus poor growth (Dubois et al., 2007; Sleddens, Kremers and Thijs, 2008; Viana, Sinde and Saxton, 2008; Jansen et al., 2012; Webber et al., 2009).

As for the reasons behind picky eating, there are numerous possibilities, the first one being the absence of exclusive or reduced duration of breastfeeding and the introduction of complementary foods before 6 months (Shim, et al., 2011; Galloway, Lee and Birch, 2003), as well as the late introduction of chewy foods (Northstone et al., 2001). An example for this is also noted in the study of Tharner et al. (2014) where children who were recognized as picky eaters (at age 4) had eaten fewer whole grain products, vegetables, seafood and less meat at 14 months of age than those children who were not picky eaters. In contrast, Finistrella et al. (2012) found no difference in neophobia or pickiness scores between children who were breast-fed or formula-fed, or a mixture of both. However, other family internal factors can also trigger picky eating such as the stress from caregivers and parents to eat certain foods as well as other parental feeding styles (Jani Mehta et al., 2014; Moroshko and Brennan, 2013). Research from Hafstad et al. (2013) suggest, that children with siblings are less likely to be fussy eaters. The study also suggest, that the mother age is linked to picky eating, the lower maternal age, the more likely the child is a picky eater (Hafstad et al., 2013). Picky eating at 38 months was associated with the infant being male together with greater maternal age, higher maternal social class, maternal smoking, lower pre-pregnancy body mass index, higher maternal educational attainment, lower parity, and a lighter birth weight (Taylor et al., 2015). Finally, the healthier the mothers of children eat themselves, the less likely the child will develop fussy eating habits (Gregory, Paxton and Brozovic, 2010). As a strong relationship was found between the mother's liked and disliked food items and those of their children (Horodyski et al., 2010; Finistrella et al., 2012).

Another possible link to picky eating is derived with intakes of specific food groups. A common finding in numerous studies is that picky eaters consumed fruits and vegetables less often than non-picky eaters (Horodyski et al., 2010; Galloway et al., 2005). Avoidance of vegetables has also been found in several studies (Carruth et al., 2004; Dubois et al., 2007; Tharner et al., 2014; Cardona Cano et al., 2015), while Jacobi et al. (2003) linked this occurrence to males. Twin studies showed that pickiness about vegetables seems to be a heritable trait (Dubois et al., 2013). Estimates of the frequency of picky eating range extensively reaching from 5.6% in 4-year-olds in the Netherlands (Tharner et al., 2014) to 50% in 2-year-olds in the USA (Carruth et al., 2004). The reason behind the great gap in range lies within the various definitions of picky eating as well as the differences in methods of assessment. As a matter of fact, the occurrence also seems

to change with age; Mascola, Bryson and Agras (2010) found an increase from age 2 to a peak at age 6, while Hafstad et al. (2013) found the highest occurrence at 3.5 (in a study spanning the age range of 1.5 to 3.5), and Cardona Cano et al. (2015) found the occurrence to be the highest at the age 3 (compared with age 1.5 and 6 years). Other studies, have reported no change in the prevalence of picky eating with age (Marchi and Cohen, 1990; Örün et al., 2012; Dubois et al., 2007).

2.2.1.3 Personal factors

In his paper (Steenkamp, 1993) focuses on two personality variables; variety seeking and quality-consciousness. However, due the fact that literature regarding these aspects on preschool aged children is scarce, the current sub-chapter will rather introduce various studies focusing on personality traits as well as temper of children in relation to their eating behaviours.

According to De Bourdeaudhuij et al. (2008), positive self-efficacy is a personal factor related to daily intake of fruit and vegetables. Children who were confident that they can eat fruit or vegetables daily were one and a half time more likely to eat vegetables daily and more than two times more likely to eat fruit daily. Still, literature is inconsistent about the relationship between self-efficacy and fruit and vegetable intake (Domel et al., 1996; Lien, Lytle and Komro, 2002), however, it has to be noted, that these studies were conducted on elder children.

Links between eating behaviours and temperament in a sample of 3–8 year olds showed children with more emotional temperaments were reported to display more food avoidant eating behaviours. The study underlined, that shyness, sociability and activity were not related to children's eating behaviours. The EAS Temperament Survey was used, assessing four dimensions of children's temperament: shyness, emotionality, sociability and activity (Haycraft et al., 2011).

2.2.2 Environmental factors determining food consumption behaviour.

The second set of factors discussed in the current dissertation are the environmental factors that influence food consumption behaviour. These include socio-cultural, economic, and marketing factors. Socio-cultural factors reach from cultural dimensions and ethnic groups to the social surroundings of the children. Economic factors on the other hand are mainly limited to the incomes of their family members as well as the prices of the various foods consumed. Finally, marketing related factors such as advertisement through the media and branding can alter the eating behaviour of children as well.

2.2.2.1 Socio-cultural factors

According to (Steenkamp, 1993), what we eat, how it is prepared, the rules and meanings which permeate every aspect of food consumption practices are all socio-cultural matters. While all these aspects are interlinked with ones culture or ethnic group as well as social class.

Within all three environmental factors determining food consumption behaviour, academia still argues what has the most dominant effect on children. Socio-cultural factors such as the role of parents have been researched extensively regarding the eating behaviours of children. Birch and Marlin (1982), for instance claimed that children choose to eat the foods that they are served most often, and they tend to prefer to eat foods that are readily available in the home. Thus, the foods to which children are routinely exposed shape preferences and consumption. Obviously, children are still vastly influenced by what is available at home, while more recent studies suggest that there is a wider array of relating factors linked to children's eating behaviours.

Bowman and Harris (2003) for example compared dietary choices, and television-viewing status of preschool-aged children living in single parent or two-parent households, finding that children in single parent households watch more television and eat unhealthier. Another study found that children of migrant and low educational level parents had higher body fat, ate more meals and snacks while watching television and had more fruit and fatty foods compared with their respective counterparts. Children of low educational level parents also consumed less water and vegetables compared with their

counterparts (Ebenegger et al., 2011). Finally, children who spent more than 2 hours per day in front of the television were more likely to live in large urban/urban regions, to have low educated mothers, and to be overweight compared to children who watched television less than 2 hours per day. Moreover, it was observed that television viewing time of both participants' mothers and fathers was longer among children whose television viewing time was ≥ 2 h/day compared to those with television viewing time < 2 h/day (Manios et al., 2009).

Pérez-Farinós et. al (2017) further found that children who had parents with no formal or only primary school education, displayed a significantly higher consumption of soft drinks containing sugar and potato chips and other salty snacks, and a significantly lower consumption of fresh fruit, vegetables and cheese (Pérez-Farinós et. al 2017). Parents often report using a wide range of child-feeding behaviours, including monitoring, pressure to eat as well as restriction. Restriction of children's eating has most frequently and consistently been associated with child weight gain. Furthermore, there is substantial evidence for a causal relationship between parental restriction and childhood overweight (Clark et al., 2007).

Children's appetite patterns were associated with parental feeding practices (Tomomi and Rie, 2011). A study by Wenhold and Harrison looked into the quality of family mealtimes, specifically focusing on mealtime harmony, mealtime ritualization and the child's food intake. The study found that watching television during family meals was a significant predictor of less mealtime ritualization, the children also tended to eat less fruit and vegetables; however, mealtime harmony did not decrease (Wenhold and Harrison, 2016). Another study explored associations between child eating behaviours and maternal feeding practices, specifically testing the hypotheses that maternal "restriction" is associated with having a child with stronger food approach tendencies (such as over responsiveness to food), and maternal pressure to eat is associated with having a child with food avoidant tendencies. Children who enjoyed food less, were fussier, or ate more slowly, had mothers who were more likely to use pressure strategies (Webber et al., 2010).

The first study examining the associations of parenting styles and practices specific to child emotional expression, family emotional expressiveness and emotional support with young children's emotional eating found, that the parenting styles also alter the emotional

eating of children. The study examined the relations between three different parenting styles (authoritative, permissive and authoritarian), two parenting practices (punitive and minimizing), and 2 family interaction variables (family affective involvement and family affective responsiveness) with the emotional eating in young children. The findings showed, that children of more authoritative mothers, of mothers less minimizing of child emotions and from more emotionally responsive families were less likely to report eating in response to negative emotion. At the same time, family affective involvement, punitive response to child emotion, and authoritarian and permissive parenting styles, were not significantly related to child emotional eating (Topham et al., 2011).

Furthermore, other factors can also influence eating behaviour such as the presence of siblings. Findings indicated older siblings might affect the presence of fussy eating; boys who had older siblings were less likely to be fussy eaters, whereas girls with older siblings had a higher risk of being fussy eaters at the age of 5 years (Jacobi et al., 2003). Although parents provide the strongest influence on children's eating behaviours, they are also influenced by what their peers eat. In the 1930s, Duncker (1938) was one of the first to explore the influence of peers on preschool aged children regarding their eating behaviour. Children's food preferences shifted to match the preferences of the peer. Another study found younger children were more affected by peer modelling than the elder ones (Birch, 1980). Hendy and Raudenbush (2000) studied children aged four to five by exposing them to one of three conditions: teacher modelling of a new food; unfamiliar peer modelling of a new food; exposure to new food (without modelling). Girls accepted new foods more when they were modelled by peers, both immediately and at follow-up, while for immediate food acceptance, there was no difference between the three conditions (Lowe et al., 2004). Finally, the children's preschools also can influence the eating behaviour of the children. A study by Vereecken et al. (2008) found that food rules regarding snack consumption within the preschool was associated with an increase in the consumption of fruit. At the same time, availability of sugared milk drinks led to decrease the consumption of regular milk. Suggesting, that school food policy is one of the factors that can influence children's eating habits (Vereecken et al., 2008).

Regarding the way researchers explored the similarities in the eating attitudes and behaviours of friendship groups; social network analysis is a relatively novel practice. The technique involves asking children to name the children they are closest to and spend

most time with, allowing researchers to establish friendship cliques or social networks (Houldcroft, Haycraft and Farrow, 2014). Here the focus is on friends rather than peers who tend to be the focus in experimental designs. Using this technique Farrow et al. (2011) reported that children's levels of dietary restraint, body dissatisfaction, and external eating being significantly associated with those of other children in their friendship group. This suggests that children's individual psychopathology may make them more susceptible to friend influences (Houldcroft, Haycraft and Farrow, 2014). A study conducted by Salvy et al. (2011) compared the influence of parents and friends on children's and adolescents' food intake and food selection was conducted, where 23 preschool aged children and 27 adolescents (ages 13–15 y) ate a meal with their mother on one occasion and with a same-sex friend on another occasion. Male and female children consumed less energy from unhealthy snacks when in the presence of their mothers than when in the company of their friends. Conversely, female adolescents consumed less energy from unhealthy snacks and more energy from healthy snacks when they were with their friends than when with their mothers. Parents may act as an inhibitory influence on unhealthy eating for younger children (Salvy et al., 2011).

Another study found that for boys, significant predictors of body weight were family food insecurity and conflicts during mealtime. Healthy eating was predicted by food insecurity, mealtime conflicts, and sedentary behaviours. For girls, none of the variables predicted body weight, however food insecurity predicted less healthy eating (Tremblay and Rinaldi, 2010). Girls, older children, and children with higher weight-for-age Z-scores were pressure-fed to a greater extent according to a study by Jani Mehta et al. (2014). A study regarding emotional overeating found, that girls with low quality of the mother/child relationship were prone to emotional overeating (Escobar et al., 2014). All in all, socio-cultural factors do indeed highly influence the eating behaviour of children, however other factors related to the family such as level of income can also affect this as discussed in the following chapter.

2.2.2.2 Economic factors

Income and the prices of the goods sold are the two main factors considered when considering the influence of economic factors on food consumption. Income could be

argued to be a personal factor, however as in the case of children the income of the parents is the dominant factor it is classified as an economic factor. These factors mainly affect the quantities and types of food bought by parents. Studies in this specific field regarding small children are limited to analyzing the way the income of parents affects eating behavior.

In a longitudinal analysis from 2000 to 2011, Ford, Ng and Popkin (2014) found, changes in consumer packaged goods purchases differed significantly by race, female head of household education, and household income. Household income showed that low-income households had the smallest decrease in calories purchased from beverages (−78 kcal/day vs −105 to −103 kcal/day) between 2000 and 2011. The decreases observed in purchases of soft drinks, juice and juice drinks, and grain-based desserts can be explained by the fact that these foods have been identified as key sources of added sugar in the diets of U.S. children (Ford, Ng and Popkin, 2014). This finding is explained through a study on perceptions and attitudes of Hungarian consumers towards healthy eating (Malota, Gyulavári and Bogáromi, 2019). The study found that those in the best financial position are the most health conscious, thus parents with higher income levels try to make sure that their children consumer a minimal amount of sugar through their beverage consumption.

Five different patterns regarding the control of children's food negotiated between parents and children were identified by O'Connell and Brannen (2014). Parents, who encouraged children to broaden their preferences, were those in the higher socioeconomic groups; those more concerned that their child ate what they were given tended to be in the middle- or lower-income categories (O'Connell and Brannen, 2014). In developing countries such as India, this is not yet the case, as children indicated in a study by Staab et al. (2016) that parents largely determined food availability, children did not discuss purchasing food. What is more, children rarely mentioned not liking a certain food. Overall, adolescents with low educated parents had diets of lower quality and spent more time in sedentary activities (Ottevaere et al., 2011). A study looking into eating behaviour differences across eight different countries found that there were rural/urban differences related to eating behaviour, this can also be categorized under economic factors. Children from urban areas reported less healthy eating behaviour, drank more soft drinks and ate more snacks. On the other hand, children from urban areas reported higher eating

awareness/care when compared with children from rural areas. Children from rural areas claimed they ate more vegetables and have more self-regulation strategies (Gaspar et al., 2014).

2.2.2.3 Marketing factors

One common way to add value to a food product is by introducing or reinforcing a brand. Using brands consumers can more easily understand and process information of products and also increase consumers confidence when making purchase decisions. Raising brand awareness to children is conducted in the form of advertising, often through the media, but also through in store promotions. In the past, more studies have looked into how various marketing related factors can alter eating behaviours of children.

In their paper Marshall, O'Donohoe and Kline (2007) examine children's experiences and influences with high fat, salt and sugar foods. The survey conducted in New Zealand claimed that food advertisements represented one-third of the favorites mentioned by children. Most of the named advertisements were for confectionary, fast foods and drinks. Galst and White (1976) found that the items the children requested the most were cereals and candies and that these were the items most frequently advertised. A similar study by Aktas Arnas (2006) revealed that 89.6% of the children either drank or ate something while watching television and the food they consumed most while watching television were fruits, soft drinks, popcorn/nuts, cake, chips and candy/chocolate. The results also revealed that 40.3% of the children asked their parents to purchase the goods that they saw on the television advertisements and that 8.9% of them argued with their parents in order for their parents to buy that particular product. Children also tended to request more sweetened products such as candy, ice cream, biscuit, cake or soft drinks.

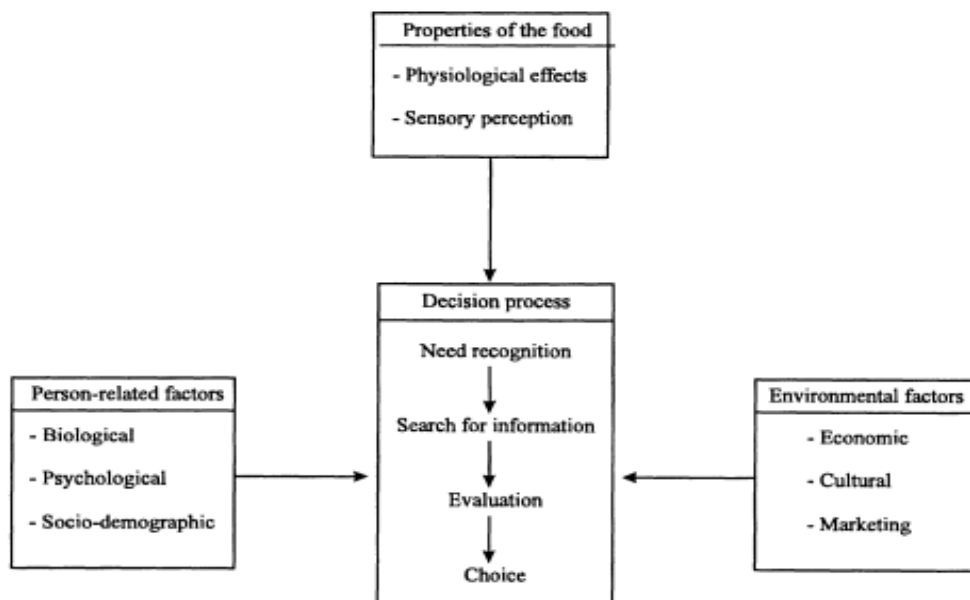
Nicklas et al. (2011) also analysed the impact of commercials on the food preferences of preschoolers, looking at low-income and minority preschoolers in specific. The children were shown a 15-minute television program which also included two 30-second commercials; "Judy Fruity" promoted apples and bananas and "Reggie Veggie" promoted broccoli and carrots. The fruit and vegetable preferences of the children were before and after four exposures to each of the commercials. Interestingly, compared to control

children, there was a significantly higher preference for broccoli and carrots (the targeted vegetables in the vegetable commercial) than in the intervention group. There was no significant difference in fruit preferences which can be explained by a “ceiling effect” resulting from the high preference for fruit in this age group (Nicklas et al., 2011). The food content and messages depicted in popular children's picture books were also examined. Results were compared to findings in the literature on food messages presented in children's television programs. The ratio of healthy foods to nutrient-poor foods was higher in the books. However, as in television, the books emphasized the desirability of sweetened foods (Goldman and Descartes, 2016). Boyland et al.'s (2016) study created a meta-analysis of the effect of food advertising exposure on food intake. The analysis pointed out, that there is a small-to-moderate effect size for advertising on food consumption. Experiments with adults showed no evidence of an effect of advertising on intake, however a significant effect of moderate size was shown for children, where food advertising exposure was linked with a greater food intake. Whilst a study on young school aged children regarding children's emotional attachments to food and drink brands in comparison to their food marketing exposure via television suggested that children exposed to advertisements, had a significant effect on their food and drink brand attachments (Kelly et al., 2019). The majority of studies reported a significant association between television viewing and adverse dietary outcomes. However, aside from measuring exposure, little is known about the eating behaviours linked to screen time amongst young children. Many eating behaviours emerge prior to school admission, suggesting a need to support caregivers in establishing healthy eating habits (Blaine et al., 2016).

2.3 Factors that influence food consumer behaviour

As seen in the previous chapter, there are numerous factors that can alter the eating behaviours of children. However, it needs to be considered, that there are also various factors that influence the food consumption behaviour, which ultimately affects what types of food families consume. Pilgrim (1957) was one of the first to suggest a model discussing the relationships between food consumption and consumer behavior, and with this served as a starting point for many subsequent models. According to his model, when choosing a food, the consumer is influenced by the food, its properties, and the consumer's physiological state. In addition, sensory perception of the person and the psychological characteristics of the are present during the decision, along with economic and social factors. Based on these, an attitude is formed within the consumer. The model was further developed by Shepherd (1990), then later by Steenkamp (1997) (see Figure 11). Compared to Pilgrim's approach, the properties of food and the decision-making process are outlined, person-related and environmental factors are further distinguished.

Figure 11. Consumer behaviour with respect to food

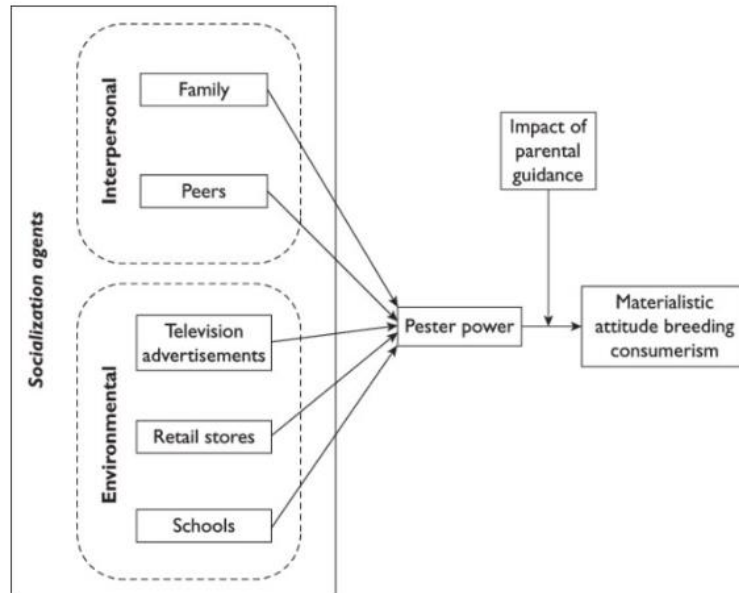


Source: Steenkamp, 1997

It is especially the environmental factors influencing children, which the current dissertation will explore further. As already presented in subchapter 2.1.3, Mowen (1987) suggested one component consumer socialization is based on are socialization agents (media, family, peers and teachers). Lenka and Vandana (2015), further developed this

idea by looking into how socialization agents impact the consumerism of children, their model can be found below on Figure 12.

Figure 12: Consumerism in Children



Source: Lenka and Vandana, 2015

Lenka and Vandana (2015) split the socialization agents into two categories, interpersonal and environmental agents. Interpersonal agents are family and peers, while environmental agents are schools, television and retail stores. After being influenced by these various agents, children exercise influence on their parents to purchase products of choice applying the pester power strategy. Ji (2002) also confirmed that child–brand relationships are influenced by a variety of social factors such as family, peers, and media. Ji (2002) conducted a qualitative study with three children and stated that they established relationships with a broad range of brands, the paper defined ten types of relationships. These relationships are embedded in the social environment of the children. They form positive, neutral as well as negative bonds with brands (Ji, 2002). This phenomenon was also tested through the perception of the children’s parents. A Hungarian study by Hofmeister-Tóth and Malota (2017) on advertising through the eyes of children and parents, looked into what roles different socialization agents have in shaping children’s values. Out of the 500 parents asked, the findings show, that the respondents perceived, that parental influence should be increased further. As only 54% claimed, that currently parental influence is the most dominant form of influence regarding the development of children’s values. 94% of the respondent claimed that it would be desirable for the parents

to play the key role in shaping children's values, while the media should ideally have the least influence on children.

2.3.1 Family influence on consumer behaviour

Families are an important influence in consumer socialization of children which ultimately influences their consumer behaviour. The influence on families on children has been extensively studied in the past. Communication pattern, socio-economic status, employment of parents, birth order and structure of the family are some components of a family that play a considerable role in the extent of influence a family exerts upon a child's consumer behaviour.

Children develop various norms relating to consumer socialization by observing the behavior of their parents and receiving positive and negative reinforcement. The communication between parent and child has an important influence on the consumer socialization and the consumer behaviour of children. Parents who are more emotionally involved often avoid conflict by knowingly indulging in their children's wishes (Khurana and Dang, 2017). There are four types of family communication patterns: pluralistic, protective, consensual and laissez faire. Pluralistic communication reassures participation of the children while consensual asks for their opinion. Protective communication maintains control over the child's request and finally, laissez faire displays indifference in their behavior. Pluralistic as well as consensual establish a concept-oriented approach of communication. Protective and laissez faire are socio-oriented approaches. Concept-oriented parents encourage their children's participation. Whereas, socio-oriented parents monitor the activities of their children (Lenka and Vandana, 2015). Children from pluralistic families are known to be the most competent as consumers while children from laissez faire families tend to be the least competent consumers. Research has identified that pluralistic families encourage consumer learning without stressing monitoring and control of consumption behavior (Khurana and Dang, 2017). Hsieh, Chiu and Lin's (2006) study on parental influence on children indicated that mothers with concept-oriented (incorporating child's opinions into consumption) and fathers with socio-oriented communication (who act as gatekeepers and encourage proper normative behaviour) are more likely to influence their children's brand attitudes (Hsieh, Chiu and Lin 2006).

Parental influence also depends on the social and demographic backgrounds, while this influence decreases with age. The older a child, the more likely the parents are to give in to the child's requests, perhaps because they believe that they are able to make the right decisions as consumers who have with an independent opinion (Pólya, 2008). Gunter and Furnham (1998) were one of the first to underline, that the socio-economic status of a family can influence children's awareness of their consumer environment and affect their opportunities for consumption. Some studies suggest that children with high socio-economic positioned families have a better brand awareness, as they have higher contact to the economic world (Ward, 1974; Moschis and Churchill, 1978). Though contradicting to previous studies, Gunter and Furnham (1998) found that children from low socio-economic positioned families are better at brand awareness, as they are exposed to the market place earlier in life (Gunter and Furnham, 1998). Furthermore, according to Robertson and Rossiter (1974) children of parents with higher educational background are able to better perceive persuasive intent in commercials (Robertson and Rossiter, 1974).

Valkenburg and Buijzen (2005) claimed parents can also influence their children's consumer behaviour through modelling, reinforcement, and social interaction, as families often visit supermarkets together. The purchase behaviour of families has shifted over time. According to Fiates, Amboni and Teixeira (2008b) there has been not only a transformation of family compositions in the recent years: women started to work outside the home and families became smaller, which increased the importance attributed to each child. Parents and children also spend more time shopping. The study of Owens and Hofferth (2001) showed, that among 3- to 5-year-olds, the amount of time spent shopping rose 45% from 1981-1997, from 2.35 hours to 3.44 hours per week. For 6- to 8-year-olds the increase was 168%, from 0.59 hours to 2.38 hours per week (Owens and Hofferth, 2001).

According to Pólya (2008), children learn how to evaluate advertisements from their parents as well as their main motivations for consumption. They also shape the child's brand and shop preferences. Although parents influence their child's purchase decision-making processes at all levels, this primarily affects their attitudes towards consumer goods, rather than convenience and special products. Parental brand awareness is an important predictor of children's brand awareness (Valkenburg and Buijzen, 2005).

Parents can influence their children's consumer behaviour by passing their own brand relationships to their children. Papers on intergenerational impacts showed that mothers' preferences of certain brands were passed on to their daughters (Moore, Wilkie, and Lutz, 2002). According to Ji (2008) various factors play an important role in the way children learn information about brands from their parents. These factors include parental style and how important certain brands are to parents.

Different family structures (single, dual-income, large-sized etc.) can also contribute to this phenomenon. Growing busier schedules and single parent households are one of the reasons children are more involved in household purchase decisions (Lenka and Vandana, 2015). Socio-demographic changes such as dual-career couples have led parents to be more liberal with children, giving them more voice in parental decision making. Parents in these families purchase their children more costly gifts in order to compensate time missed with their (Jeevananda and Kumar, 2012).

Finally, the birth order of children may also influence the way families impact children as consumers. Firstborn children are accommodative and submissive to parental decision than later born siblings. The firstborn children are more cautious, risk-averse and seek parental support to make certain purchase decisions, valuing product quality, reliability, price and promotional tactics. On the contrary, later born children are risk takers and seek peer suggestions, while they prefer buying new products (Rink, 2010). Parents can exert more influence on children than siblings due to their intimacy. Parents do not have competing interest as siblings often do. However, Information gathered from parents and siblings respectively raises children's awareness of new products, altering and developing their consumer behaviour (Cotte and Wood, 2004).

Overall, past findings underline, that family plays a great role influencing children as consumers. Numerous different aspects were discussed, some aspects being more critical than others. Another factor linked to the influence of children are their peers, however their growing importance is still debated within literature and will be discussed in the next sub-chapter.

2.3.2 Peer influence on consumer behaviour

Peer interaction is considered a fundamental human trait, arising from psycho-physiological and sociological need gratification (Ward, 1974). According to Moschis and Churchill (1978), peers serve as significant transmitters of behavioral norms via consumption-related communication, which ultimately adjusts actions. The behaviors and attitudes of one's peers not only serve as a base of comparison, but also provide a means of learning how to respond to new consumption-related stimuli in the environment (De Gregorio and Sung, 2010). Peer interaction helps with the cognitive and affective development of children (Priya, Baisya and Sharma, 2010). Children further develop empathy, emotional control and improve their language skills in their day-to-day interactions with peers. Peer relationship influences children's behavioural as well as emotional development and their adjustment in society (Lenka and Vandana, 2015). According to Roper and Shah (2007), children generally seek peer opinion for buying products of specific brands (Roper and Shah, 2007).

Until today, literature on how friends influence children's consumer behaviour has been extremely scarce. Drenten, Peters and Thomas (2008) were one of the few who examined the consumer socialization of preschool age children in a peer-to-peer context as they participate in dramatic play in a grocery store setting. One of their research questions highlighted what influence preschool children exert on one another in a grocery store setting. The findings are consistent with prior research (discussed in the previous chapter) suggesting that children in the perceptual stage understand the basic shopping script (John, 1999). The children demonstrated peer-to-peer consumer socialization strategies, directing each other on how to perform appropriate shopping scripts. Furthermore, the children demonstrated peer-to-peer consumer socialization strategies, directing each other on how to perform appropriate shopping scripts. The findings support the proposition that social (i.e. peers) and environmental (i.e. preschool) factors do in fact influence a child's consumer socialization, even at a very young age. One example of many from Drenten, Peters and Thomas's study (2008) underlining the finding mentioned, was when a participant decided to purchase a specific box of cereals due to the fact that "My friend eats them". The participant was purchasing the cereal, not only for his own satisfaction but also based on his friend's preference. The young children that participated in this study did in fact teach, influence, and socialize one another with

respect to grocery store shopping behaviours. These findings contradicted with earlier findings of John (1999), who argued that peers only influence children at later stages of child development (namely the analytical stage discussed in the previous chapter).

As mentioned, studies specifically dealing with the preschool age group are rather scarce, however another study partially integrated this age group to test peer influence on children. Bachmann, John and Rao (1993) conducted a study to examine how children of different ages factor peer group influence into their purchase decision. Within the age groups measured, 54 children were 6-8 years of age, 49 children were 9-11 years of age, and 38 children were 12-14 years of age. Influence was highest by the older age group and peer group influence was directly related to the conspicuousness of the product. For the youngest age group, none of the contrasts between product types was significant. The data implies that children between ages 6-8 view the degree of peer group influence as rather constant across all product types. It seems that these children have not yet developed an understanding of the social significance of using products in different contexts. Findings indicate that peer group purchase influence emerges slowly through the years (Bachmann, John and Rao, 1993). An early study by (Moschis and Mitchell, 1986) that was conducted on school children and their parents found that peer influence is quite dominating in the early stages of consumer decisions, the influence is found to decline towards actual purchase suggesting that parents may mediate the effect of peer influence (Moschis and Mitchell, 1986).

The amount of studies in this field reflect, that among socialization agents, peer influence demands more attention in academia. Due to the concern over television advertising as a major influence on children, most current papers in the field rather focus on media related issues, these will be presented in the following chapter. However, considering the findings presented here, it seems to be important to consider peer group influence on consumer behaviour as an important issue as well.

2.3.3 Media's impact on consumer behaviour

The first studies regarding the media usage of preschool children can be traced back to the 70's. The study of Lyle and Hoffman (1971) examined 157 preschool children about

their media and television usage six out of ten children viewed television in the afternoon. Seventeen percent of the three year olds said they viewed alone, compared with 11 percent of the four year olds and 6 percent of the five year olds. The majority of five year olds say they make their own selections regarding programs, compared with only about one third of the three and four year olds. Children whose mothers work are more likely to say they make their own program selection, while the influence of non-working mothers is stronger. The impact of advertising was further emphasized by the fact that 87 percent of the mothers said their preschool-age children asked for food items they saw on television; 91 percent said their children asked for toys they saw on television (Lyle and Hoffman 1971). The study by Ward (1971) examined commercial watching behaviour on children from 5 to 18 years. The study indicates that children pay full attention to prior programming about 65 percent of the viewing time, although somewhat higher incidence of full attention is found among younger children. Children make some verbal response at commercial outset about 25 percent of the time. When such a response is made, it is most likely to be favourable. Also, the girls in the oldest age group talked during 28 percent of the commercial exposures, while boys in the same age group talked during 20 percent. Paying full attention to commercials during family viewing decreased with age, suggesting that older children use the opportunity of commercial breaks for interpersonal communication (Ward, 1971).

Subsequently in the early 1980s, the first books were published regarding that investigated the media usage of children and the effect on their development; David Elkind: "The hurried child" (1981) and Marie Winn: "Children without Childhood" (1984). The main message of these books were, that children grow up: too fast and too soon. As a child psychologist Elkind (1981) emphasizes the level of stress today's children have to cope with. Elkind (1981) sees the key problem in that children nowadays are forced to deal with the same physical, psychological and social pitfalls as adults before they are actually ready to deal with such issues. According to Winn (1984), it does not matter what the child watches on TV, in any event, the child is being deprived playtime and other forms of healthy interactions. According to the author, too many parents use the television as a "babysitter".

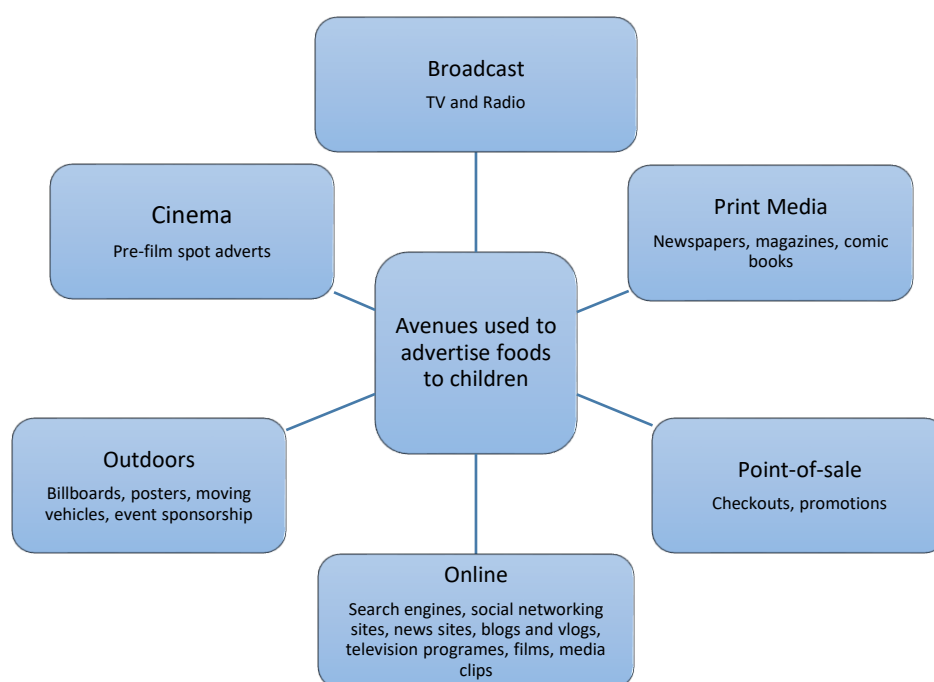
Valkenburg and Buijzen's study (2005) was also conducted in this specific field, interviewing 234, 2-8 year-olds in the Netherlands. 12 logos were presented in random

order to the participants. In order to measure brand recall, children were asked to mention the name of the brand that the logo symbolized. To measure brand recognition, children were presented with three cards representing various products in random order. One of the three cards was the product matching the brand logo. The children were asked to pick the card that matched the logo. Children's brand recognition followed a different developmental path than their brand recall. The 2-3 year-olds recognized 8 out of 12 brand logos, most 8-year-olds were able to recognize 100% of the logos. However, young children's brand recall was significantly weaker. 2-3 year-olds could hardly recall any of the brand logos. 8-year-olds only recalled fewer than 50% of the logos. The most significant increase in brand recognition occurred between ages 3 to 5 and the most significant increase in brand recall occurred between the ages 7-8. Boys showed a higher brand recall and recognition than girls did. Television exposure was a stronger predictor of children's brand recognition than of their brand recall (Valkenburg and Buijzen, 2005). Considering the literature within this specific field, the assumption is made, that the environmental factor 'media' influences pre-school children's consumer behaviour and brand preference, thus the following chapter of the dissertation will solely focus on the preschool children's various forms of media consumption as well as studies conducted in this field in more detail.

2.3.3.1 Children's Media Consumption

Today, there are various channels through which children are exposed to advertisement, as can be seen in Figure 13. below. However, advertising to preschool children tends to focus on traditional broadcast media (primarily television) and, more recently, new non-broadcast media avenues (primarily the Internet and social media) as being most important in terms of reach and impact and therefore the dissertation will focus on these two channels. As children cannot read at this age print media is not considered separately. Also, as only a very small proportion of preschool children visit the cinema (Klág, 2016), this channel is also left undiscussed within the dissertation.

Figure 13: The main channels to which children are exposed to advertisement



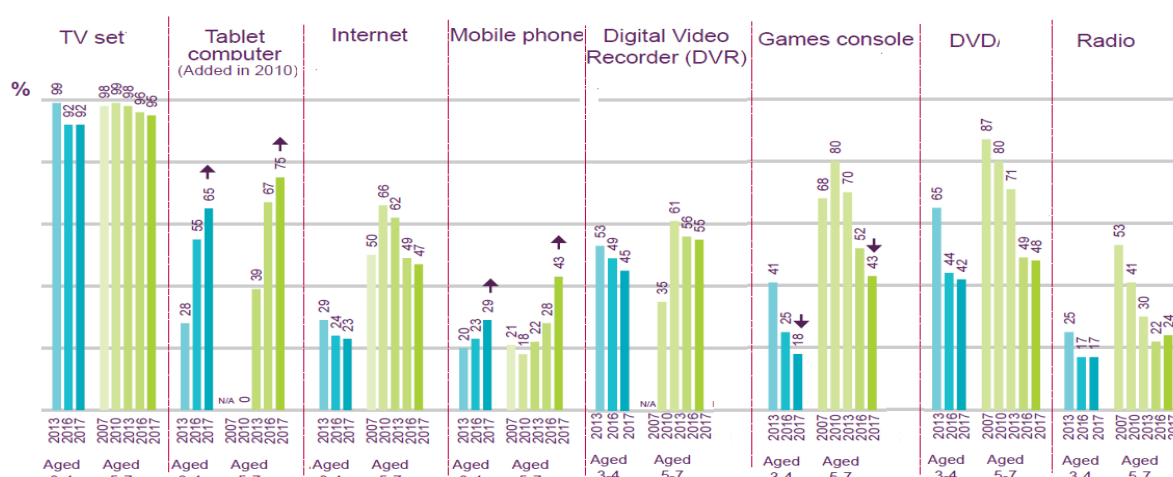
Source: Boyland and Whalen, 2015, page 334.

A recent Hungarian study by Antalóczy, Pörcezi and Vaskuti (2012) on preschool children's media consumption habits outlined to what extent Hungarian preschool children consume various forms of media, and what effects this has on them. The paper confirms previous findings that nearly one hundred percent of the participants own a media device: only 3 families owned no mass communication tool. In contrast, approximately one in four preschool children own some form of device, typically a television. The study also revealed that all young people watch television, about 80 percent of them turn on the television every day. The children's typical media consumption pattern is that the children typically watch television on their own or with their siblings. Parental control is becoming increasingly diffuse. The children prefer the cartoon channels, followed by various sports channels, sports programs and nature films. Finally, the children drew a drawing, which symbolizes what they do in their free time. From the 42 drawings completed, the television, computer or a video game only appeared in 4 cases as the popular leisure activity. In contrast, typically the children drew: swimming, playing with a ball, riding, driving or playing board games. It is important to

note that none of the 4 television or computer related drawings pictures violence or aggression (Antalóczy, Pöröczy and Vaskuti, 2012).

Finally the figure below (Figure 14.) underlines, how vastly the various forms of media usage have increased over the past 10 years. Although there has been a slight decrease in the usage of television consumption, the usage of radio and DVDs has nearly halved. At the same time, tablet and computer usage as well as the usage of mobile phones has more than doubled. A clear trend is arising amongst this young consumer group. Whereas the usage of television is still relevant, the usage of internet related media is on the rise, therefore the following three sub-chapters will focus on the television, internet as well as advergames consumption of children as well as recent studies conducted in this specific field (Ofcom, 2017).

Figure 14. Media used by children at home, by age: 3-4 and 5-7 in the years 2007, 2010, 2013, 2016 and 2017.



Source: Ofcom, 2017

2.3.3.2 Television consumption habits of preschool children

In spite of the increasing accessibility of other options, television is still one of the most popular activities amongst children undertaking any other media activity. Hodge and Tripp (1986) conducted one of the first experiments, where a socio- semiotic approach was used, whilst analysing children's programs and audience data. In their opinion, the way children interpret cartoons and what they say about them to other children and adults

depends on what position they have relative to the others in a group (Hodge and Tripp, 1986).

Subsequently in the past few decades, numerous studies focused on the television viewing behaviour of preschool aged children. Anderson et al.'s (1986) observation was, that the children in this age group turn their heads 150 times away from the screen every hour (Anderson et al., 1986), indicating, that their attention towards this medium is rather limited at times. Schmitt, Woolf and Anderson (2003) also quantified viewing behaviours that occurred during television viewing. They found nearly half of viewers' time was spent engaged in some other activity than looking at the television. This also indicates that children do not necessarily always pay attention to the television set, even though it is turned on. Schmitt, Woolf and Anderson (2003) found that social interaction was particularly frequent among the youngest viewers, with 2-year-olds engaged in social activity more than 39% of their time. 2 year-olds paid equivalent attention to advertisements and programs, 5-year-olds looked less at advertisements than programs, while the gap between advertisements and programs increased in size among 8-year-olds and 12-year-olds. Indicating, that the younger children are most vulnerable to the advertisements on television.

Also linked to the topic how children's consumer behaviour changes when expressed to the media is a study of Pine and Nash (2002), who interviewed children aged 3-6 years, who had written letters to Father Christmas. Overall, children who watched more commercial television were found to request a greater number of items, these children also requested more branded items. However, the children's requests did not correlate significantly with the most frequently advertised toy products on television during the Christmas season. A positive correlation was found between watching television alone and number of requests. One interpretation of this may be that viewing television alone makes children more vulnerable to advertising (Pine and Nash, 2002).

Other studies tried to find links between healthy eating habits and watching television, such as the study by FitzPatrick, Edmunds and Dennison (2007) who tested the independent associations of eating dinner as a family and having the television on during dinner with child feeding behaviours. Each night the family that ate dinner together was positively associated with serving fruits or vegetables, this decreased with each night the

television was on during dinner (FitzPatrick, Edmunds and Dennison, 2007). The findings have also shown, that an increase in television consumption can lead to an increase in the pace of food intake of children. While the link between eating speed and television consumption in pre-school aged children has not been examined so far, eating at a fast pace has been linked to obesity in the paper of Jahnke and Warschburger (2008). Finally, a study also linked high television exposure to increased risks of bullying and victimization within 2-5 year old children (Verlinden et al., 2014). The paper of Ford, Ward and White (2012) reports that, there is a significant relationship between television viewing time and adverse dietary outcomes. Lower fruit and/or vegetable intake was the most frequently reported dietary outcome, followed by increased energy intake with increased television viewing. This suggests that children whose television consumption is higher eat more junk food and are more likely to enjoy food consumption overall. Interestingly other areas tested within the survey such as drinking habits were not affected by the television consumption of the children.

Boyland et al. (2011) studied over 5000 hours of commercial programs on television channels that are popular with children and found that 12.8% of the advertisements were for food. Above this, the food advertisements came on during higher rates when child viewing periods peaked, while the majority of these adverts were for unhealthy foods. A study by Powell et al. (2011) used television ratings data from 2003 to 2009 to analyse the nutritional content of foods advertised to children. The analysis showed that while exposure to unhealthy food and beverage products fell, fast food advertisements increased (Powell et al., 2011). A study by Dovey et al. (2011), exposed 66, 5 to 7 year old children to healthy and unhealthy food as well as toy (control) advertisements. Furthermore, the children were categorised on a food neophobia (the fear of novel foods) scale. Food advert exposure increased highly neophobic children's intake of foods by 11%, whereas low neophobic children ate 14% more following the unhealthy adverts only. Healthy food adverts did not increase children's consumption of healthy foods but low neophobic children ate less chocolate in this condition.

Berger (1988) indicated that the most important effect of television on children is not the effect that it will cause but the things that it will prohibit. This is because the television takes away the children's playtime, prevents their creativity, decreases their communication skills and social development (Berger, 1988). The study by Kásler

(2017b) compared the drawings of several preschool children who all view television for different time intervals. The study found that an increased television consumption influenced the drawing abilities and the overall development of the children. The usage of space, the details found within the drawings, the explanations of the drawings by the children and the usage of symbolism, all underlined the findings.

2.3.3.3 Internet consumption habits of preschool children

Another form of media can now be found on the internet, through watching cartoons online on channels such as YouTube, but also playing various games online. In 2007, Apple introduced the first iPhone and three years later the first iPad, introducing the world to a new type of mobile technology driven by the touchscreen. This technological advancement also created a developmentally more appropriate medium for young children (Geist, 2012). Tablet devices are also being integrated into a variety of children's toys and products. These technologies allow access to the internet for young children as touchscreen technologies are perfect for the sensorimotor stage of even very young children, who can easily press the icons with little or no help from adults. This permits a greater grade of independence for young children who can play with touchscreens close to unaided, especially in contrast to a PC, which requires the help of adults to use the keyboard and mouse (Holloway, Green and Livingstone, 2013).

The American Academy of Pediatrics initially recommended no screen time for children under 2 years old and limited screen time for older children, the organization's most recent recommendations in 2015 recognized that strict screen time limits are no longer plausible in today's media-saturated world. The Academy even acknowledged the benefits of quality educational content, such as the Sesame Street, which aids children's learning and development, as long as screen time occurs in moderation and with the guidance of parents (American Academy of Pediatrics, 2015).

An advantage of the internet for marketers, is the active process, compared to more passive mediums like television. Surfing through a website demands a series of decisions and actions. The advertiser can engage children for several minutes in a potentially powerful, interactive medium (Moore, 2006). Although the size of the Hungarian market is much smaller than Western markets, companies can still get significant profit using

internet-based marketing strategies, since branded entertainment is a fast growing and potentially highly effective way to reach consumers in unique and compelling ways (Hofmeister-Tóth and Nagy, 2011).

More recent surveys from other EU countries show that children using the internet under the age of nine is continuing to rise. As Figure 15. underlines, half of the 3 to 4 year olds are online for an average of 8 hours per week, as are 79% of the 5 to 7 year olds, for an average of 9 hours per week. Of these children, close to half of the 3 to 4 year olds and 71% of the 5 to 7 year olds watch YouTube. 96% of the 3 to 4 year olds watch TV for about 15 hours per week. 95% of the 5 to 7 year olds watch TV for about 13 and a half hours per week (Ofcom, 2017). Whereas the same Ofcom (2017) report suggests that the use of the internet is increasing rapidly among children and surpasses television watching time.

Figure 15. Estimated weekly hours of media consumption by age: 2017

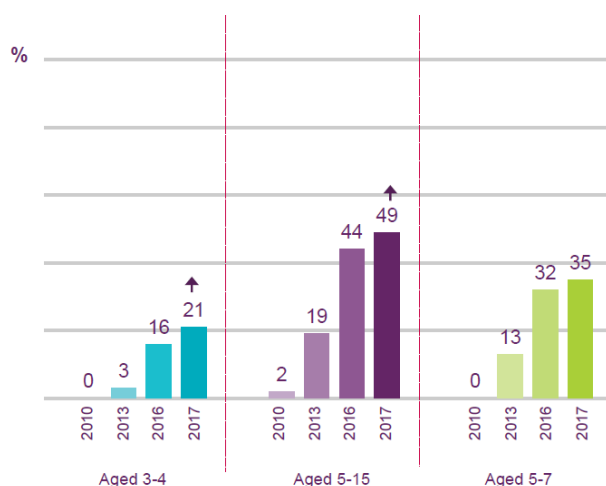


Source: Ofcom, 2017.

The ownership of different devices that allow the child to use the internet are also a large indicator of how much children at such a young age are actively online. One example is tablet ownership. Figure 16. suggests that the tablet ownership of children between the age of 3 to 4 has increased by 20 percent over the last 10 years, while in the 5 to 7 age group this increase was 35 percent. Even though in comparison, the smartphone ownership is still pretty low, at 1% for the 3 to 4 age group, however 4% of the 6 year olds, and 9% of the 7 year olds own their own smartphone device (Ofcom, 2017). For many young children, they do not actually have their own mobile device, but their parents engage in what Chiong and Schuler (2010) describe as the “pass-back effect.” This phenomenon derives from the image of a parent “passing back” a mobile device in the car to a child in the back seat to keep him/her occupied, but it can occur in any location at anytime. A survey conducted by Wartella et al. (2014) of parents of 0 to 6 year olds

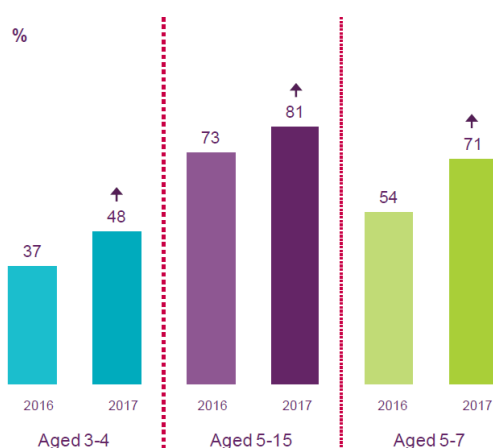
found that parents use mobile devices in many situations, from making dinner, to eating at a restaurant, to calming the child down (Wartella et al., 2014). Often the child is only allowed to use the device for a short amount of time (Chiong and Schuler, 2010). However, parents do not all have positive attitudes toward mobile device use of their children. According to Wartella et al., (2014) only 29% of parents believed that newer mobile devices have made parenting easier. At the same time, 70% of parents claimed that devices do not make parenting easier due to: (1) fears of children not developing social skills; (2) having a harder time getting their children's attention; and (3) fears over children getting addicted to the devices (Wartella et al., 2014).

Figure 16. Tablet ownership by age: 2010, 2013, 2016 and 2017



Source: Ofcom, 2017

Figure 17. YouTube usage by age: 2016 and 2017



Source: Ofcom, 2017

It is also important to examine the type of content that young children are engaging with. The Michael Cohen Group (2011) identified three types of tablet computer apps for young children—gaming apps, creation apps, and electronic books. The first describes apps that are interactive, goal oriented, and level up to make game play progressively harder; the second describes apps that allow children to draw or build; and the third, as described in the previous section, include animated e-books that can be read by children (or adults) or have audio narrators telling the story.

At the same time, YouTube usage is also a great predictor of not only the internet use of children, but also to what extent children are exposed to excess advertisements. Just like internet usage in general, according to Ofcom (2017), YouTube usage is on the rise within this young age group. Figure 17. above depicts the YouTube usage of young children. Within only one year, from 2016 to 2017, there was a great increase amongst YouTube usage in all age groups depicted. Parents also mentioned whether they use the YouTube Kid app, that is specifically aimed at under 5 year olds. Parents indicated, that half of the children aged 3 to 4 only use the YouTube Kids app, while this decreases to one quarter amongst the 5 to 7 age group (Ofcom, 2017). Table 1. displays the content watched on YouTube by age, which slightly differs in various age groups. However, cartoons are the most popular content, followed by funny videos and music videos. Unboxing videos are popular with the 3 to 4 year olds and game tutorials are commonly watched within the 5 to 7 year old group.

Table 1. Content watched on YouTube by age

All who use the YouTube website or app	Aged 3-4	Aged 5-15	Aged 5-7
Base	325	1100	285
Funny videos/ jokes/ pranks/ challenges	37%	69%	53%
Music videos	33%	62%	40%
Cartoons/ animations/ mini-movies or songs	84%	48%	69%
'How-to' videos or tutorials about hobbies/ sports/ things they are interested in	16%	40%	28%
Game tutorials/ walk-throughs/ watching other people play games	12%	39%	30%
Vloggers or YouTube personalities	6%	32%	16%
Film trailers, clips of programmes, 'best-bits' or programme highlights	8%	31%	16%
Sports/ football clips or videos	4%	28%	14%
Whole programmes or films	13%	22%	14%
'Unboxing' videos - e.g. where toys are unwrapped or assembled	26%	21%	20%

Source: Ofcom, 2017

According to Calvert (2008), increased advertising online makes children even more vulnerable to marketing. When a television viewer watches an advertisement, they must act on the message if a product purchase is to occur. That action can involve requesting the product from a parent or even pulling it from a shelf while shopping. However, the delay between seeing an advertisement and being in a store is a likely disruption to a purchase. On the contrary, the internet often involves the children directly with the content. Actions range from clicking on an icon in order to directly purchase the advertised product. In newer technologies, the distinctions between the commercial and program content can be blurred in a seamless presentation (Calvert, 2008). There is an emerging trend for very young children to use internet connected devices, especially touchscreen tablets and smartphones. This is likely to result in an increase in exposure to risks associated with such internet use. According to Spiteri Cornish (2014) parents are viewed as having a responsibility to deter children from invasive marketing, yet with the rise of non-traditional marketing, it is unclear whether they have the knowledge and skills necessary to undertake this role. In her 2014 study, Spiteri Cornish found that parents recognize online persuasive techniques only when they themselves have been exposed to them (e.g. banners, pop-up advertisements) and are often unable to appreciate more subtle marketing techniques in their persuasive capacity. Here it has to be noted that “freemium” apps (apps that offer limited-time free content before requiring users to make a purchase), popular with small children, are more likely to have features such as popup or banner advertisements as well as embedded external web links. In addition, they wrongly believe that children respond to online marketing the same way adults do. Parents display naivety in their conviction that their children would never be taken in by marketers but, absurdly, this is limited to online advertising (Spiteri Cornish, 2014).

A content analysis of websites conducted on popular children channels Nickelodeon and Cartoon Network, examined 290 web pages across 19 Internet websites and found that games, appearing on 81% of the sites, were the most predominant promotion strategy used and all games had at least one brand identifier (usually a logo) (Culp, Bell and Cassady, 2010). In another study, it was found that of 24 sampled websites, over 80% targeted children below the age of 12. The marketing techniques used included free website membership, leader boards (encouraging recurring visits), advergames and branded downloadable content (Brady, Mendelson, Farrell and Wong, 2010). These

techniques are exceptionally effective at strengthening brand awareness and encouraging product purchases (Sprott, Czellar and Spangenberg, 2009). Interestingly, it has to be pointed out, that, children have been found to have a much lower recognition of advertisements on webpages than for television advertisements (Ali et al., 2009). The study of Hang and Auty (2011) extends product placement research by testing the impact of interactivity on product placement effectiveness. The results suggest that when children cannot interact with the placements in video games, perceptual fluency is the underlying mechanism leading to positive affect. Therefore, the effects are only evident in a stimulus-based choice where the same stimulus is provided as a cue. However, when children have the opportunity to interact with the placements in video games, they may be influenced by conceptual fluency. Placements are still effective in a memory-based choice where no stimulus is provided as a cue (Hang and Auty, 2011).

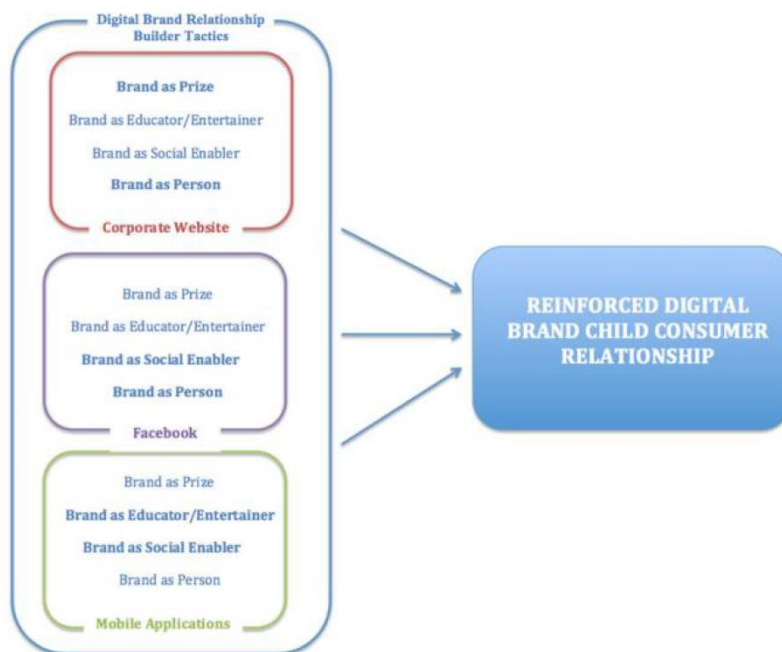
Vangsnes, Økland and Krumsvik (2012) analysed computer games in pre-school settings in Norway, as Norwegian policy now requires a stronger focus on children's use of technology from an early age and require kindergartens to consider digital tools. They came to the conclusion that the pre-school teachers do face didactical challenges when commercial educational computer games are implemented in kindergartens. It was found that the pre-school teacher was more or less absent in the gaming situation, conversation between the pre-school teacher and children playing was rarely observed (Vangsnes, Økland and Krumsvik, 2012). Computer use in three Swedish preschools was also analysed by Ljung-Djärf (2008). The key question of the study was how this new artefact should be used in preschool activities. The teacher's approach to computer use was shown to be determined by a combination of the teacher's assumptions about the possibilities of computers and the dominant underlying principle or rationale at work in the preschool. It is argued that the computer is treated differently depending on whether a caring, nurturing, or teaching rationale dominates. Consequently, the role of the pre-school teacher is vital and creates different possibilities for children to learn about and from the computer depending on the teaching style of the pre-school teacher (Ljung-Djärf, 2008).

A study by Mendoza, Zimmerman and Christakis (2007) underlined, that television viewing was the more common form of media use, compared to computer use. The children who watched 4 or more hours of television, spent 1 hour or less on the computer. Like television, internet use on tablets and computers may lead to decreased time spent

being physically active, which may incline to excess weight gain. Interestingly, any computer use was individually linked to higher obesity (Mendoza, Zimmerman and Christakis, 2007).

Food advertising has also started to shift from solely television advertisements to digital technologies such as the Internet. The marketing of food products through online media has grown rapidly in recent years, particularly in high-income countries (Lascu et al., 2013). Mobile devices are continuously expanding and with them food advertisements too (Kelly et al., 2015). Children are becoming increasingly competent users of digital media, the food industry has taken advantage of this growing trend. Child-targeted food advertisements have established themselves amongst commercial websites, using banners, online videos, advergames and social media (Faber, Lee and Nan, 2004). A great example of this is Facebook, where estimates of the biggest advertising expenditures in 2013 included numerous global food and beverage companies such as Coca-Cola and Nestle (Edwards, 2013). Whereas television commercials for various products are more frequently embedded among other games and activities that children encounter on a website, blurring the lines between advertising mediums (Moore, 2006).

Figure 18. Children's digital brand relationships



Source: Confos and Davis (2016)

In their paper, Confos and Davis (2016) discuss young consumer-brand relationship building potential using digital marketing. Their results are summarized in Figure 18. below. Overall the authors mention four different branding strategies that advertisers use differently in various online platforms to target young consumers; brand as prize, brands as educator/entertainer, brand as social enabler and brand as person. Food companies frequently use sales promotions and competitions to engage children (brand as prize). Typically, a product must be purchased to enter the competition, and usually the prize is the brand itself or products containing the logo of the brand. By doing so positive brand reinforcement takes place. An advantage compared to competitions on television, digital media encourage children to interact directly with the brand (Confos and Davis, 2016).

Marketers also disguise advertising as entertainment or educational content (brand as educator/entertainer). This form of entertainment generates a positive long lasting experience for the children, after playing the game repeatedly this positive association will become connected with the brand in the minds of the children. Advergimes discussed in the next subchapter are great examples this. When food marketers use this strategy, they tend to present brands in the background which activates the brand in implicit memory. Furthermore, the brand product is regularly shown in the game as an active component. Marketers can also use the brand to create social connections on digital media (brand as social enabler). Highlighting the children's regular interaction with friends and others in the virtual community influences that child's attitudes and behaviours, thus many brand promote brand advocacy by encouraging children to tag or share a product brand with their friends (however this step is mainly the case with elder children than preschool level). Finally, food companies often use the tactic of personifying the brand (brand as person). Marketers use brand characters or animations to do so. With the help of digital media, now the brand itself is being portrayed as a person. Children can now talk to the brand character and the brand can respond to the child in real time, giving substance to the brand relationship. The anthropomorphised brand can now speak to the consumer in the voice of the brand (Confos and Davis, 2016).

2.3.3.4 Advergame usage of preschool children

Advergimes are a type of online advertising that incorporates logos, messages and characters in a video game format (Mallinckrodt & Mizerski, 2007). This is obvious in

the term itself, which is derived from combining the words “advertisement” and “video game” (Grossman, 2005). They are created by a company for the purpose of promoting its brands (Moore, 2006). However, in these games, brand figures are not just important characters but “heroes”, which encourages social as well as observational learning. Furthermore, Piaget’s theory (discussed in the first section of this dissertation) on cognitive development applied to advergimes suggests children under the age of 10 cannot understand communication processes like adults, thus brand characters may influence them more efficiently (Hofmeister-Tóth and Nagy, 2011). They contain the usual video game features, such as multiple levels and personal avatars. The goal is to get children to return to the company's website and play the game numerous times (Nairn and Hang, 2012). As a consequence, it is more difficult for children to recognize the persuasive purpose of the game (Folkvord and van’t Riet, 2018). Compared to television and simple internet channels, advergimes offer vaster interactivity. Advergimes compass children’s cognitive system and influence them in a more powerful way in comparison to television commercials. Children memorize the attributes of products better due to the entertaining nature of advergimes. A typical advergime takes approximately 10-15 minutes, which is enough time to fix the brand in the memory of the child. Whilst playing with them repeatedly transfers memories from short to long term (Hofmeister-Tóth and Nagy, 2011). Sadly marketers capitalise on this strategy as it operates under-the-radar as parents are often unaware of the fact that the advertising is delivered as entertainment (Kelly et al., 2015). At the same time these games are quite simple, therefore television advertising could be argued to make up for the absence of interactivity through the realistic virtual worlds that can be generated on the screen (Boyland and Whalen, 2015).

A recent study found that both advergimes and television advertisements improved brand attitudes in a similar degree (Bellman et al., 2014). Another study pointed out the opposite, that, children have much lower recognition of advertisements using advergimes than through television (Ali et al., 2009). Now that games can be downloaded, marketing can be transmitted by cell phones and other digital devices (Calvert, 2008).

From a marketer’s perspective, one of the potential advantages is the ability to draw attention to your brand in a playful way, for an extended period of time. The Internet can be an advertising venue that is particularly well-suited for informing consumers about the array of product forms and flavours available. While it might be difficult to communicate

much about an entire product line in the space of a 30-second television ad, it is more easily accomplished on the Internet. In Moore's (2006) study, the overall range of brand variants in the various games was from 1 to 95. Moore (2006) conducted an in-depth content analysis on advergaming sites (e.g., Master Foods, skittles.com and Wrigley's juicyfruit.com). On single brand sites, there was an average of 3.6 games and on multi-brand sites, an average of 16.4 games per site. On multi-brand sites, 30 or more games may be posted, which are organized into categories to help visitors find the kind of game they want to play with. Though sites with a large number of games attract more young children. When a game ends, visitors may receive suggestions for other games. By playing these games, brand awareness is reinforced, and repeat visits are encouraged. According to the study, brand logos were the most visible, appearing in 86% of the games. Giving a child the freedom to choose his game player, select an opponent, or design the game space is likely to stimulate greater interest. 39% of the games studied, incorporated one or more of these elements. Sometimes the player is a brand character or a vehicle that has a brand logo on it. Furthermore, 72 percent of the sites study's included one or more types of either: (1) basic nutritional information, (2) specific nutrition claims, and (3) healthy eating strategies. Also 42 percent of the sites offered an option to register, join a club or to become a member, however several opportunities were not available to children under the age of 13. Membership may allow access to a variety of special site features and benefits. Finally, 47 percent of the sites incorporated some form of television or movie tie-in, therefore media partnerships were common too.

A vast amount of food and beverage advergaming incorporate at least one food cue that is a brand identifier, this can range from images of packaging, brand characters, or a logo (Culp, Bell and Cassady, 2010). In a meta-analysis, Folkvord and van't Riet (2018) concluded, that advergaming promoting unhealthy foods induced unhealthy eating behaviour among children. This was also the outcome of Harris et al. (2012) who exposed 152 children between the age of 7–12 to either unhealthy, healthy, or non-food computer games and then presented the participants with healthy, moderately healthy, and unhealthy snack foods for consumption. After playing the unhealthy advergaming, children increased their intake by 56% (77 kcal) compared with the healthy advergaming and 16% (25 kcal) compared with the non-food control game (Harris et al., 2012). Another Dutch study used a similar approach to study 270 children between the age of 8–10. They found that, playing an unhealthy food advergaming increased children's food intake compared

with the healthy game (7.1% or 13 kcal) and the non-food game (53.0% or 68 kcal). However, playing the healthy advergame also increased total energy intake relative to control, indicating that children simply responded to the food cues regardless of the advertised brand or product type (Folkvord et al., 2012). Finally, Pempek and Calvert (2009) were able to demonstrate that children who played an advergame featuring healthier products selected and consumed significantly more healthy snacks than those who played a less healthy version of the same advergame.

The study by Owen, Lewis and Auty (2014), proved that elder children, who have a basic understanding of advertisement, do not understand the non-traditional forms of advertisement. A study was conducted comparing children's understanding of advertising with a variety of non-traditional forms (such as film and in-game product placement, product licensing, programme sponsorship and advergames). They interviewed 134 children aged 6-10 in the UK, using combined, open ended and cued formats. The children had a significantly more sophisticated understanding of television advertising compared to non-traditional formats. Even the eldest children failed to recognize the persuasive intent of the non-traditional techniques.

Another study, conducted on college students, was performed by Yang et al. (2006). The study examined the effect of brand names placed in video games on college students' memory. Both implicit and explicit memory for brands placed in two sports computer games were tested using a word-fragment test and a recognition task, respectively. The results indicated that college students had low levels of explicit memory (recognition test) for the brands, but they showed implicit memory (word-fragment test) for the brand names placed in the video games (Yang et al., 2006).

A Hungarian study on advergames underlines, that advergames are just as effective in Hungary than anywhere else worldwide. A study by Hofmeister-Tóth and Nagy (2011) focused on understanding the differences and similarities between webpages containing advergames relevant to children in Hungary. The content analysis of food-related advergames revealed several components governed by four major codes: type, brand, prize, and special features. Similarly to online advertisements, advergames use many of the same techniques as television commercials, and consequently have similar effects. These games feature operant learning theories, as a result children may win prizes through playing, which leads to the development of emotional bondage to companies. In Hungary

this was especially true for Chio (chips), Milkaland (chocolate), and Turo Rudi (sweet dairy product). Furthermore, children like playing these games, this associates positive feelings with the brands played, this relates to classical conditional learning theory. Second, children can also personify their characters creating a more comfortable learning environment, most games analysed used this technique to attract children also tightening emotional bonds by the classical and operant learning mechanisms, later transforming to loyalty (Hofmeister-Tóth and Nagy, 2011).

2.3.3.5 Advertisings influence on children

As discussed previously, children are exposed to a wide range of advertising through the media, thus it is vital to grasp the ways children process the various content exposed to them on a daily basis in order to understand how this might affect their consumer behaviour as well as their eating practices. The literature regarding advertisements influence on pre-school aged children concentrates on several key areas: children's ability to discriminate between programming and advertising, their understanding of advertising intent as well as deception in advertising and their use of cognitive defences against advertising. (Hastings et al., 2003). The following chapter will summarize these key ideas. In the child and advertising literature, advertising literacy is generally defined as conceptual knowledge of advertising. Seven knowledge components of advertising literacy can be identified: (1) recognition of advertising—differentiating advertising from other media content (e.g., television programs and Web content); (2) recognition of advertising's source—understanding who pays for advertising messages; (3) perception of intended audience—understanding the concept of audience targeting and segmentation; (4) understanding advertising's selling intent—understanding that advertising tries to sell products; (5) understanding advertising's persuasive intent—understanding that advertising attempts to influence consumers' behaviour by changing their mental states, for instance their attitudes and cognitions about a product; (6) understanding advertiser's persuasive tactics—understanding specific strategies used by advertisers to enhance and idealize the product; (7) understanding of advertising's bias—being aware of discrepancies between the advertised and the actual product (Rozendaal et al., 2011).

The child's ability to distinguish between an advertisement and television program has been a vastly studied, yet remains a highly contradicting area as children's awareness of advertising takes years to evolve. Further, children can often indicate how the program is different from the advertisement but they cannot describe why. Leading back to two stages in the understanding of children. The first stage is when children identify an advertisement. The second stage is when children actually realise, that an advertisement has persuasive intent (Blades, Oates and Li, 2013). In a study, Ward found kindergarten children exhibited confusion and judged the relationship between commercials and reality based on coincidental reasoning or affect (Ward, Wackman and Wartella 1977). Stephens, Stutts, and Burdick found age was significantly associated with ability to distinguish between programming and commercials. Only 17 percent of the 5 year olds in the segment with no commercials viewed, correctly identified the non-animated programming (Stephens, Stutts and Burdick, 1982). As mentioned in the television sub-chapter, Levin, Petros and Petrella (1982), found that the ability to identify ad and program segments becomes substantial by age 5 already. In addition, according to Ali et al., (2009) children can differentiate advertisements from television programmes by about the age of 5. However, children can only be said to understand the persuasive intent of advertising when they can explain, that the purpose of an advertisement is to get the viewer to purchase the product that is being promoted (Blades, Oates and Li, 2013). It also has to be noted, that previous research has mainly investigated television advertisings influence on children, while very little attention has been given to advertisements in other media such as the internet. Even though the internet has become a vastly important channel for marketing to children. In their study on young children's ability to recognize advertisements in web page designs, Ali et al. (2009) found that 6 year old children recognized a quarter of the advertisements, 8 year olds recognized half the advertisements, and 10 – 12 year olds recognized about three-quarters (Ali et al., 2009).

The child's ability to recognize advertising and understand its selling intent is the second field that has been studied in great depth (Wright, Friestad and Boush, 2005). However, especially in this field studies have yielded inconsistent results regarding at what the age children understand the intent of advertising. One explanation lies in the conceptual treatment of selling and persuasive intent (Kunkel, 2010). Studies that investigated the children's understanding of advertisements selling intent consistently found, that more than three quarter of all children understood advertising's selling intent around the age of

eight (Roberts and Bachen, 1981; Robertson and Rossiter, 1974; Mallalieu, Palan and Lacznia, 2005; Wright, Friestad and Boush, 2005; Calvert, 2008). In contrast, the studies that measured children's more sophisticated understanding of advertising's persuasive intent showed, that children develop the understanding of the persuasive advertising intent much later than the understanding advertisements selling intent. Such as Rozendaal, Buijzen and Valkenburg (2010), who found that it was only by the age of 11 that three-quarter of all children could articulate the persuasive intent of advertising after exposure to a commercial message. Suggesting that it is easier for children to understand that advertisers try to change their behaviour (selling intent) than to understand that they try to change their mental states (persuasive intent). Oates et al. (2003) explored the understanding of television advertising using focus groups. None of the 6 year olds, a minority of the 8 year olds could express a clear understanding of the persuasive nature of advertising. Thus, the children's understanding of the persuasive intent of television advertising is less well developed than previously thought, challenging current marketing perspectives (Oates, 2003). A similar result was found by Levin, Petros and Petrella (1982), who tested the ability of 3-5 year old children to differentiate between advertisement and program segments. The study concluded that the ability only becomes substantial by the age of 5.

Buijzen, Van Reijmersdal and Owen (2010) studied the way young people process commercialized media content and as a result created the PCMC Model. In their model, Buijzen Van Reijmersdal and Owen (2010) highlight three levels of persuasion processing, systematic, heuristic, and automatic persuasion processing. The authors highlight, that each may lead to attitude formation, which may affect consumer behaviour. However, in early childhood, children lack the necessary information-processing abilities (such as explicit memory storage and retrieval) and market-related experience to process a persuasive message elaborately, thus are generally unaware of advertisements persuasive intent. This renders systematic and heuristic processing less likely, thus children are more influenced by the automatic process. The paper then takes the model further by connecting the limited capacity model of mediated message processing (LCMP) introduced by Lang (2000) to the triple-level process model by comparing the possible ratios between resources allocated (RA) and the resources required (RR) by the message (Buijzen, Van Reijmersdal and Owen, 2010).

Finally, the cognitive effect of children to advertisement is also an important issue. At around the age of 8, there is evidence that children are beginning to respond to advertising in a more sophisticated way. At this stage, they start to evaluate and consider the messages to which they are exposed and are capable of responding to them in a more mature and informed way (John 1999). Prior to this age, children demonstrate very little ability to accurately judge and critically reflect upon commercial messages. Children later use their knowledge of advertisements as some form of ‘cognitive defence.’ Children at an earlier stage of development may therefore be more vulnerable to commercial influence (Hastings et al., 2003). Rozendaal et al. (2011) argue, that due to the affect-based nature of contemporary advertising, children mainly process advertising under conditions of low elaboration and are therefore not likely to use their advertising knowledge as a critical defence. Literature on cognitive development also claims, that children's ability to use advertising knowledge as a defence is limited by their immature executive functioning and emotion regulation abilities. Due to this, two dimensions need to be taken into account: advertising literacy performance, which takes into account the actual use of conceptual advertising knowledge, and attitudinal advertising literacy, which includes low-effort, attitudinal mechanisms that can function as a defence under conditions of low elaboration (Rozendaal et al., 2011).

Advertisers also use persuasive techniques to appeal to children and young people (such as the use of appeals, promotional characters and giveaways) (Committee on Communications, 2006), these techniques affect the popularity of the advert with children (Nash, Pine and Messer, 2009). Commercials that are designed to attract and hold children's attention are characterized by lively action, sound effects, and loud music. Audio features are particularly important in gaining children's attention. Audio features have more recruiting power than visual features because interesting sounds can get children who are not looking at the television screen to direct their visual attention to it. These findings are consistent with Piaget's insight that young children are especially focused on the attention-getting perceptual qualities of presentations (Calvert, 2008). Children naturally focus their attention on techniques such as animation and visual effects, and emotional appeals distract children from other aspects of adverts for example nutritional disclaimers or product information (Wicks et al., 2009).

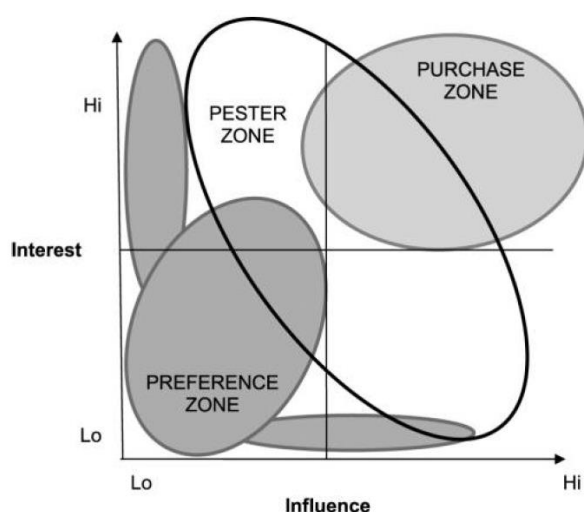
Further research on the way advertisement affects children found, that children (at the age of 4) preferred low-quality products bearing a familiar character's image over high-quality products without a character image up to 74% of the time (whereas control groups preferred the low-quality products less than 6% of the time when they did not include a character image). On a personal note, I conducted this test with the images from the paper with my three year old son out of curiosity (different from the one in the paper), and he also preferred the low-quality products with the character images. The findings suggest that children are vastly influenced by familiar characters encountered in the media, furthermore they are clouding their judgments about products (Danovitch and Mills, 2014). The characters in these advertisements are meant to get the children's attention and give them memory cues for certain products (Neeley and Schumann, 2004). This was also underlined by Connor (2006), who found that brand recognition is enhanced in young children when a cartoon character is used in advertising or on packaging (Connor, 2006). Positive feelings are also evoked during exposure to attractive animated characters (as discussed in the previous chapter), lively music and bright colours make children click on, or pay more attention to advertised products. This on the other hand can help shape children's brand attitudes without them knowing (MacKenzie, Lutz and Belch, 1986; Moore and Rideout, 2007).

Furthermore, exposure to commercial messages also have behavioural effects on children, such as product requests. Researchers have found that repetition, in particular, increases children's requests for, and purchases of, specific food, beverage, and toy products (Calvert, 2008). The study of Galst and White (1976) underlined this. They measured 3-11 year-old children's exposure to advertisements and to specific advertisements in their laboratory. The children then shopped in a mock grocery store with a parent. Children who were exposed to more overall advertisements at home and who were most attentive to advertisements in the laboratory setting made the most requests for the advertised products (Galst and White, 1976). These requests are furthermore prone to parent-child conflict (Calvert, 2008). A study by Hofmeister-Tóth and Malota (2000) showed that the advertisements demand increasing character, causes 1.5 percent of the daily, and 5-6 percent of the weekly problems of Hungarian families (Hofmeister-Tóth and Malota, 2000).

Walia Sharma and Dasgupta (2009) introduced the concept of zones of influence in children. Depending on the degree of interest and the level of influence children have for

various product categories, three zones of influence can be defined (see Figure 19). The preference zone, the pester zone and the purchase zone. In the preference zone, parents are the initiators, the decision makers and purchasers, but they can consider the children's preferences. The products in this zone will usually be for adult or family consumption, such as soap. While buying soap the mother will keep in mind the suitability for the child. In the pester zone, parents are the decision makers and purchasers but children have strong influencing power. The products in this zone are for children or family consumption, where parents are less involved. This includes expensive items like video games or apparel, as well as less expensive items which are undesirable for parents. In the purchase zone, parents may be the purchasers whereas children are the decision makers. Influence is strongest in this zone because the children play decision-making roles. This zone includes products for children's individual consumption that are typically of low value like candy, soft drinks and small toys (Walia Sharma and Dasgupta, 2009).

Figure 19: Zones of influence in marketing to children



Source: Walia Sharma and Dasgupta (2009), page 182

2.3.3.6 Advertising influence on food choices

Television is still the primary medium for food and drink advertising globally (Eagle et al., 2004; Story and French, 2004; Kelly et al., 2010; Landon, 2013; Whalen et al., 2017). Traditional marketing techniques in television commercials include repetition, branded characters, catchy and interesting production features, celebrity endorsements, and premiums (free merchandise that accompanies a product) (Calvert, 2008). The impact of

television food advertising on food intake in children has been the focus of numerous research papers over the last four decades (Boyland and Whalen, 2015). In 2016, over 20,300 food, beverage, and restaurant companies spent approximately \$13,5 billion in advertising on all media. In the US children saw an average of 10-11 television advertisements per day related to foods in 2016. This adds up to 4,000 advertisements that year (Rudd Center, 2017). According to the CFBAI criteria, in 2009, 48% of food advertisements viewed by pre-schoolers and 45% of advertisements viewed by children aged 6–11 were child-directed (Harris et al., 2013), this is summarized by the table below (Table 2).

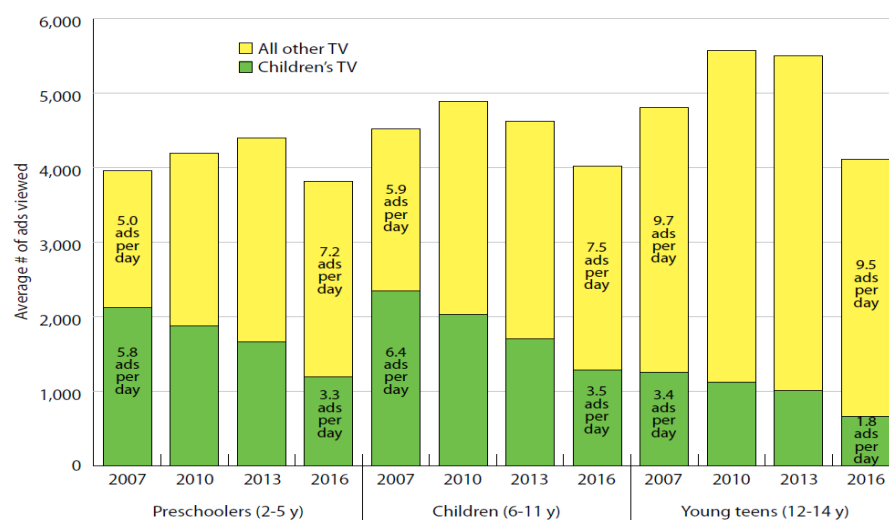
Table 2: Food advertisements viewed by children aged 2–11 years in 2009

Food category	All programs Ads viewed	Child-audience share					
		$\geq 35\%^a$		$\geq 20\%$		$\geq 20\%$ or $\geq 100,000$ <i>n</i>	
		Ads viewed	% of total	Ads viewed	% of total	Ads viewed	% of total
Fast-food restaurants	1018	408	40	465	46	685	67
Other restaurants	460	237	51	252	55	335	73
Breakfast cereals	702	560	80	584	83	626	89
Prepared foods and meals	354	157	44	180	51	239	67
Snack foods	327	181	55	199	61	243	74
Candy	281	100	36	129	46	188	67
Dairy products	253	153	61	163	65	193	76
Fruit juice and noncarbonated beverages	240	71	30	90	37	142	59
Baked goods	69	3	4	12	17	32	46
Carbonated beverages	51	1	2	5	11	24	47
Frozen and chilled desserts	18	6	34	7	42	11	63
All others	406	82	20	113	28	211	52

Source: (Harris et al., 2013) using Nielsen data from January 1 to December 31, 2009.

Harris et al. (2013) compares how the amount of food-related advertisement viewed by children changed over the years. Figure 20. clearly shows that even pre-schoolers watch increasingly more food advertisements on non-children channels, while ten years ago, the ratio was about half, nowadays almost two-thirds of the food adverts are watched on non-child channels by children.

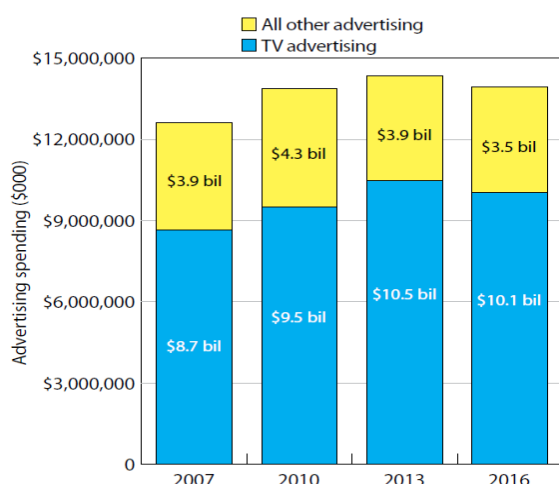
Figure 20: Changes in food-related advertisements viewed on children's and other television channels.



Source: Rudd center (2017)

Figure 21. shows the changes in food advertisement spending in the last 10 years. Both overall and television advertisement spending increased compared to 10 years ago, however there is a slight decrease in both types of advertisement compared to 2013, when spending peaked.

Figure 21: Changes in advertising spending by food, beverage and restaurant companies



Source: Rudd center (2017).

A paper that compared the television food advertising to children in several countries found, that of the 68462 advertisements identified, 18% were for food. Overall, food was the second most frequently advertised product, after channel promotions. The overall rate

of food advertising across the sample was 5 food advertisements per hour per channel. Greece had the highest rate of food advertising and Brazil had the lowest. The most frequently advertised food groups were dairy products (17%) fast-food restaurant meals (12%), chocolate (12%), as well as spreads and sauces (8%) (Kelly et. al, 2010).

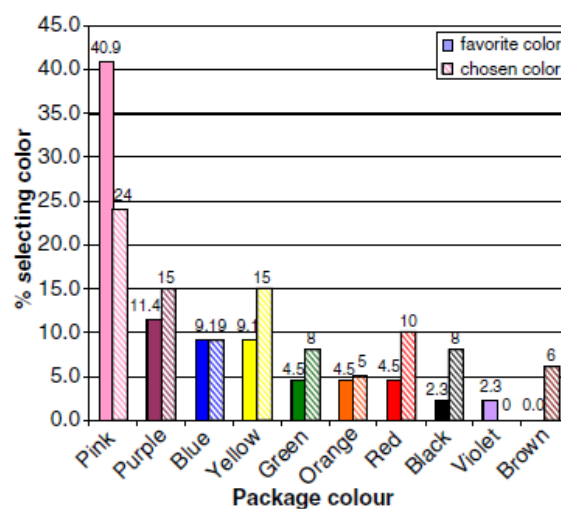
There is plenty of evidence that children notice and enjoy food promotion. However, establishing whether this actually influences them is a complex problem (Hastings et al., 2003). Hastings et al., (2003) reported that these effects operate at both brand (e.g. which cereal) and category level (e.g. chocolate versus fruit). Themes of fun and fantasy are commonly used to promote certain foods to children, pushing back the health and nutrition aspect (Hastings et al., 2003). Six techniques are commonly employed by food companies to market their products: television advertising, in-school marketing, sponsorship, product placement, internet marketing including advergames and sales promotions on food packaging (Hawkes, 2004). Children's food promotion is dominated by television advertising, and the great majority of this promotes the so-called 'Big Four' of breakfast cereals, soft-drinks, confectionary and snacks. In the last ten years advertising for fast food outlets has rapidly increased, turning the 'Big Four' into the 'Big Five' (Hastings et al., 2003). Moore (2006) identified all the foods advertised to children in the media, using the Competitive Media Reports data from 1999–2003. 12 food categories were identified: (1) breads and pastries, (2) candy and gum, (3) breakfast cereals, (4) cookies and crackers, (5) fruit juices and other non-carbonated drinks, (6) ice cream, (7) peanut butter and jelly, (8) prepared foods, (9) restaurants, (10) salty snacks, (11) carbonated soft drinks, and (12) other snacks (e.g., yogurt, fruit snacks, granola bars).

Food is the most frequently advertised product category on children's television program (Fiates, Amboni and Teixeira, 2008a), thus it is essential to investigate the influence on advertisement as well, as a high exposure to such advertisements can change the eating behaviours of children. Furthermore, food advertising, according to research almost completely promotes high-fat, sugar and salty foods (Kelly et al., 2010; Powell et al., 2011; Boyland et al., 2016). Branding is a vital feature of advertising, especially for children. The majority of child-oriented food advertisements take a branding approach (Connor, 2006). Food is one of the most highly branded items, as more than 80% of US grocery items are branded, leading to major advertising campaigns. Food manufacturers carry out advertising activity with the aim of building brand awareness and brand loyalty,

as brand preference influences purchase behaviour (Story and French, 2004). Furthermore, research on brand recognition in preschool children suggests that even 3 to 4 year olds are able to identify brands of fast food chains and snacks (Derscheid, Kwon and Fang, 1996).

A logo recognition test by Borzekowski and Pires (2018) conducted in six different countries of young children's media exposure, logo recognition and dietary preferences found, that logo recognition varied according to demographic characteristics. The child's sex was not associated with the ability to identify food or beverage logos, elder children were significantly better at logo recognition. There was no significant difference between rural and urban children regarding logo recognition. In Brazil, Nigeria, and Pakistan, children from urban areas could identify more logos than children from rural areas, the reverse was true in China and India. Children's capability to identify logos varied with parents' education level. Those children, whose parents had the highest education, were better at identifying logos. In Brazil, Nigeria and Russia, higher parental education was associated with greater logo recognition. Interestingly, in China, higher parent education was associated with lower logo recognition. Those children with higher parent education preferred more international foods and beverages, the only exception being China. Still significant, media exposure had a less strong influence on preferences than logo recognition (Borzekowski and Pires, 2018).

Figure 22. Comparing children's favourite colour and their actual colour selection



Source: Marshall, Stuart and Bell, 2006

Packaging can also be claimed as a part of the advertising process to children that might have an impact on their selection choices. Thus, Marshall, Stuart and Bell (2006) looked into the role of packaging colour in product selection among pre-schoolers, by age and gender, across three product categories: cereals, biscuits and drinks. The results showed a high correlation between favourite colour and choice of product across the total sample, with lower correlations for individuals. Younger children were more likely to select colours that matched their own preferences (Marshall, Stuart and Bell, 2006). Figure 22. above shows the findings of Marshall, Stuart and Bell (2006) compared with all other colours, pink was most frequently stated to be a child's favourite colour and this is also reflected in the choice of package. Children aged 4 had a lower preference for pink and a higher preference for yellow, compared with children aged 3 or 5. The older children were more likely to select darker colours, compared to the younger children. McNeal and Ji (2003) found that when children select the background colours of cereal packages they tend to choose colours that equated with actual products in 85 percent of cases with yellow, red and blue being the most popular. When more than one colour was selected, it tended to be warmer colours such as red, yellow and orange as opposed to cooler colours such as blue, green and purple (McNeal and Ji, 2003).

In 2012, Ferguson, Muñoz and Medrano examined the way advertising influences young children's food choices and the way parental influence might affect these. Children were assigned to watch one of two commercials, promoting McDonald's food products. These commercials were embedded in cartoon programs. Half the children were exposed to a commercial featuring a relatively healthy food item, while the rest were exposed to an unhealthy food item. Afterwards, a research assistant approached the children with the pictures of the two food items and asked each child to select a coupon for one item. The results suggest that advertising influences on children's food choices can be considerable, whereas parental influence only has a small moderating influence on advertisements (Ferguson, Muñoz and Medrano, 2012). Another paper focusing on the way child-targeted television advertisements affect the consumption of cereals high in sugar found, the number of high-sugar breakfast cereal brands children consumed was positively associated with their exposure to child-targeted high-sugar breakfast cereal advertisements. As a matter of fact, children consumed 14% more high-sugar breakfast cereal brands for every 10 high-sugar breakfast cereal advertisement seen among preschool-aged children (Longacre et al., 2017).

Mothers' perceptions on the negative impact on television food advertisements on children's food choices has also been examined previously by Yu in 2012. The results of the study concluded, most mothers thought there were too many food advertisements in television targeting children. The mothers also indicated that the advertisements encourage unhealthy eating habits in their children, which leads to nagging behaviour, which eventually may cause parents to purchase unnecessary food products. The mothers in the study claimed, that advertisements often fool children by using tricks and gimmicks. At the same time, the author highlights that negative attitudes from the mothers may have been influenced by the numerous media reports and studies indicating the negative impact of food advertising on children. In addition, the mothers disagreed that food advertising aimed at their children was the most important influence on their children's eating habits (Yu, 2012).

In a further meta analysis Hastings et al. (2003) found 34 studies that addressed the issue of the nature of food promotions to children. A broad range of creative strategies were examined, the main method employed was content analysis. The use of animation techniques in television food adverts was found to be particularly strongly associated with children's food adverts in comparison to non-food adverts. Overall, the creative appeals in children's food advertising were found to concentrate on 'fun' and 'taste', rather than on health or nutrition. The dominance of animation underlines this tendency. Fast-food advertising, which has become more prominent in recent years, tends not to describe the product advertised and focuses on the experience of the meal and the brand. (Hastings et al., 2003). Also, another comprehensive systematic review shows, that food promotions have a direct effect on children's eating behaviour (Cairns et al., 2013).

2.3.3.7 Obesity and the media

The topic of the present dissertation is essential as the prevalence of overweight and obesity among children is rising in the European region (Jackson-Leach and Lobstein, 2006). Whereas weight problems that arise in the first years of life tend to persist. Weight problems in childhood and adolescence are very common in Western countries with overweight rates estimated at 17-25% in West-Europe, Australia, and the United States (Jansen et al., 2012).

The role of food marketing in the development of obesity in children is of great concern, as children are preferably targeted by marketers in the food industry. The main reason for this is as already discussed, they are the future adult consumers, if their brand loyalty is established at a young age, it can be greatly financially rewarding for certain food companies (Story and French, 2004) but can potentially have negative outcomes for the health of the children on the long run. According to Harrison et al. (2016) children's food brand recognition predicts health-related outcomes such as preference for unhealthy foods. Whilst the level of food brand recognition is strongly affected by the media (Borzekowski and Robinson, 2001). Children who view more television tend to be more familiar with brands associated with unhealthy foods (Harrison, 2005). Harrison et al.'s (2016) study of the link between BMI and food brand recognition found, that food brand recognition, but not recall, independently predicted pre-schooler BMI percentile even when household income, parent healthy eating guidance, child commercial TV viewing, child dietary intake, child age, child vocabulary and other family demographic variables were controlled. Likewise, research involving pre-schoolers exclusively showed that food brand knowledge predicted child BMI, even controlling gender, age, and television viewing (Cornwell, McAlister and Polmear-Swendris, 2014). Forman et al. (2009) also studied the effect of branding on energy intake among overweight and not overweight 4-6-year-olds. Overweight children in the branded condition consumed the most kcal, but not overweight children in the branded condition consumed more kcal than not-overweight and overweight children in the unbranded condition.

In the past, several studies have linked high television consumption to altering children's eating behaviours (Hertzler and Frary, 1999), but also to obesity. Both Lumeng et al. (2006) and Steffen et al. (2009) found that a high television exposure (over two hours) is positively associated to an increased risk of becoming overweight. The effect of television advertisements for foods on food consumption in children was also tested by Halford et al. in 2004. All three groups of children (lean, overweight and obese) ate significantly more after food advertisements were shown to them. The obese children ate the greatest amount, followed by the overweight children, in the condition in which the children were exposed to non-food advertisements. Their study clearly underlined, that exposure to food advertisements promotes food consumption. At the same time, a study in Japan could not verify these results (Sasaki et al., 2010) the paper claims the difference in social environment is to blame.

Longitudinal research also determined that there is a direct relationship between the time spent watching television and obesity (Crespo et al. 2001; Proctor et al., 2003; Cox et al., 2012 and Twarog et al. 2015). In a meta-analysis of 8,718 retrieved papers, 23 papers showed that there is moderate evidence for a positive association between television viewing and overweight (te Velde et al., 2012). Furthermore Gortmaker et al. (1996) found that every additional hour spent watching television increased obesity by 2%. In addition, exposure to food advertising increased food intake in all children. This finding was later replicated in 5–7 year old children (Halford et al., 2007). A further study demonstrated that, this increase in intake was largest in the obese children (Halford et al., 2008). Additionally, watching TV has been found to decrease children's awareness of food consumption (often resulting in greater food intake) and encourages the development of non-hungry eating habits (Francis and Birch, 2006). Furthermore, Mendoza Zimmerman and Christaki (2007) also claim, that watching more than two hours of television or videos, leads to a higher risk of being overweight in preschool aged children (Mendoza, Zimmerman and Christakis, 2007). To examine whether televised food commercials influence preschool children's food preferences. Children exposed to the videotape with embedded commercials were significantly more likely to choose the advertised food related items than children who saw the same videotape without commercials (Borzekowski and Robinson, 2001). Thus, children have become an important market of influencers; they give direction to daily household purchases, such as snacks, sweets, and breakfast products. Thus, it is vital, to research preschool children behaviour but also their paths as consumers as they are a future market and are known to develop brand loyalty at an early age, and that favourable attitudes toward brands last well into adulthood (McNeal, 1992).

A further interesting study by Dalton et al. (2017) analysed the how child-targeted fast food advertisement exposure on television affected preschool children's fast food intake. The study was the first to demonstrate a significant positive association between exposure to child-targeted fast food TV advertising and fast food consumption among children of pre-school age in a non-experimental setting. Children's fast food consumption were significantly associated with their ad exposure, but not overall hours of TV viewing or other screen time. The study demonstrates that food-marketing influences observed in highly controlled, experimental settings with children are consistent with associations

observed in uncontrolled, non-experimental settings with greater external validity, and that this is the case even for pre-school children (Dalton et al., 2017). Within the eating behaviours of children in connotation to television consumption, snacking has been a widely discussed issue. One of the first studies in this field, was conducted by Gorn and Goldberg (1982). Preschool aged children were exposed to 2 weeks of daily televised food and beverage messages. Children who viewed candy commercials picked significantly more candy over fruit. Even though removing the candy commercials encouraged the selection of fruit as did exposing the children to fruit commercials or nutritional public service announcements (Gorn and Goldberg, 1982). Ouwens, Cebolla and Van Strien found that television-viewing was positively associated with snacking, external eating and emotional eating. Furthermore, emotional eating significantly moderated the relation between television viewing and snacking. One risk factor for acquirement of emotional eating may be television viewing, because television viewing has been associated with negative feelings, and with snacking (Ouwens, Cebolla and Van Strien, 2012).

Finally, a Mexican study conducted in 2011 aimed to explore what key obesity determinants exist of preschool children. The study found several barriers to healthful eating. Despite the fact that food advertisement was a dominant factor, it has to be noted, that there are several other important factors to consider such as parental time constraints, permissive feeding styles, unhealthful food preparation practices, lack of knowledge about nutrition and high availability of unhealthful foods in public places (Rodriguez-Oliveros et al., 2011). On a personal note, while I do agree with the findings of the study above, that there are other factors linked to obesity of children other than food advertisement. Most studies of the current subchapter strongly underline, that obesity is directly linked to food advertisements and therefore food brand recognition. Due to this, it is vital to understand the ratio of influence food advertisements in specific have on children, in order to better protect them from these influential techniques in the future and potentially help fight childhood obesity.

2.3.4 In-store influence on children




























As mentioned in previous chapters, changing lifestyles of families have increased the number of children accompanying their parents to store settings. When children do

accompany their parents to the stores they often tend to persuade them to buy the products they desire. Parents sometimes tend to encourage their children to participate in the purchase process with the intention to develop their rational buying behaviour. At the same time, parental denial for purchase requests can lead to tantrums among children (Wimalasiri, 2004). Income of parents also plays a role, wealthy parents tend to try and avoid conflict by buying products demanded by their children. These children usually showing more interest in the family purchase practices (Atkin, 1978). Similarly, children of working mothers and children with two working parents frequently visit stores with their parents as there is often no time frame when parents can go without their children. The more children visit these stores, the more they can recall and spot products displayed on shelves. The level of children's free movement in store settings, the extent to how they can reach certain products as well as stages of cognitive development, all influence in-store persuasion in the form of requests (Ebster, Wagner & Neumueller, 2009). From these requests, pestering has been observed as the most influential tactic implemented by children in store settings (Lenka and Vandana, 2015).

Supermarket shelves contain a vast amount of products that use children's favourite characters to market food directly to children. The reason for this is that when visual cues are provided in addition to brand names that are prior-associated in children's memory structures, children better remember the brand names. Although two cues (a picture and a colour) improve memory over the imposition of a single cue, extensive visual cues may overtax young children's processing abilities (Macklin, 1996). Chapman et al. (2006) aimed to describe the nature and amount of sales promotion used on food packaging in selected Australian supermarkets, with a special focus on the ones directed to children. The snack category had the greatest level of food promotion usage on a product. Several snacks not only used cartoon characters to promote their products but also offered toys as well as a chance to win within the scope of a competition. The products were mainly promoted through television, movie celebrities and cartoon characters. 82% of these promotions were for unhealthy foods (Chapman et al., 2006). As a matter of fact in 2004, US \$3 billion was spent on packaging designed specifically for children (Institute of Medicine of the National Academies, 2004). This is similarly the case in Hungary. The Figure below summarizes the various brand mascots used in Hungary currently (see Figure 23. below). Under the pictures the names of the various mascots can be found, whilst under the names, the company who uses the mascots can be found in bold. The

beverage and dairy category used by far the most mascots, interestingly candy hardly had any mascots. Bears are by far the most popular animal used by marketers.

Figure 23. Brand mascots used in Hungary

Beverages and Dairy	Candy	Children's meals	Cereals	Snacks
 Polar bear Coca Cola Company	 Milka cow Mondelez Company	 Ronald Mc Donald Mc Donalds	 Monkey Kellogg's company	 Mr. Pringles Pringles company
 Dino Danonino Danone Company	 Kinderino Ferrero	 Happy Mc Donalds	 Chocapic Nestlé	 Pom-Bar Maci Chio
 Nesquick Bunny Nesquick company	 Red and Yellow M&Ms characters M&Ms		 Buzz Nestlé	 Master Croc Chio
 Kubu Bear Maspeks Olympos kft.				
 Yippy bear Rauch	 Tim Zott	 Chipi Chipicao Chipita S.A.	 Chip the Wolf Nestlé	 Biosaurus McLLOYD'S
 Ac, Ti and Mel Actimel kids Danone	 Monti Zott		 Tony the Tiger Kellogs	 Dörmi bear Györi édes
 Nesquick Bunny Nesquick company			 Nesquick Bunny Nesquick company	 Chester Cheetah Chio

Source: Own construction

A qualitative study on 3-5-year-old children's relationships with logos, where children and their mothers walked through a local store found, that preschoolers do not necessarily know the brand names, however they often know the logo of the products instead. Children correctly pointed out various logos such as M&Ms. When asked by his mother what cereal they should purchase, a 3 year old boy asked for "Special K" by name. Another 3 year old boy was able to recognize a product via advertisement seen previously twice. The children also interacted with products by pointing, touching, and looking at them for a longer time period. Children also made non-verbal requests by picking up items. 17 different characters were recognized on food items, while 33 were identified by

name throughout the toy aisles. Those referred to by name included superheroes (e.g. Batman), preschool-focused characters (e.g. Dora), movie characters (e.g. Shrek), and dolls (e.g. Barbie). Parents also referred to products by the character pictured on it. For example, one mother replied, “OK. We’ll get Spongebob”, as she picked up a box for her five-year-old daughter (Kinsky and Bichard, 2011).

Carruth et al. (2000) believes that the consumer behaviours of preschool children indicate that products are selected on the basis of colour, characteristic and toys. A study was created aiming to determine the positive attributes of familiar food products as reported by preschool children and to assess their mothers' consumer practices. Most children selected one of the paired foods based on a single attribute (e.g., action figure or type of product). At 69 months, single attributes reported earlier changed (e.g., characters to taste). Findings indicate that most children were in the preoperational stage of development. They did not select foods using several attributes, which would indicate a higher level of cognition. For mothers, economic factors had the most influence on their consumer practices. Preschool children's food selections were influenced by a single attribute of the product/packaging at 60 and 69 months of age. Parents need information about preschoolers' single attribute selection process and to use that process to teach better food selection (Carruth et al., 2000).

2.4 Conceptual Framework

My goal is to create a model with practical applicability that examines the factors affecting the food consumer behaviour of children from several aspects and provides a comprehensive picture of this processes. The basic structure of the model (see Figure 24) is based on relevant models known from the literature, introduced in the previous theoretical section of the paper.

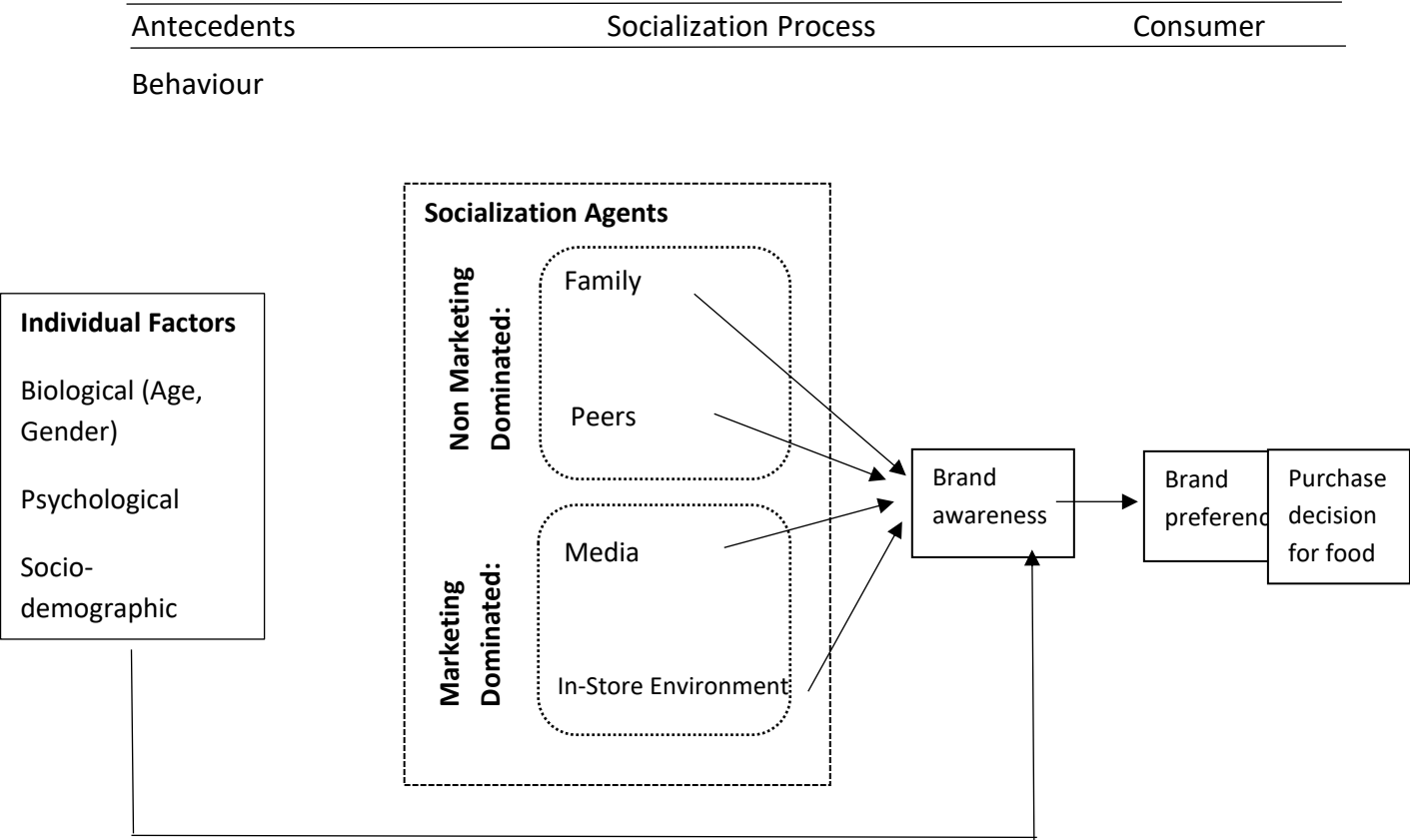
The conceptual framework's general structure is adapted from Moschis and Churchill's (1978) Conceptual model of Consumer Socialization. Originally the model splits the core components into antecedents, socialization processes and outcomes. For the current conceptual model, outcomes was altered to consumer behaviour as that is the specific outcome studied within the dissertation. However, while these core components are central to consumer socialization theory, the frameworks are flexible as to what specific variables that can be investigated within each of these components.

As the conceptual framework in Figure 24. indicates, besides environmental factors, various individual factors, which cannot be modified by the environment, influence consumer behaviour, these are the antecedents in the model. The individual factors in the framework derived from Steenkamp's (1997) model of consumer behaviour range from biological factors such as age (Ali et al., 2009; Blades, Oates and Li, 2013) to gender of the child (Marchi and Cohen 1990; Jacobi et al., 2003; Cooke and Wardle, 2005). Psychological factors such as personality (i.e exploratory buying behaviour), experience, mood and opinions (Pilgrim, 1957), as well as socio-demographic factors such as income, family size and education, employment status of mother (Ward, 1974; Moschis and Churchill, 1978; Gunter and Furnham, 1998; Steenkamp, 1997) are also part of the individual factors.

The socialization agents are derived from Lenka and Vandana's (2015) Socialization agents model. The original model consist of five different socialization agents; family, peers, television advertisements, retail stores and schools. In the current framework, television advertisements are replaced by the variable media, as there has been a shift from television advertisements to online advertising too, thus the term media covers both aspects as well as advergimes. The variable retail stores is also named differently using

the term in-store environments in the current conceptual framework as that incorporates not only retail but also grocery stores. Furthermore, the variable school was not adapted from the original model, as the variable peers covers all the children that pre-school children meet in their respective preschools as well as their friends outside of preschool. Instead, the two categories interpersonal and environmental are also substituted with the terms marketing dominated and non-marketing dominated. Finally, all socialization agents have influence on brand awareness, however in different proportions. Brand awareness then influences brand preference. This is similar to the conceptual model of Thjomoe (1995), for different routes to preference. All in all, the Figure below (see Figure 24) summarizes the various findings of the literature review and the numerous points mentioned above.

Figure 24: Conceptual framework: Factors affecting the food consumer behaviour of children.



Source: Own construction

2.4.1 Research Questions

Considering the conceptual framework above, the objective of my dissertation is to analyse in what steps pre-school children become consumers of their own and to evaluate what influences them the most out of the factors mentioned in the previous chapter. The consumer behaviour chapter discussed that Kotler and Armstrong's (2010) consumer purchases model is influenced strongly by cultural, social, personal and psychological characteristics. Although I strongly agree with Kotler and Armstrong's (2010) model, the literature above indicated that for children at such a young age not all of the factors are relevant. At the same time, some of the factors mentioned by Kotler and Armstrong (2010) are more dominant than others, especially when compared to adults. There are many possible explanations as to why certain brands might be more readily recognized by young children while other brands seem to escape their attention such as consumption frequency and various form of marketing directed to children.

Due to the fact, that the current dissertation primarily relies on qualitative methods, research questions were formulated instead of hypotheses. Thus, the first research question of my dissertation is namely that regarding pre-school aged children, the media consumption plays a large role in influencing children as consumers. If so, they should be integrated into the model regarding the influencing factors of consumer purchases.

Subsequently the following research problem can be stated:

1. *"In what ways does the media influence preschool children as consumer?"*

This question can be answered by primarily mapping the general media consumption of preschool children along with the overall consumption habits of these children. Once the consumption habits are discussed, the differences are analysed and compared through various primary studies in order to receive a general idea how exactly the media can influence preschool aged children.

Consequently, the second and third research questions within the media category relate to the frequency of media consumption and its effect on the brand awareness of the pre-school aged children.

1.1 “What is the relationship between media consumption of pre-school aged children and their brand awareness?”

1.2 “Does media consumption influence the brand preferences of pre-school aged children?”

At the same time the second and third research question is related to the cultural and social factors, as pre-school aged children mainly only socialize within their own family and with their pre-school friends and teachers. These two groups also are greatly influencing the child’s consumer behaviour. Thus, the third research question states:

2. “To what extent does the family influence the child’s food consumer behaviour?”

3. “To what extent do social surroundings such as peers influence the child’s food consumer behaviour?”

After clarifying what influences children primarily in terms of consumption, the dissertation aims to investigate furthermore how children evolve as consumers. How consciously are children deciding as consumers in today’s world and are they taken seriously as individual consumers at such a young age by their families?

3. Empirical research

3.1 The methodology of the empirical research

The dissertation will incorporate both qualitative and quantitative research techniques, as the examined subject will be children, thus qualitative studies are vital for an overall understanding of the issue. Popular qualitative research techniques are interviews, which are particularly useful when dealing with children. Children are less likely to use procedures as adults, for example, they are unlikely to elaborate certain in detail. It is therefore advisable to use non-verbal techniques when working with children. Non-verbal techniques are all forms of data collection in which children can express themselves in a symbolic way, such as children's drawings. To achieve these goals, it is often necessary to collect verbal data in the form of an interview, although this cannot serve as an exclusive source of data, but is complementary to the symbolic representations. Qualitative interviews with children need to meet certain aspects; beginning with the selection of children and ending with the use of special forms of communication through the arrangement of the interview situation (Ayaß and Bergmann, 2011).

Both qualitative and quantitative research will be conducted in Hungary, it is important to highlight this partially due to the difference in education, that children worldwide receive at this age. In Hungary children stay in kindergarten until the age of 6, sometimes even 7 if they are born after the 20th of August. Inevitably, starting school one or even two years later than children in other parts of the world effects the children's cognitive and social skills. This lag can even effect their eating behaviours, as children in schools are expected to eat in a more independent manner, they are not asked to try new foods or finish their plates.

A qualitative and quantitative pilot study was conducted in order to pre-test certain questions and to understand which issues need to be investigated in greater detail. Once, deeper insights were gained through the pilot studies the final questions were assembled for the interviews with the parents as well as the children. As in many cases, the consumer

himself does not know why he or she makes certain decisions (Szűcs, 2016), thus in-depth interviews can understand the complex decision-making process families face in their everyday lives. Especially the initial quantitative questionnaire helped clarify which aspects need to be discussed with the parents in further detail. Table 3. below, summarizes the methodology applied as well as the year conducted, sample size, participants, the literature the methodology was based on as well as the main topics covered.

Table 3: Summary of methodology applied throughout the dissertation

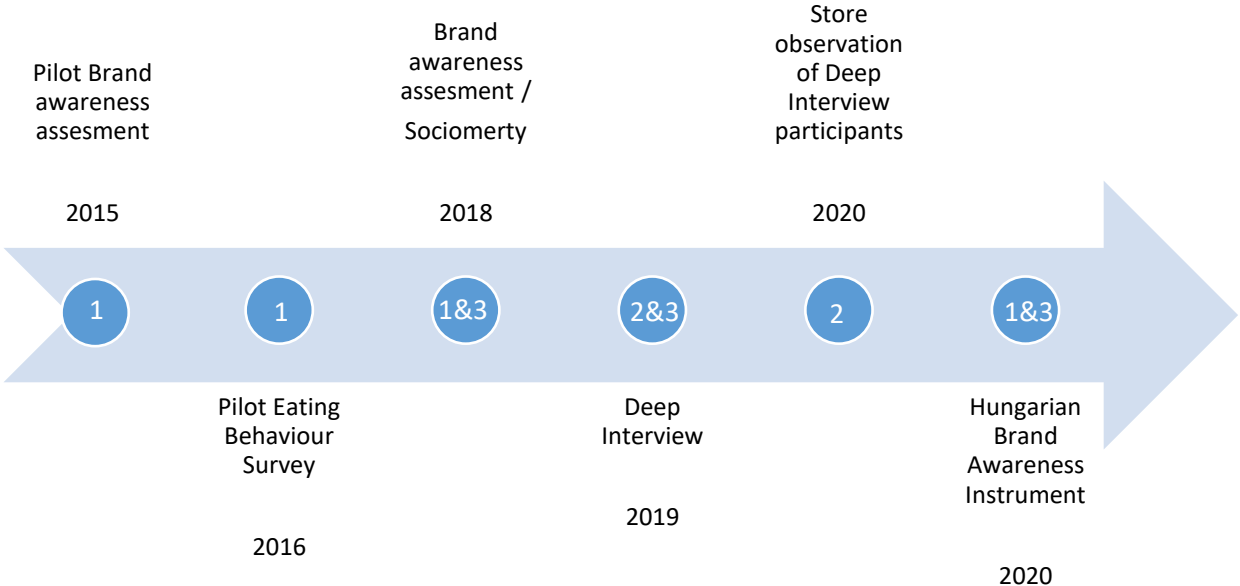
	YEAR	SAMPLE	PARTICIPANTS	BASED ON	TOPICS COVERED
PILOT BRAND AWARENESS ASSESSMENT	2015	N=20	Children ages 4-6	Forman et al. (2009) (Pine and Nash (2002)	<ul style="list-style-type: none"> • Brand awareness • Television consumption • Shopping habits • Brand request
PILOT EATING BEHAVIOUR SURVEY	2016	N=365	Parents of children age 3-7	Wardle et al. (2001)	<ul style="list-style-type: none"> • Eating behaviours • Allergies • Media consumption
BRAND AWARENESS ASSESSMENT AND SOCIOMERTY	2018	N=23	Children ages 6-7	Forman et al. (2009) Moreno, Jennings and Stockton (1943)	<ul style="list-style-type: none"> • Brand awareness • Media consumption • Shopping habits • Sociometry
DEEP INTERVIEWS	2019	N=15	Parents of children age 3-7		<ul style="list-style-type: none"> • Eating behaviours • Media consumption • Shopping habits • Brand preference
STORE OBSERVATION	2020	N=9	Parents of children age 3-7	Buijzen and Valkenburg, 2008; Gram, 2015; Page et al., 2018	<ul style="list-style-type: none"> • Shopping habits • Brand preference • Pester power
HUNGARIAN BRAND AWARENESS INSTRUMENT AND SOCIOMETRY	2020	N=60	Children ages 3-7	Forman et al. (2009) Turner et al. (2015)	<ul style="list-style-type: none"> • Brand awareness • Brand preference • Media Consumption • Sociometry

Source: Own construction

One of the main insights from the brand awareness pilot studies conducted was, that not only television, but also internet consumption of children needs to be looked at in more detail, furthermore, peer and family influence need to be tested too. Due to this the second

round of the brand awareness assessment not only included the internet consumption of children, but also a sociometry allowing to results to reflect peer influence too. This was then repeated once more in the final Hungarian Brand Awareness Instrument to increase sample size and validity. The pilot survey mainly focused on eating behaviours, therefore only media consumption and health related aspects could be compared to various eating behaviour approaches. In addition, the survey answers quickly made clear, that in order to understand the consumers true motives, a survey would not be sufficient and a qualitative approach had to be selected to continue the research. Thus, deep interviews were conducted with the parents of preschool aged children. As indicated in Figure 25., the interviews allowed to further investigate the second but also partially the third research question. The second research question was further supported by the in-store observation methodology. Finally, the Hungarian Brand Awareness Instrument was able to integrate the first and the final research question on peers, as it not only incorporated a sociometry, but also looked into the brand preference of children, an aspect which is found in the research questions, but was barely explored in the methodology so far.

Figure 25: Methodology timeline in contrast to research questions



Source: Own construction

3.2 Pilot study

3.2.1 Brand awareness assessment and interview

In order to receive an in-depth understanding about the way the media affects preschool children, data was collected from 20 preschool children in Budapest, in various preschools and then analysed through qualitative research techniques. The entire population of my investigation consists of children from Hungary between the ages of 4-6. From the 20 children participating 12 were boys and 8 were girls. In order to broaden the population of the study in terms of socio-economic background, private as well as public preschools were chosen as the locations for the study. Preschool directors served as gatekeepers in the current study. As a good existing relationship with several directors made eased the choice of institutions in which the studies were finally conducted. Three of the children went to private preschools and four to private bilingual preschools, the remaining 13 children visited public institutions. In terms of sampling strategies, the idea was to find extreme cases (Horváth and Mitev, 2015) of media consumption, ideally finding children with no television sets or with multiple types of media access (such as tablets and smartphones), in order to find a greater contrast between the children's development levels. It can be argued, that because preschools were selected, where existing relationships with gatekeepers existed, convenience-sampling strategy was applied (Horváth and Mitev, 2015). However, this is only partially the case, as adding public as well as private institutions to the sample using the maximum variety sampling (Horváth and Mitev, 2015), adds to the samples credibility, which would normally be lost in a convenience sample.

The parents of the children in the study gave their consent of their children participating in the study, that all materials gained could be used and published for research purposes. In general, during the interviews with the children, all ESOMAR guidelines for interviewing young children were followed. The ICC/ESOMAR International Code points out, for special care and precautions on the part of the researcher, concentrating on the ethical issues involved with this research branch and does not deal with the technical problems of such research (Esomar, 2009). The study was carried out in the preschool, this within a "protected environment" of the children, where the preschool teacher being

the person in authority had overall responsibility for the protection of the child. When requesting permission to carry out the interview, sufficient information was given to the parents to reach an adequately considered decision about participating in the study by explaining the subject and general nature of the interview. When carrying out interviews with children a responsible adult remained close at hand in the form of the preschool teacher while the interview was conducted.

Once the population for the study was defined, and institutions were designated, classrooms were recommended by the preschool directors that had children with the right age groups and teachers suitable to aid the study. The selection of the children within the classrooms was made primarily based on whose parents gave their consent of their children participating in the study and the willingness to answer questions regarding their media consumption themselves. The classroom teacher approached the parents about the possibility of being included in the study as the parents already knew and trusted them, therefore they also acted as gatekeepers in the current study. The second main role of the gatekeepers was with the aid of the reputational case selection (Miles, Huberman and Saldana, 2014), where the class teachers took on the role of experts and recommended certain children based on their background knowledge of them. As Barbara Kawulich (2004) suggests using outliers/extreme cases for testing or confirming findings, children who had an extreme or non-existing media consumption were also actively searched for and included in the study. As mentioned above, the sample was a purposive sample, in term of the preschools selected. Furthermore, it has to be noted in terms of the sampling frame, the demographics, specifically the age range of the children had to be reduced from 3-6 to 4-6 after the first set of interviews with the children. As three year olds had to be excluded from the sample, as none of the children were able to answer the logo test, as well as most of the questions.

In terms of establishing an adequate relationship with the participants, it is important when working with such a young age group, that the children and the interviewer get to know each other before the actual interview, in order to create a trusting atmosphere. For this, the interviewer spent several days with the children, in their various preschool groups before the actual interview was conducted. The literature suggests that the place of the data collection should be a familiar surrounding for the children; this is why the interviews were conducted in the kindergarten of the children. The literature further states (Kuhn, 2003) that the conversation should be as undisturbed as possible; this is why the

children were separated from their peers and interviewed during a time the others had different tasks to do and were still silent (such as the art sessions). The length of the conversation should depend on the child's ability and willingness to react on the narration evoking stimuli, while breaks should be taken in order not to expect too much of the child, this was also considered during the data collection phase, therefore some questions were altered or left out completely during conversations with certain children. It is vital that the interviewer is friendly, supportive, encouraging, patient, considerate, cautious, for this reason the interviews were conducted with the children sitting on their small sized tables and the interviewer sitting on the floor enabling optimal communication as the child could face the interviewer at their own level (Kuhn, 2003).

Firstly, a short interview was conducted with the children (for the interview guide please see Appendix 1.). These techniques were applied on the same day, making this one possible limitation of the study, as some children were not in the mood or too tired to draw a picture after the first two sections. The first few questions dealt with the television viewing habits of the children, followed by questions of their shopping habits, while the image recognition consisted of 13 logos, that the children were asked to name. This technique is similar to the brand awareness instrument developed by Forman et al. (2009) which is a logo-matching exercise.

The length of the interview is vital, as children with such a young age have very short concentration ability. In addition, several factors must also be taken into account, which are related to the age of the children. At preschool level, children do not know the time, consequently it is needless to ask them how much time they spend watching television (Lyle and Hoffman, 1971). Instead, one can ask them whether they watch television before or after kindergarten. It is vital to keep the children in their habitual, comfortable surroundings, hence the children were not recorded with cameras. In addition, instead of taking them to a separate room, they were interviewed within their classrooms, but separated from the group as in this age group the children highly influence each other. In order for them to focus on the questions asked. Having an unknown interviewer can also cause discomfort at this age, as a result the interviewer spent a few days with the children in their various preschools, prior to the interviews, and making sure the children do not feel they are talking to a stranger. Otherwise, the pre-school teacher would have had to conduct the interview. Another factor that has to be taken into account is that children in

this age group have different moods day by day, sometimes they refuse to answer certain questions, and therefore sometimes the contents of the questions have to be changed slightly. The first few questions dealt with the television viewing habits of the children, followed by questions of their shopping habits. In addition, the parents of the children also completed a brief questionnaire on their child's media consumption (Appendix 1.). The questionnaire only validated the children's daily and weekly television habits and the types of programs they viewed. The short parental questionnaire was used only to filter out children whose answers did not match those of their parents at all. This was clearly part of the sampling strategy as the aim was partially to find extreme cases as well, but also it was vital to filter out children who might not take the study seriously and gave random answers. As some children were not in the mood for talking to me and made up lots of answers, in terms of validity it was vital to take these children out of the sample. This section also aims to underline the results of Antalóczy, Pörcezi and Vaskuti (2012) as well as Ward (1977), testing aspects such as the general television viewing time and the preferred viewing genre.

The main incentive for these techniques was that the literature for the current topic underlined, that most studies in the past were studying children, yet lacking a children's point of view. Having a degree in preschool education, working on a daily basis with children and being a mother, I realized that children's thoughts and feelings are not necessarily included in studies about them as mostly their parents were interviewed. Furthermore, Heinzl's (1997) meta-analysis indicates, that partly-standardized and semi-standardized interviews as well as narrative interviews and psychoanalytic in-depth interviews are the most important forms of interviews for research with children. Hence, the semi-structured form was selected for this specific study, as the questions and topics were pre-prepared before the interview, yet leaving the possibility during the interview, to skip a question if the child's attention requires it. The interview questions were open, direct and as simple as possible. To save time, an introductory of the topic was not discussed with the children, so that they do not lose focus even faster. The interviews were transcribed and analysed via categorizing and connecting, whilst relating outcomes to theory. This was done by identifying reoccurring ideas and patterns in the data, linking them and comparing them to past literature.

In order to keep children's attention as long as possible, I gave them a task during the conversation. I showed them thirteen different logos and I asked them if they recognized it and to name the logo they saw. The "logo test" consisted of 13 different popular logos: Apple, Ariel, Barbie, Coca-Cola, Disney, Facebook, Fisher-Price, LEGO, McDonalds, Minimax, Pampers, Rovio and Volkswagen. In half of the cases, the logos were intentionally child-specific, such as the logos for different toy brands. At the same time, many brands were tested, that are advertised on children's channels, such as Pampers and McDonalds. Individual interviews took 10 minutes on average per child, but as children were usually playing during the interviews, they often lasted up to 20 minutes. The logos are depicted in the table below and categorized in food and beverage, toy related logos and other. The other category mainly contains brands used by adults, but also media related brand logos (see Table 4). The partial results of the logo test were published in the Journal of Marketing Management (Kásler, 2017a).

Table 4. Logos used in the logo test

Food and Beverages	Toys	Other
 Mc Donalds	 Rovio	 Volkswagen
	 Barbie	 Pampers
	 Fisher-Price	 Minimax (TV channel)
 Coca Cola	 Lego	 Facebook
	 Disney	 Ariel
		 Apple

Source: Own construction

3.2.2 Eating behaviour survey

A quantitative approach was also selected as part of the pilot study in the form of a survey. The survey consisted of general questions regarding the children's media consumption, their eating behaviour as well as possible food allergies together with demographic questions regarding the children and their parents. In the past, a number of psychometric

instruments have been developed in order to assess the eating behaviour in children, including the Modified Pelchat and Pliner Questionnaire (Pelchat and Pliner, 1986), the Oregon Research Institute's Children's Eating Behavior Inventory (Archer, Rosenbaum and Streiner, 1991), the Bob and Tom's Method of Assessing Nutrition (Babbitt et al., 1995), the Child Feeding Questionnaire (Birch et al., 2001), the Pre-schooler Feeding Questionnaire (Baughcum et al., 2001) and the Children's Eating Behaviour Questionnaire (Wardle et al., 2001a). Of which the latter is generally regarded as one of the most comprehensive instruments in assessing children's eating behaviour and therefore also selected for the survey of the current dissertation.

The Children's Eating Behaviour Questionnaire was developed and validated in the United Kingdom. It has been used for different research purposes; to examine the relationship between obesity, differences between siblings in terms of eating behaviour and maternal feeding practices (Carnell and Wardle, 2007; Farrow, Galloway and Fraser, 2009; Blissett, Haycraft and Farrow, 2010; Rodgers et al., 2013; Boyland and Halford, 2013). The relationship with the body mass index (Powers et al., 2006; Viana, Sinde and Saxton, 2008) to discover continuity in children's eating behaviours across time (Ashcroft et al., 2007) and to examine the relations between children's maternal feeding practices (Tomomi and Rie, 2011; Blissett, Haycraft and Farrow, 2010). The desire to drink has also been tested but mostly in relation to soft drink consumption (Sweetman, Wardle and Cooke, 2008). Whilst country specific comparisons have also been made in Portugal (Viana, Sinde and Saxton, 2008), Australia (Mallan et al., 2013) and Dutch (Sleddens, Kremers and Thijs, 2008) regions.

The Children's Eating Behaviour Questionnaire consists of eight scales. The scales food fussiness (FF) is defined as refusal of a considerable amount of acquainted foods as well as non-familiar foods. The scales emotional overeating (EOE) and emotional undereating (EUE) are considered as either an increase or a decrease of food intake due to a variety of negative emotions. The scales food responsiveness (FR) and enjoyment of food (EF) stand for food intake in response to environmental food cues. Desire to drink (DD) mirrors the longing of children to have drinks. Satiety responsiveness (SR) represents the capability of a child to reduce food intake after eating in order to control their energy intake and the scale slowness in eating (SE) is characterised by a decrease in eating rate due to the of lack of satisfaction and interest in food. Principal Components Analyses

showed that each scale had a single factor, that explained 50–84% of the variance, while an overall factor analysis verified the hypothesized scales (Wardle et al., 2001a).

The final questionnaire used for the dissertation consisted of 51 questions and can be found in the Appendix (see Appendix 2). The questionnaire was translated into Hungarian and then back into English to make sure that the translation was accurate. Prior to the online survey, a pilot version of the survey was tested, and questions were altered when necessary to improve clarity. The survey was conducted online in 2016 with parents whose children were between 3 and 7 years old. The sample of size N=365 was then analysed via SPSS.

Regarding the socio-demographic characteristics of the sample, 190 respondents lived in or around the capital of Hungary, the majority, 177 respondents claimed to have an “average” income, while the second most common income level was “good” (see Table 5).

Table 5: Selected demographic characteristics of the sample participating in the survey

Characteristics		Frequency	Percentage (N=365)
Gender	Boy	200	54,8
	Girl	165	45,2
	Total	365	100
Age	3	119	32,6
	4	74	20,3
	5	77	21,1
	6	58	15,9
	7	37	10,1
	Total	365	100
Family income	Poor	2	0,5
	Below average	14	3,8
	Average	177	48,5
	Good	116	31,8
	Very good	33	9,6
	Total	342	100
Region	Central Hungary	190	52,1
	(Budapest)		
	Northern Hungary	29	7,9
	North Downland	59	16,2
	Western Hungary	13	3,6
	South Downland	23	6,3
	South West Hungary	9	2,5
	Central Transdanubia	19	5,2
	Total	342	100

Source: Own construction













Only 16 respondents claimed to have a “below average” or “poor” income. The mean age of children was 4.51 years. The most common food allergy was lactose intolerance with affected 6.8% of the children in the sample. The average television viewing time for the children was “between 1-2 hours” daily. Conversely, the analysis method slightly differed from the original paper where the questionnaire was developed.

3.3 Qualitative Research

3.3.1 Sociometry

In order to find out, what other factors affect the children's consumer behaviour besides the media and family. A qualitative test for measuring social relationships was applied on a specific group of children in a selected public Hungarian kindergarten after conducting a similar brand awareness assessment as in the pilot study. The sociometry enables us to find out, which child is close to which other child. Then their brand preferences can be compared to see, how much friendships influence brand preferences. However, it has to be noted, that the main limitation with such sociometric methods is regarding the stability of choices for a given child on repeated assessments. In a review of sociometric tasks, Hymel (1983) concluded that young children's responses concerning specific peers often changed when the tests were repeated a few weeks apart, this depended on the child's mood or what interactions the child had with its peers previously (e.g., fights).

Table 6. Logos used in the logo test

Food and Beverages		Toys		Other	
	Kinder		Hello Kitty		Aldi
	Kubu		JátekBolt.hu		Spar
	Marsloakócska		Minecraft		
	Dörmi		Duplo		
			Play-Doh		
			Farm Heroes		

Source: Own construction

Similar to the brand awareness pilot study, data was collected from 23 preschool children in Budapest, Hungary, this time the study was conducted in one preschool class in order

to be able to assess the social relationships of the children. The participants of the study were 6-7 year old preschool children, of which 16 were boys and 7 were girls.

Firstly, a short interview was conducted with the children, however, this time not only television consumption but also internet consumption of the children was analysed. The length of the interview was still kept as short as possible, for the same reasons as in the pilot study. During data collection, the children were interviewed separately, face to face. The children were not recorded in order for them to focus on the questions asked and to keep them in their habitual, comfortable surroundings. Following the interview, a similar logo test was conducted as in the pilot study; however, the logos this time were specifically selected, to be logos that are actually advertised on- and offline. The 12 logos selected this time focused more on food and beverage as well as toy brands, the logos are depicted in the table below (see Table 6). The parents were also asked to fill out a small questionnaire of seven questions, which were mainly used to verify the children's answers given about their media consumption.

Finally, the children played the „postman” game, where each child was given three post cards with their own sign and their task was to place the post cards in their best friend's cubby. Following the game, the results were noted and a sociometric matrix was created. This approach was based Moreno, one of the founders of this methodology. In their paper Moreno, Jennings and Stockton apply a similar method to a class of school children, analysing their selections of friends (Moreno, Jennings and Stockton, 1943), the current experiment was slightly altered to fit preschool aged children's abilities, as they cannot read or write, their preschool signs were used instead of their written names.

3.3.2 Deep interviews

Following the pilot studies, especially in the course of the quantitative study, it became clear, that in order to receive an in-depth understanding about the ways various environmental factors affect preschool children, in-depth interviews had to be conducted with parents. 15 parents (N=15) of preschool aged (3-6 year old children) in various regions of Hungary were interviewed in 2019. The main reason for choosing this

methodology was, that when children are too young to provide reliable self-reports, it is necessary and common to use parent reports (Borgers, De Leeuw, & Hox, 2001). The entire population of the investigation consisted of parents who have children between the ages of 3-6 and live in Hungary. Prior to the interview, the participants were informed about the purpose of the research, why they were chosen as respondents as well as the expected duration of the interview. The parents gave their consent that all materials gained during the interview can be used and published for research purposes.

Each interview's time span varied between an hour and an hour and a half. In order to loosen up the initial tension that such an interview can create, the interviewer first took time to introduce the topic of the dissertation thoroughly as the interviewer often met the interviewee for the first time on the day of the interview, in order to create a trusting atmosphere. In order to make the conversation as undisturbed as possible, most interviews took place in the homes of the parents, in five cases this was not possible or the interviewee felt more comfortable with doing the interview in public, therefore in these cases the interviews were conducted in quiet cafés. The length of the conversation depended merely on the interviewee and their willingness to share information.

The in-depth interviews were semi-structured, primary, open questions. The questions and topics were pre-prepared before the interview, yet leaving the possibility during the interview, to skip a question if the participant had already answered it, probing by asking about certain questions in more detail and clarifying terms where required. The questions were formulated as simple as possible and structured into seven separate topics. Each topic was introduced in a few sentences. The first two sections specified the personal data of the parents and the children. This was followed by how equipped the family was in terms of media. The fourth topic discussed the eating habits of the children, while the fifth looked into the purchasing behaviour of the families. The sixth topic discussed the brand preferences of the family, the final section looked into the eating routines of the family in more detail (for the interview guide please see Appendix 3.).

In terms of sampling strategies, maximum-variety sampling was applied in order to adequately capture the heterogeneity in the population. This is a special kind of purposive sample that is suitable for a smaller sample size. In order to cover the entire Hungarian region, in the first stage, participants were selected so that at least one participant lived in one of the seven Hungarian regions. Due to this, the research relationship with the

research participants was initiated via Facebook. Facebook is full of ‘Mommy and Baby’ groups for various mothers in nearly all regions of Hungary. Depending on the size of the region, the sizes of these groups can range from 10-20 to a couple of thousand parents. Primarily the regions were selected and a call was posted inviting parents who are interested in participating in the interview to volunteer. Volunteers were asked to write down a couple of basic information about themselves such as their home address, number and age of children, marital status, medical issues of the children, in order to make the selection of the final participants easier. Once all the regions were covered, participants were selected further to make sure various income levels, family sizes, education levels and media usage were covered in the sample. For example, after all regions were covered by at least one participant, it became clear that all the participants interviewed so far had at least one university degree, therefore then participants were selected who had no higher education deliberately. A similar issue derived with family size, no larger families with more than two children were interviewed at first, thus once the regional and educational areas were covered, larger families were selected deliberately for further interviews. Similar to the pilot study, using outliers/extreme cases for testing or confirming findings was also applied, therefore parents whose children had an extreme or non-existing media consumption, or an extreme consumption habit due to medical purposes were also actively searched for and included in the study.

The sample was rather unbalanced in terms of gender with only two male participants. The average age was 33, whereas the oldest participant was 43 years old and the youngest a 24 year old mother of two. Two parents only had one child, while the largest family was a mother with six children (from two different fathers). When looking at the age and the gender of only the preschool aged children in the sample, 13 children in the sample were girls and 7 boys. The age of the children in the sample ranged between 3 and 6, the mean age being 4.2. One mother had identical twins, two four year old girls. 12 of the respondents were married, one respondent was divorced and lived alone with her daughter, while two respondents were not married to their partners (both of these respondents has children from multiple fathers). The income level of the parents was determined by the question; ‘What percentage of your monthly income do you spend on groceries’. Three respondents claimed they spend more than 50% of their monthly income, they were grouped in the low-income category (the highest percentage answer being 70%). At the same time, four respondents claimed to spend less than 25% of their

monthly income, they were grouped in the high-income household category (from these respondents, two claimed to spend less than 10%). The average answer to this question was 30%. Interestingly only three children visited private kindergartens, of which two were the twins. Attributes for all participants is presented in the table above (see Table 7).

Table 7. Attributes of participants using NVivo.

<i>Participants</i>	<i>Age</i>	<i>Age of child</i>	<i>Gender of child</i>	<i>Income</i>	<i>Region</i>	<i>Allergy</i>	<i>Education</i>	<i>Gender</i>	<i>Media consumption</i>	<i>Number of children</i>
1.	30-34	3	female	average income	Rural	no	secondary school	female	high media consumption	1
10.	35-40	4	female	high income	Urban	no	university	female	average media consumption	2
11.	30-34	4	male	low income	Urban	no	university	male	high media consumption	2
12.	35-40	6	male	high income	Urban	no	university	female	average media consumption	2
13.	35-40	3	female	average income	Rural	yes	secondary school	female	average media consumption	2
14.	under 30	3	male	average income	Rural	no	secondary school	female	high media consumption	2
15.	30-34	4	female	average income	Rural	yes	secondary school	female	low media consumption	3
2.	over 40	5	female	high income	Rural	no	university	male	low media consumption	3
3.	35-40	4	male	average income	Rural	no	university	female	low media consumption	4
4.	35-40	6	female	low income	Rural	no	primary school	female	high media consumption	6
5.	30-34	4	male	high income	Urban	no	university	female	high media consumption	2
6.	30-34	4	female	average income	Rural	yes	secondary school	female	average media consumption	2
7.	30-34	4	male	average income	Rural	no	university	female	average media consumption	2
8.	35-40	3	female	average income	Rural	no	university	female	high media consumption	1
9.	under 30	6	male	low income	Rural	no	primary school	female	high media consumption	2

Source: Own construction using NVivo

Interviews were audio-recorded with the respondent's permission, also a special permission form was signed by each participant. All the transcripts were entered into an NVivo database to facilitate coding and data management. The transcripts were coded using methods of constant comparison, an iterative process where data were reviewed and re-reviewed as new themes emerged. The results were first evaluated independently after transcribing each interview, then the key elements were determined that were able to provide a deeper understanding of the previously identified topics, in accordance with the interpretative methodology. The purpose of identifying these themes and factors was to build up a model, i.e. a conceptual framework explaining the influence that various factors discussed have on the consumer behaviour of preschool aged children. Moreover, participant attributes, such as socio-economic status and media consumption were cross-

linked with constructs and themes. Findings from the interviews were grouped into environmental factors that influence the purchase intentions and brand perception of children, which were subdivided into specific factors according to the literature used. Inclusion of factors was based on the frequency and specificity of the quotes related to the factor.

3.3.2.1 In-store observation

Following the deep interview's, the second pillar of the methodology consisted of an observation of the parents and children in a grocery store setting. This method is a popular tool to study how children influence their parents' consumption and vice versa (Thomas and Garland, 1993; O'Dougherty et al., 2006; Page et al., 2018). The in-store observation is particularly suitable for areas of research where people are asked to recall low-involvement, habitual behaviour. Especially within a grocery store setting, where participants are very unlikely to recall their consumer behaviour accurately being surrounded by thousands of products at a time (Page et al., 2018). As none of the papers previously focused solely on the age group in the current study, it was added as a second data collection technique to the deep interviews. It also further helps cancel out bias from the conducted interviews. The other advantage of using the deep interview participants for the observation rather than just simply observing shoppers (O'Dougherty et al., 2006) is that the relationship between adults and children was not known together with a vast amount of previous data of the subsequent families shopping routines. By doing so, a follow-up interview was also possible where necessary.

Out of the 15 interview respondents, 4 claimed they never take their children with them grocery shopping. They were excluded for the second section of the study. From the remaining 11 participants, two parents claimed they do not want to enter the store together with their child during the Covid-19 pandemic, leaving a sample of 9 participants. The observation took place in the store, where the participants would normally go. Field observations were recorded of what item was being requested, selected or rejected, together with verbal and non-verbal communications between parent and child. Observations were coded into two main categories: where negotiation took place, and ones in which the child did not participate in the decision making. The requests of

accompanying siblings (in one case) were not included. Means and frequencies were calculated. Content analysis of field notes was conducted following qualitative analysis methods. Table 8. presents shopper characteristics by shopping groups (adults shopping alone with a child or children, adults in pairs) and numbers of accompanying children. The most frequently observed combination was an adult woman shopping with one child.

Table 8: Observed characteristics of study sample (n=9)

Food Items	Frequency
Configuration of adult shoppers	
Female only	6
Male only	2
Female/male duo	1
Total	1
Configuration of child co-shoppers	
One child	7
Two children	2
Three or more children	0
Total	11
Total number of children	
Girls	6
Boys	5
Total	11

Source: Own construction

3.4 Quantitative research

3.4.1 Hungarian Brand Awareness Instrument

With reference to previous International Brand Awareness Instrument studies (Forman et al., 2009; Turner et al., 2015), the Hungarian Brand Awareness Instrument (HBAI) aimed to develop a tool for measuring food/drink brand awareness in Hungarian children, aged 3–7 years, as a representation for their prior food marketing exposure, based on the existing International Brand Awareness Instrument. The HBAI was developed paying attention to specific criteria when selecting the brands. As Turner et al. (2015) paid special attention to represent food/drink brands that represented the ‘big 5’ categories of foods and beverages, the 30 brands selected by them were taken as a basis for the current instrument's brand selection. Those brands that were not available in Hungary were replaced by Hungarian brands in similar food categories. Because children this age may have a decreased ability to recall brand images by name, a forced-choice procedure was established where each food brand logo was paired with 4 pictures of foods, one of which correctly matched with the logo. Brand logos were used from company websites and partially de-identified, by removing some text from the logos using Adobe Photoshop (see Appendix 4). Just as in previous IBAI studies, children were asked to “choose the food that matches with the food brand.” If children stated that they had never seen the brand, they were asked to make a guess. Once children selected a food picture, they were asked if they could name the food brand. Besides this instrument, a brand preference test was developed using 10 popular brands and pairing them with an unbranded version. The children were then asked to select one out of the two products. Similar to Turner et al. (2015) participants received one point for correctly identifying the brand logo (recall), which constituted precise identification of the brand name and/or branded character, and half a point for correctly matching the product type (recognition). This gave less weighting to the recognition task due to a 25% chance of randomly guessing the correct product with each trial. This scoring system gave a total possible composite multi-brand awareness score of 45 (30 for recall, 15 for recognition).

A questionnaire was implemented from the study by Turner et al. (2015), which is partially based on the Schools Physical Activity and Nutrition Survey 2010 (SPANS) (NSW Ministry of Health, 2010). The parental part of the questionnaire included basic

demographic information (age, sex). As well as the frequency of consumption of the ‘big 5’ foods and beverages (0 = never or rarely, 1 = 1–2 times a week, 2 = 3–4 times a week, 3 = 5–6 times a week, 4 = 1 time/day and 5 = 2 or more times/day). The amount of weekly TV and internet viewing time (cumulative minutes/week), as well as frequency of supermarket attendance was asked from the parents of the children. The full questionnaire and instrument is presented in Appendix 4.

Originally, the testing was meant to be personally, using flash cards, however due to the current COVID-19 pandemic, this was no longer possible. Especially the preschools were either shut down or not allowed to let anyone other than staff enter the facilities. Thus, the instrument was converted into an online survey, and parents were given excessive instruction on how to fill out the survey together with their children. Families were recruited on the one hand through a selected Hungarian private preschool in Budapest and online through various groups for parents who have preschool-aged children. It was important to find one preschool where all children in a given class would participate in the study in order to put together a sociometry of the entire class. The sample consisted of N=59, 3–7 year old children (24 girls; 36 boys), mean age 4,78 years and their parents who participated in this study. The initial sample size was 60, however one participant was excluded from the study due to missing data. Due to the smaller sample size and the fact that this a novel instrument to be conducted within Hungary, the current method is rather an exploratory research at this point.

Analyses were conducted using IBM SPSS Statistical Software package. Descriptive statistics (means and SDs) were computed on all main study variables that were continuous (e.g. child age, brand recognition scores, and meal intakes and media consumption). The independent variables included: age, frequency of consumption of the ‘big 5’, amount of TV viewing (minutes/week), frequency of supermarket attendance, and amount of internet usage (minutes/week). The frequency categories used for all ordinal variables in the questionnaire (frequency of consumption, watching TV while eating dinner, supermarket attendance) were collapsed into four broader categories (0 = Never or rarely, 1 = At least weekly (1–4 times/week), 2 = Almost daily (5–6 times/week), 4 = At least daily). The dependent variable was brand awareness, divided into recall and recognition for each of the ‘big 5’ food products as well as total scores. Normality of the data (based on the continuous brand awareness score variable) was confirmed using the

Shapiro-Wilk test ($p = 0.079$), therefore parametric tests were used for statistical analyses. A p-value of < 0.05 was considered significant in the final analyses. In terms of reliability, the Cronbach Alpha was computed for brand recognition is 0.850, brand recall is 0,898 and brand awareness is 0,897 which all indicates a high level of internal consistency.

4. Results

4.1 Media influence on preschool children as consumers?

The results of both qualitative brand awareness studies were analysed in terms of media influence. First, the television habits and internet consumption habits of the children were investigated to then be able to compare these with the logos recognized. From the 20 children participating in the first, and 23 in the second study only two children did not have a television set at home or watch TV at all. In contrast, 28 children claimed they watch television every day. There were children in the sample, who were allowed to watch in the morning and in the afternoon as well. The remaining 14 children watched television less often, some only at their grandparent's home. Most of the children claimed to watch the television alone or with siblings. Only two children from the sample watched television regularly with their parents. Most of the children were allowed to decide for themselves what they watched on television, though some watched DVDs instead of cable television. Each child watched cartoons; some children said they also watch sports regularly. Some children could specifically name the children's channel they watched at home. To increase the effectiveness of the analysis, children are classified into three categories based on their television consumption. Children who reported that they watch television every day were in the "frequent user" category. Children who did not watch TV every day but on a weekly basis were included in the "average user" category, while children who did not watch TV at home (or only at their grandparent's house) were classified as the "rare user". Within the second sample where internet consumption was also tested, 11 children use their tablet or smartphone every day. 7 children can use their tablet only on weekends and 4 children do not get a tablet or smartphone at all.

In terms of advertising awareness, none of the children could answer the question „How people and cartoons are placed in the TV set?”. As for the question „What is an advertisement?”, half of the children answered that they did not know what an advertisement was. The remaining answers revealed that they were not really aware of the concept or could not adequately define advertising. For example, one child stated that advertising was a "movie", another that it is "something that is on TV". The remaining

responses showed that children know that advertising is something that pauses their favourite programs for a while, but no child understood or named the intention to sell:

"It's after the cartoons" (6-year-old girl, frequent user).

"When the kids are watching TV and they are advertising a picture before that" (6-year-old girl, frequent user).

This theory is also in line with Piaget's (1970) Theory of Cognitive Development, since the child is still merely in the pre-operational stage (at 2 to 7 years) and is therefore only capable of one-dimensional thinking. However, there was one child who was aware of the fact that advertising presents various goods to people:

"When the doctor shows things and cars" (5 year old boy, rare user).

There was also a child who noticed that certain advertisements targeted boys, and others girls

"Something ends, then the boyish thing comes and cars fly" (5 year old boy, frequent user).

Finally, there was a child who, could not really describe what advertisements were, but he had already stated that he did not like them:

"I know what an advertisement is, I do not like it" (5 year old boy, average user)

Table 9. Matrix Coding comparing brand names mentioned and media consumption

	Media consumption = high	Media consumption = average	Media consumption = low
Brands	149	62	63

Source: Own construction using NVivo

Furthermore, the results of the deep interview conducted with the parents showed another interesting pattern. Those parents who named the most brands in connotation with their child also claimed that their child watches television on a daily basis. This was further underlined using NVivo. All brands mentioned by the participants were coded into one Node, and a Matrix Coding Query was run according to the media consumption of the child (see Table 9. above).

The eating behaviour survey also brought some interesting results regarding the link between eating behaviour and the media, which ultimately affects consumer behaviour. A one-way ANOVA test was run to investigate the relationship between the children's eating behaviour and their television consumption. The Bartlett's test of sphericity was significant at 595 degrees of freedom. Indicating that the sample is big enough for factor analysis. For the reliability test, Cronbach's alpha was used to assess the internal consistency with alpha. Five of the subscales, i.e., emotional overeating, satiety responsiveness, slowness in eating, emotional undereating and food fussiness, produced Cronbach's alphas under 0.7. According to the most widely accepted evaluation of alpha, this value should be above 0.7 but not much higher than 0.9 (Nunnally, 1978). Hence, one item was removed from the 'emotional overeating', 'satiety responsiveness' and 'emotional undereating' subscales, two items were removed from 'slowness in eating', and three items were removed from 'food fussiness'. The other three subscales consist of the same items used by Wardle et al. (2001). See Cronbach's alpha values and item statistics in Table 10.

Table 10. Cronbach's alpha of subscales

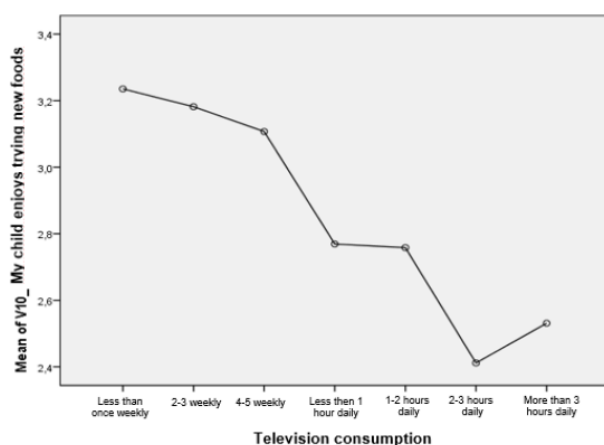
Sub-scale of CEBQ	Cronbach alpha	Mean	Std. Deviation
Food responsiveness	0,811	2,108	0,903
Emotional overeating	0,766	1,567	0,654
Enjoyment of food	0,828	3,375	0,799
Desire to drink	0,797	2,597	0,903
Satiety responsiveness	0,553	3,16	0,51
Slowness in eating	0,704	2,681	0,559
Emotional undereating	0,705	2,65	0,853
Food fussiness	0,864	2,945	0,36

Source: Own construction using SPSS

From the items tested, only the six significant results are displayed below for further discussion. The first item selected for further discussion compares the 10th item of the Children's Eating Behaviour Questionnaire with the amount of television consumed (see Figure 26). The Chi-square value is 20.76, the p-value for $F(6,323) = 2.98$ is $p = 0.006$. A negative relationship can be seen; thus, an increase in television consumption leads to a decrease in the willingness to try new types of foods.

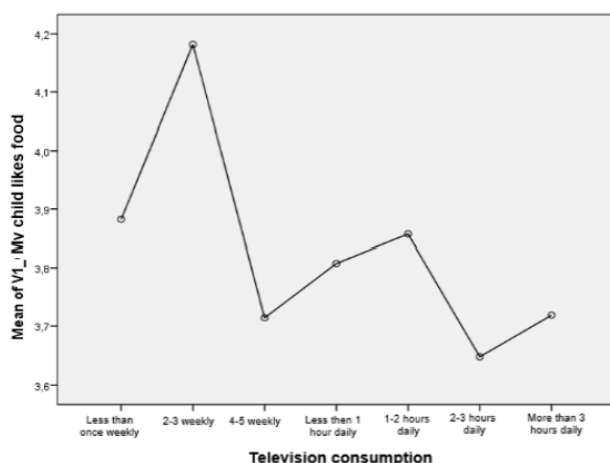
The second item selected for further analysis has a Chi-square of 6.69 and a level of significance for $F(6,323)=1.42$ of $p=0.062$ (see Figure 27). It compares the first item of the Children's Eating Behaviour Questionnaire with the amount of television consumed. Here, a negative relationship can also be seen, which leads to the assumption that an increase in television consumption can be partially responsible for a child disliking certain types of food.

Figure 26. Relationship between enjoyment of new foods and television consumption.



Source: Own construction using SPSS

Figure 27. Relationship between liking foods and television consumption.

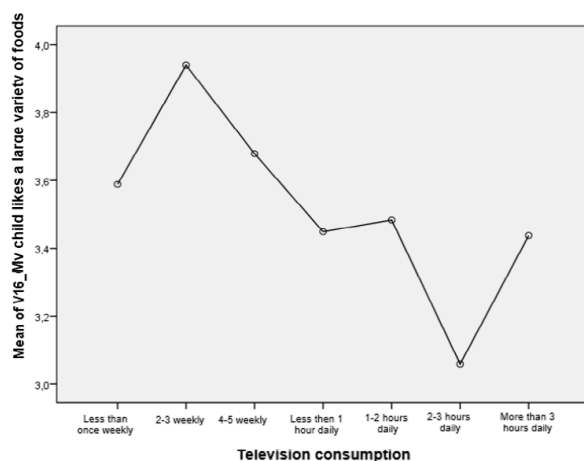


Source: Own construction using SPSS

The sixteenth item on the Children's Eating Behaviour Questionnaire was also selected for further analysis, as the results are significant with $F(6,323)=2.4$, $p=0.033$ (see Figure 28) and a Chi-square of 17.432. Comparing this item with the amount of television

consumed shows a negative relationship, meaning that an increase in television consumption narrows a child's food intake variety.

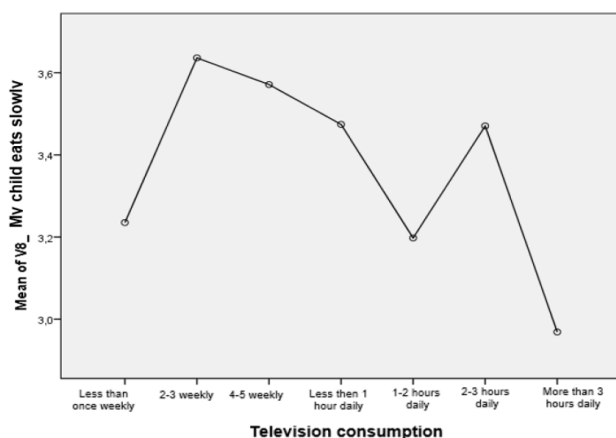
Figure 28. Relationship between liking a variety of foods and television consumption.



Source: Own construction using SPSS

Comparing the eighth item of the Children's Eating Behaviour Questionnaire with the amount of television consumed also lead to a significant result, with $F(6,323)=2.14$, $p=0.049$ (see Figure 29) and a Chi-square of 17.43. Therefore, an increase in television consumption results in children eating less slowly.

Figure 29. Relationship between eating slowly and television consumption.

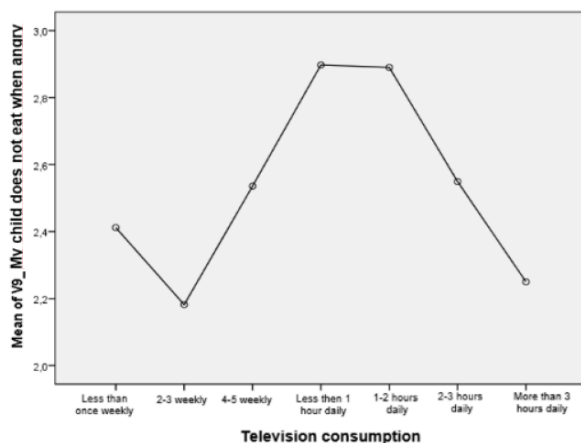


Source: Own construction using SPSS

The results of comparing the ninth item of the Children's Eating Behaviour Questionnaire with the amount of television consumed were also significant, with $F(6,323)=2.56$, $p=0.016$ (see Figure 30) and a Chi-square of 24.23. Interestingly children whose

television consumption is low (less than the daily average consumption) showed a positive relationship between consumption and food intake when angry. Meanwhile, children with a high television consumption showed a negative relationship between consumption and food intake when angry.

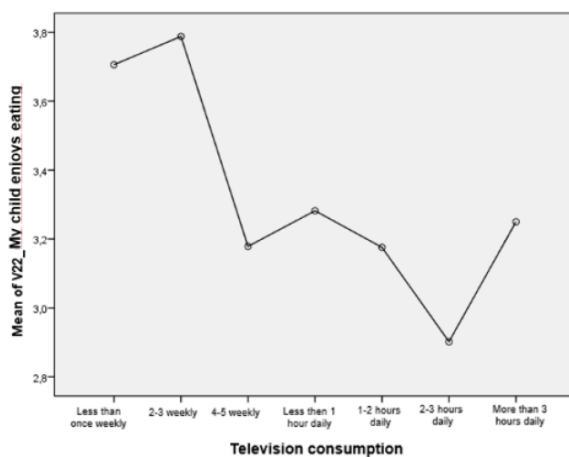
Figure 30. Relationship between not eating when angry and television consumption.



Source: Own construction using SPSS

Finally, the twenty-second item on the Children's Eating Behaviour Questionnaire was chosen for further analysis (see Figure 31). The results were also significant, with $F(6,323)=3.29$, $p=0.002$ and a Chi-square of 19.98. Generally, the results showed that a decrease in the enjoyment in food consumption can be witnessed as television consumption increases.

Figure 31. Relationship enjoyment of eating and television consumption.



Source: Own construction using SPSS

All in all, increased emotional eating is linked to an increase in television consumption, which is in line with the findings of Ouwens, Cebolla and Van Strien (2012), who found that television viewing was positively associated with emotional eating. The findings also reveal that an increase in television consumption leads to an increase in the pace of food intake of children. However the link between eating speed and television consumption in preschool-aged children has not been examined t far, eating at a fast pace has been linked to obesity by Jahnke and Warschburger (2008).

Furthermore, an increase in television consumption influences the way children dislike certain types of foods and also narrows a child's food intake variety. These results can be linked to the findings of Borzekowski and Robinson (2001), who found that children were significantly more likely to choose advertised items and that these items were mostly cereals and candies, which are most frequently advertised. The findings that children who have high television consumption dislike more types of food and are willing to eat a smaller variety may well be linked to the food advertisements they are exposed to while watching television. These results, on the other hand, underline the theory of Buijzen, Van Reijmersdal and Owen (2010) that children are influenced more by automatic processes, where advertising exposure may lead to attitude changes without explicit attention to, or awareness of, the persuasive communication. An increase in television consumption led to a decrease in the enjoyment of food, consequently, it can be argued that children who often consume their meals watching television, prohibits them from enjoying their food to the fullest, as they are multitasking whilst eating.

Ford et al. (2012) reported that there is a significant relationship between television viewing time and adverse dietary outcomes. Lower fruit and/or vegetable intake was the most frequently reported dietary outcome, followed by increased energy intake, from increased television viewing, suggesting that children whose television consumption is higher eat more junk food and are more likely to enjoy food consumption overall. Interestingly, other areas tested within the current survey, such as drinking habits, were not affected by television consumption. Finally, an increase in television consumption also led to a decrease in the willingness to try new food. It can be argued that findings related to the impact of commercials, such as in the study of Borzekowski and Robinson (2001), where children who were exposed to commercials were significantly more likely to choose the advertised items, can be used to explain the results of this study.

To conclude, it can be stated, there is no correlation between the amount of television watched and children's knowledge about advertising. Moreover, media consumption does in fact impact the extent to which brands are present on a daily basis within the lives of families. Results further suggest that media consumption influences various aspects of eating behaviour such as picky and emotional eating, this suggests that the brand selection chosen by children might be narrowed down through the media as their picky eating increases with increased media consumption.

4.1.1 The relationship between media consumption and brand awareness

Regarding the pilot qualitative brand awareness test, most children were able to identify LEGO correctly, 14 children recognized the logo (see Table 11). Interestingly, only one of the daily television users and one of the average users could not recognize the logo, four of the children who hardly watch television could not name the brand. This is also interesting because LEGO is a popular toy amongst preschool children, it can be found in almost all kindergartens and children play with it daily. All children know and recognize the product, this example clearly showed that those children who do not watch television, cannot tie the logo to the product. 8 children identified Minimax. Minimax was the second most identified logo. Other television brand logos were mixed with one another. A child mixed with the competition Jim Jam, while another child knew it was a channel but he was unable to name it. Half of the frequent users did not recognize the brand, whereas among the average and rare users, three-quarters of the children did not know the logo. Here a clear tendency can be recognized, that mainly those children knew the channel who watch television frequently. However, it is important to point out that Minimax is a cable TV channel, so it may occur that children who are frequent users simply do not have access to this channel at home.

Another well-known logo among children was McDonalds, although only one child could correctly name it (McDonalds), 5 children referred to the slang Hungarian name "Meki". In this case, the slang version was accepted too. This underlines the findings of Harrison et al. (2016) as in their study only food brands were tested, and Mc Donald's was the most often recognized brand. Other children connected the logo to "Happy Meal", "Hamburger" and "Fries". So most of the children were aware of what the logo was. Two

children named the letter "M" and not the company itself. The child who correctly knew the name of the logo was in the average user category, while the 5 children who called the logo "Meki" were all in the frequent user category. The result is not surprising, as McDonalds has nearly twice as many adverts running on children's channels compared to competing companies. In 2012, the National Media and Communications Authority summarized the advertisements of the three largest children's channels (Minimax, Cartoon Network and Disney channel) for four months. During the study, two fast food chains were advertised a total of 161 times. Of which 55 were Burger King commercials, and 106 McDonald's commercials. From the three channels tested, the Disney Channel aired the commercial most frequently, with a total of 121 spots (Nemzeti Média és Hírközlési Hatóság, 2012).

Table 11. Logos correctly named by the children, categorized by television consumption frequency

<i>LOGO</i>	<i>Frequent user (N=12)</i>	<i>Average user (N=4)</i>	<i>Rare user (N=4)</i>
<i>Fisher-Price</i>	0	0	0
<i>LEGO</i>	11	3	0
<i>Apple</i>	1	0	0
<i>Pampers</i>	0	0	0
<i>Facebook</i>	1	0	0
<i>Volkswagen</i>	4	0	1
<i>Disney</i>	1	0	0
<i>Barbie</i>	2	0	0
<i>Ariel</i>	0	0	0
<i>Minimax</i>	6	1	1
<i>Rovio</i>	0	0	0
<i>McDonalds</i>	5	1	0
<i>Coca-cola</i>	2	1	0

Source: Own construction

The most correct answers were given by a 5-year-old boy who is allowed to watch television every day. He could name five logos and was the only child who recognized

the Facebook logo correctly. He knew the product of several logos; he just could not name the brand exactly. He identified Pampers as a "diaper", Fisher-Price a "toy store", Apple a "phone", Disney as the "Mikey cartoon", Ariel as "washing machine" and Coca-Cola as "Cola". The only logos he did not know at all were Barbie and Rovio. A total of 3 children were able to answer 4 logos correctly. From these children, 2 were frequent viewer and 1 child was an average viewer. Design elements in the logos led children toward brand-name guesses that missed the mark for example with Apple, because most of the children said the logo was an "apple" because they did not recognize the brand but just named what they saw on the logo. 5 children connected the logo with a technical equipment: the terms mobile, computer, TV, phone and tab were named. 3 children recognized Coca-Cola's logo (but two children called it Cola), 2 of whom knew McDonalds too.

At the same time, during the other qualitative brand awareness study, only one child who did not watch any television, only DVDs, nor did he use any form of internet, was one of the few who hardly recognized any logos (however there was still one child who recognized even less). Of the remaining 6 children, one did not have a television at home and only uses a cell phone at their grandparents supervision. Nevertheless, this child achieved one of the highest scores of 10 correctly named logos in the logo test.

Table 12: Logo test results of the entire sample

												
Ágoston	ok	ok	ok	ok	ok	ok	ok	ok	ok	X	bolt	ok
Lili	ok	ok	ok	vitamin	ok	játéket lehet venni	ok	ok	ok	X	ok	gyurma
Zoli	esoki	ok	ok	ok	ok	ok	X	ok	ok	ok	ok	gyurma
Tomi	ok	alma	ok	reklámban	ok	régio játék	ok	X	ok	X	ok	gyurma
Anna	ok	innivaló	ok	dm-ben láttam	ok	Tv-ben van	ok	X	X	X	Tesco	ok
Eszti	ok	ok	ok	ok	ok	X	ok	ok	ok	X	ok	X
Szili	X	fodrász	X	reklám	ok	X	X	jégkrém	nyuszi	X	étterem	X
Vince	ok	ok	ok	vitamin	ok	ok	ok	X	ok	X	Lidl	ok
Daeun	ok	innivaló	ok	X	ok	X	ok	sparban lehet kapni	X	X	X	X
Bendegúz	ok	ok	ok	gumivitamin	ok	ok	ok	ok	ok	X	ok	ok
Rozi	X	ok	X	vitamin	ok	ok	ok	ok	X	X	bolt	gyurma
Barnus	X	alma	ok	X	ok	X	X	X	X	X	Spar	X
Dávid	ok	X	ok	vitaminbomba	ok	régio játék	ok	X	X	X	ok	gyurma
Gyula	ok	ok	ok	ürlény, vitamin	ok	régio játék	ok	X	nyuszi	X	ok	gyurma
Letti	ok	ok	ok	vitamin	ok	játékbolt	ok	ok	ok	X	Lidl	ok
Andris	X	gyógyszer	ok	tv-ben láttam	cica	régio játék	ok	X	lego	X	CBA	X
Bazsi	X	X	X	ürlény	Letti pókján	tv-ben láttam	ok	boltban láttam	X	X	X	X
Lorand	ok	X	ok	X	X	X	X	ok	ok	X	ok	X
Máté	ok	ok	ok	tv-ben láttam, gyógyszer	ok	játék ház	ok	X	ok	X	ok	gyurma
Berci	ok	ok	tesco	multivitamin	X	X	ok	X	ok	X	bolt	gyurma
Dani	esoki	happy narancsle	ok	ok	lányos	matekbolt.hu	ok	X	ok	műzliszelet	ok	láttam már
Adél	ok	ok	bolt	vitamin	ok	ok	ok	X	X	kisbaba játék	X	bolt
Zsiga	ok	ok	ok	vitamin	ok	ját sz óház	ok	X	ok	tableten láttam	ok	gyurma

Source: Own construction

The table above summarizes the logo tests results (see Table 12). During the logo test, there were 2 children who only recognized 1 logo, interestingly both of these children were one of the few who do not use tablets or the internet at all. Still one of the two children had a weekly television consumption of around 210 minutes according to the parents, while the other only watches a few hours of DVD on a weekly basis. The third child who got the least amount of logos correct was also a boy who only watches DVDs and no commercial television, but plays one hour on the tablet in a week. In general, it can be said, there was a clear pattern between children who hardly guessed any logos correctly and the lack of media consumption.

Interestingly, no general pattern could be found within the children who guessed a lot of logos correctly, as there were 7 children who guessed more than 8 logos correctly, but this group of children consisted of heavy to very light media users too.

Table 13. Logos correctly named categorized by television consumption frequency

<i>LOGO</i>	<i>Frequent user (N=11)</i>	<i>Average user (N=7)</i>	<i>Rare user (N=5)</i>
<i>Kinder</i>	8 (72,7%)	5 (71,4%)	3 (60%)
<i>Kubu</i>	8 (72,7%)	3 (42,8%)	2 (40%)
<i>Spar</i>	10 (90,9)	5 (71,4%)	3 (60%)
<i>Marslakocskák</i>	2 (18,2%)	1 (14,3%)	1 (20%)
<i>Hello Kitty</i>	8 (72,7%)	6 (85,7%)	3 (60%)
<i>Játekbolt.hu</i>	4 (36,4%)	0	2 (40%)
<i>MineCraft</i>	11 (100%)	5 (71,4%)	3 (60%)
<i>Dörmi</i>	3 (27,3%)	2 (28,6%)	2 (40%)
<i>Duplo</i>	7 (63,6%)	4 (57%)	2 (40%)
<i>Farm Heroes</i>	1 (9%)	0	0
<i>Aldi</i>	6 (54,5%)	4 (57%)	1 (20%)
<i>Play-Doh</i>	3 3 (27,3%)	2 2 (28,6%)	1 (20%)

Source: Own construction

Especially Ágoston is an outlier, he was one of the two children who guessed 10 logos correctly, but according to his parents he does not watch TV and he is only allowed to use the tablet for 15 minutes a week (so he has the least amount of media consumption in the group). Due to this, the children's logo recognitions were categorized into television consumption and internet consumption separately, to find possible patterns. For the table below (see Table 13), the children were differentiated into three categories regarding their television consumption.

The children were categorized into frequent, average and rare users similarly as with the television consumption, frequent users used the internet for an hour or more daily, average users used the internet daily but for less than an hour, while the rare uses did not use the internet on a daily basis (see Table 14).

Table 14. Logos correctly named categorized by internet consumption frequency

LOGO	Frequent user (N=7)	Average user (N=7)	Rare user (N=9)
<i>Kinder</i>	7 (100%)	3 (42,8%)	6 (66,7%)
<i>Kubu</i>	4 (57%)	4 (57%)	5 (55,6%)
<i>Spar</i>	6 (85,7%)	7 (100%)	5 (55,6%)
<i>Marslakocskák</i>	0	3 (42,8%)	1 (11,1%)
<i>Hello Kitty</i>	6 (85,7%)	5 (71,4%)	7 (77,8%)
<i>Játekbolt.hu</i>	1 (14,3%)	2 2 (28,6%)	3 (33,3%)
<i>MineCraft</i>	7 (100%)	6 (85,7%)	7 (77,8%)
<i>Dörmi</i>	1 (14,3%)	2 (28,6%)	4 (44,4%)
<i>Duplo</i>	4 (57%)	5 (71,4%)	4 (44,4%)
<i>Farm Heroes</i>	0	1 (14,3%)	0
<i>Aldi</i>	3 (42,8%)	4 (57%)	4 (44,4%)
<i>Play-Doh</i>	3 (42,8%)	1 (14,3%)	2 (22,2%)

Source: Own construction

Table 12 clearly shows that logo recognition is linked to the volume of television consumption, as at a first glance in all 12 logos tested, the frequent users were able to name more logos correctly. However, as the number of users in each category differed,

the percentages of logos recognized in relation to their own user groups were also considered, here the results were also similar, however, Dörmi, the candy brand was correctly recognized by 40% of the rare users and only of 27% of the frequent users. There were also slight differences with the brands Play-Doh, Hello Kitty and Aldi, where a slightly smaller percentage of average users knew the logos correctly compared to the frequent users. On the contrary, hardly any pattern could be noticed regarding the internet consumption frequency and the logo recognition of the children (see table 12). Here as the number of users in each category differed slightly as well, the percentages of logos recognized in relation to their own user groups was also considered. Minecraft was the only logo that was identified mainly by the frequent users and less by rare internet users. But especially Farm Heroes would have been another brand were it would have been logical that children who spend more time online recognize it, as it is heavily advertised online through YouTube and other online channels. However, this was not the case. The current results suggest that while children are influenced by advertisements on television, this is not necessarily the case with advertisement on the internet.

In general, the most recognized logo was the Minecraft logo, 20 children named it correctly. Here, it was also interesting to see that out of the three children who did not know the logo two do not play on the internet at all, the third child only was allowed to use the internet for an hour on weekends. Only 5 children named the Play-Doh logo correctly, while 10 children recognized the product (plasticine) but did not know the brand name. This is interesting because Play-Doh advertises a lot on children's channels. However, even more interesting was, that out of the seven children who did not know the brand at all, five do not use the internet at all and two are only average users who only play on weekends, indicating that the brand heavily relies on online advertisement. What few children recognized was the Jákékbolt.hu logo, although most children knew it was a toy store or that they had been seen its ad on television. Two children also knew the slogan and melody of the ad. This was also the problem with Marslakócska the children's vitamin gummies, 11 children knew it was a vitamin, but only 4 could name the actual product brand. One child recognized the Farm Heroes Saga game's logo advertised on the internet and another child said he saw it on the tablet. They both use a tablet or smartphone and go online for more than two hours a week.

Finally, the Hungarian Brand Awareness Instrument brought some interesting insights on the way the media is linked to brand awareness as well. Pearson's correlation coefficients

were used to examine the relationship between brand awareness, brand recall, brand recognition and the continuous variables of age, minutes of TV viewing/week and internet usage. There was a medium strength, positive correlation between brand awareness and TV viewing/week, which was statistically significant ($r(57) = .483$, $p = .000$). This was also the case with internet viewing/week in correlation with brand awareness which was statistically significant ($r(57) = .473$, $p = .000$) (please see appendix 5 for the table of correlations).

To conclude, both quantitative and qualitative measures underline that increased media consumption affects children's brand awareness, only to a different extent. The qualitative measures showed that the knowledge of logos and brands was much higher amongst those children, who viewed television on a daily basis, however this was not the case with internet consumption. Similarly, while the quantitative study found a positive correlation between brand awareness and media consumption, this was only of medium strength. Indicating, that there is a link between some form of media consumption and brand awareness, however it might not be the most important influencing factor in the children's lives.

4.1.2 Media consumption's influence on brand preference

Firstly, in order to explore brand preference at such a young age, the deep interview discussions with the parents were coded using NVivo. A Node called Brands was created, where every single sentence that incorporated a brand name of any sort was marked. From this node, the most frequently used brand names were found using word frequency. Only grocery store brand names and television channels were excluded from the list. The top 24 most recent brand names can be found in the table below (Table 15).

The most frequently used brand name was Kinder (the chocolate brand) followed by Nutella and Paw Patrol (the cartoon). Cartoon names were chosen to be included into the brand names list, as numerous toys and food items were bought due to the fact that they were on the packaging of the product. Out of the 23 brand names on the list, nine were cartoon characters or names associated with toys, six were dairy brands (including one cheese), three were for sweet snacks, two were washing powders. There was one beverage, one fast food chain and one media tool.

Table 15: Most frequent brand names used during the interviews

Word	Count	Weighted Percentage (%)
<i>Kinder</i>	25	0,42
<i>Nutella</i>	10	0,12
<i>Paw Patrol</i>	9	0,10
<i>Dörmi</i>	9	0,08
<i>Kubu</i>	8	0,10
<i>Barbie</i>	7	0,12
<i>Pötyös</i>	7	0,12
<i>Frozen</i>	7	0,07
<i>Bogyó and babóca</i>	6	0,10
<i>Firefighter Sam</i>	5	0,08
<i>Bori</i>	5	0,05
<i>Paula</i>	5	0,05
<i>Nestlé</i>	4	0,07
<i>Mizó</i>	4	0,03
<i>McDonalds</i>	4	0,03
<i>Thomas</i>	4	0,07
<i>Youtube</i>	4	0,07
<i>Ariel</i>	3	0,05
<i>Babybell</i>	3	0,05
<i>Disney</i>	3	0,05
<i>Monte</i>	3	0,05
<i>Pepa pig</i>	3	0,05
<i>Tomi</i>	3	0,05

Source: Own construction using NVivo

To discuss in what ways the media might have an influence on the children's brand preference or consumer behaviour in general, the parents in the deep interview study were asked the following questions amongst others: "*Can you recall a time, when your child asked for a particular product because they had previously seen it in an advertisement? What was the product? Which advertisement was this? How often does this happen with your child?*". The answers were also compared to the media consumption habits of the children, which was also discussed during the interview. The children were grouped into three categories, frequent, average and non-frequent media consumption groups; frequent being those children, who had a daily media consumption pattern, average were those children, who did not consume media daily, but still rather frequently otherwise, such as weekends. Whereas the non-frequent media consumption group derived of those children, who hardly consumed any media at all, all of the families in this group only owned one TV for the entire household and a maximum of one tablet, the children did not own any devices of their own.

Seven respondents were grouped into the frequent consumer category. Out of the seven, six could name at least one incident, where the child had asked for a product due to a commercial. From the six respondents, the only the type pf products mentioned were toys (four respondents) and various types of food. Four respondents remembered that their child saw an advertisement on television and then asked for the product, in three cases these were toys and once it was cereal and dairy:

“He saw an ad, about some pudding, it came with a little toy, he said he needed it. Then a box of cereal, which had the Cars character on it. Or a drink, with such a label on it... things like that... He didn't necessarily see it in an advertisement, or if he liked the packaging in the store, he asked for the pudding from the TV ad, but he also ate the pudding” (Female, 29, Siófok).

One mother even recalled that their child saw a toy that she then asked for on a commercial whilst using her tablet:

“It was before her birthday, that she saw this kinetic sand. Now we don't have nappies anymore and she goes to the toilet. But we told her that if he finally poos in the toilet she could choose a toy. And she saw the Hugo Hami ad on her tablet, its this ball game from out childhood, where the hippo eats the balls. And she got it”. (Female, 30, Törökszentmiklós).

Two mothers also recalled that their children asked for products that they saw in the magazines of various grocery retailers. Both mothers where in the low-income segment of the interview respondents. Two parents also claimed that packaging as well as the grocery store environment greatly influence their children. Two mothers also mentioned, that this has a higher effect n the children during Christmas time:

“Sure, especially toys before Christmas when they write their list to Santa, I think they get everything from ads because we don't go to toy stores. I remember this year the little one was asking for this snow bucket filled with this smart plasticine, the robot dino and the robot spider is all from there, my elder son asked for a game called Laser X this year, he basically recalled the whole ad. The web stores are very clever, because they always mark the games that are shown in the ads, and I just knew those are the ones my kids were talking about” (Female, 30, Budapest).

Finally, one father interestingly stated, that his son was immune to commercials due to his YouTube consumption:

“The bigger one no, he is immune to commercials, he hates them and YouTube has a huge role in this, he would say “nooo it’s a commercial again, lets press the button so it goes away”. Now that we are talking about this, he really wants the LEGO fire station, he saw it on TV and he watches LEGO videos on Youtube, the LEGO City ones where there are bank robberies, train robberies and fire”. (Budapest, 30, male).

Out of the 15 respondents, five were grouped into the average media consumer category. All five respondents could recall that their child asked for a product due to commercials, interestingly once again only toys and dairy products were mentioned. Four out of five parents named toys, however, only two actually knew the name of the toy their child asked for. A mother in this group also mentioned Christmas. The two mothers that mentioned dairy products both recalled that the pudding brand Paula was the item that their child saw on television and asked for. This was also mentioned by a mother in the frequent group, however she was not sure where her child saw the product.

“Paula, they liked it for a while but had tasted better before. Because the cow and the bunch of kids in the commercials grab their attention, and the music, and then they said we want Paula. We bought it once or twice but we switched to another product” (Female, 34, Salgotarján).

“The Paula one.... The one with the dots, the yogurt, that she didn't eat. I have to add that advertising is very good, but she just doesn't like it. I loved it when she went "buy it, buy it" but then she didn't eat it” (Female, 36, Nográd).

3 children were grouped into the non-frequent media consumption category. One out of the 3, could not name any incident where the child asked for a particular item due to the influence of commercials. The other two both participants, mentioned that their child has requested different types of food products. One was a sweet Hungarian snack called Dörmi, while the other was a dairy product:

“Yeah it happened, it happens about once every six semesters, but just now he requested a yogurt, a kind of pudding that can be mixed together and it has mermaids and „Disney's Cars” on the cover and you could pour one into another”(Female, 37, Budakeszi).

The Dörmi request was from a child who has severe glucose allergy, in consequence the child was declined the purchase.

„He saw the Dörmi on TV. I checked how much sugar was in it. It was so much; he could have only eaten his head maximum. Now, at age 6, he knows his belly will be bloated for 24 hours with cramps that make him crazy. After half a day he will not be able to get up from the toilet, because it will spill out of him. He knows it's not worth it.” (Female, 37, Siófok).

The same mother who mentioned dairy products also mentioned LEGO as an example:

“What they see on TV is also LEGO, and then they explain in detail how interesting it is and how good, same with board games. So they are quite sensitive to toy commercials, they do watch them. Especially the one in preschool, he's into LEGOs, and now there's that ice age rescue expedition LEGO commercial and he then very often shows it to me in his LEGO catalogue, that he saw it on TV and that's how they save the mammoths.” (Female, 37, Budakeszi).

Within the qualitative brand awareness study, children were also asked what they would like from Santa. These results were also compared to their media consumption in order to see how this might affect their brand preference. Interestingly, very few children mentioned branded toys. Only three branded toys were mentioned by the children: two girls asked for Elsa dolls, two boys mentioned Star Wars games, and four boys asked for Lego. However, all these children belonged to the „frequent user” category. Only 3 children in the sample had very little or no media consumption at all, from these children, 2 did not know what they wanted from Santa and one child asked for a non-branded toy (a doll). These results are in line with Pine and Nash’s (2002) research, which concluded that children who spend more time watching television ask for more gifts, and those who request gifts are more likely to ask for branded of toys.

The Hungarian Brand Awareness Instrument was used to assess any differences in the mean of brand preference of branded vs. non branded products with television and internet consumption using the independent sample t-tests. The t-test revealed there was only one significant difference in the means of the brand preference of branded chips and television consumption $t(25,834)=2.399, p=0.024$. (please see appendix 6). There were no other statistically significant differences.

Overall, the main pattern, that was witnessed from the data, was that the media mainly influences the children’s request for food items (mainly dairy products within this sample) and toys. As far as brand preference, it was interesting to see, that several brands that are highly advertised currently appeared numerous times, such as LEGO and the Paula pudding. However, no clear pattern could be witnessed in terms of the child’s media consumption exposures frequency and brand preference. Whilst the Hungarian Brand Awareness Instrument found that out of the 10 types of food products tested for brand preferences in comparison with media consumption, only one type of snack, the selection of the branded chips was influenced by television consumption. There was no significant difference for the dairy product. Interestingly, these results are in line with the findings of the previous subchapter, namely that television has a greater impact on the consumer behaviour of children than internet usage.

4.2 Family influence on child food consumer behaviour

The deep interview conducted with parents made clear, that one of the main influencing factors primarily was, whether or not, the child is included in the food shopping routine of the family, this was also the reason, that in-store observations were conducted with the families post the deep interviews. Numerous different themes arose whilst discussing the question whether the children's presence influence their shopping behaviour in any way. Those parents who always took their children shopping emphasized how their shopping efficiency was influenced by the presence of the children:

„Yes, yes. If they did not sleep in kindergarten, we have to finish our shopping as quickly as possible because they are uncontrollable. If they do sleep, then it is quite different, calm and manageable”. (Female, 31, Siófok)

Interestingly, the same group of parents also kept highlighting the purchase intentions they had towards their child, even in their absence.

“Surely, I would buy the same stupid things for her if she was not there. It is not typical that she throws herself on something that put her eyes on”. (Female, 35, Salkszentmárton)

Another theme, namely the “asking” theme arose from those parents who seldom took their children with them to the store.

“Yes, definite yes, we have to buy something for them, if they want to buy sour cream, even if I don't need sour cream, then I have to buy some. But I usually limit it to one thing. If they see something else, I'll make them choose. (Female, 37, Budapest).

The final theme was by those parents, who claimed their children would not influence them whilst shopping; this was the case with three mothers, who either did not, or very rarely took their children shopping.

When asked if there are any products, where the child is allowed to make the purchase decision, interestingly all parents named several products, however, these were rather different from person to person. Whilst the majority of the parents named certain food categories as candy, dairy products or even bakery items. Other products named were pasta, meat products, drinks and fruit. Two mothers of girls mentioned clothing as well.

Underlining the findings of Koschate-Fischer et. al, 2018, half of the respondents claimed they replaced certain products due to their children. Interestingly most of these products were sanitary products like shower gels, washing powders and aftershave lotions.

„Aftershave, for example, because of my children I have not used it so much anymore, I didn't want them to smell like White Water scent when they were born, and after that it got less, and last year I stopped using it. (Male, 30, Budapest).

Food replacements mainly took place due to special medical conditions or allergies of the children:

„We replaced the margarine with butter because of the heart problem of my middle daughter, we changed our cooking oil to fat”. (Female, 32, Veszprém)

Furthermore, the only parent who claims to have completely replaced the items purchased due to their child was the only single mother in the study:

I did not eat salami, since my daughter loves it we have it at home. My kitchens content has been completely replaced since she was born. I wont buy two kinds of everything I prefer buying everything for her. I'm not gonna buy everything twice, I prefer to hype up anything she wants for myself as well.” (Female, 35, Szalkszentmárton).

Some highlighted how they involve their children in the shopping and the selection process of various goods, especially the picking out of fruit was mentioned, making it a fun activity for the children as well. Purchase intentions of the parents were discussed too, some highlighted that they buy goods for their children specifically, even in their absence, some discussed how their consumption patterns changed since they had children. Interestingly mainly those parents who hardly took their children with them to the store discussed how their child often requests certain products, but it was the same group of parents who could hardly name any preferred brands of their children. Finally, a part of the sample reported that to their knowledge, their children do not influence their purchasing habits; these were mainly parents who did not, or very rarely took their children shopping.

Furthermore, in order to analyse the extent, of the children's influence on their parents, it was important to find out if the parents have similar product preferences to their children. So, the parents where asked, *whether the children had any preferred products, what these where and why? After this, the parents where asked if the mentioned products are also their own preferred products.*

Half of the respondents were able to name the preferred brands of their child, out these seven, three claimed they did not like these products themselves, therefore they only purchase these for their children. Two of these mothers mentioned sugary drinks and snacks, claiming that they do not eat this much sugar themselves or only drink water. The third mother claimed to purchase special hygiene products for their child who had severe allergies from normal products: „*Detergents, rinsers, shower gel, everything is in our house due to allergies. Do you use these products too? No*” (Female, 36, Nograd).

Four parents named various food related brands (cheese, tuna, salami, cereal, McDonalds and various sweets and dairy products), claiming that they also prefer these brands.

“With Nori it’s Pick salami and Trapista cheese, usually the Tole or the Mizo, she’ll notice this if she doesn’t get these. That it’s not good, it doesn’t smell or taste like the one. Do you prefer these too? Yes, we love it too, I’m thinking of the salami, cheese, and the yogurt” (Female, 34, Salgotrajan).

These findings were also partially underlined previously within the qualitative brand awareness test with the children. When children were asked about their purchasing habits with their parents, from the 20 children who participated in the pilot study, only two did not accompany their parents to the store. From the remaining 18, only five claimed not to ask for anything at the store from their parents. The rest regularly ask for certain goods. In general, the majority of the children mentioned sweets (9), but some children also mentioned toys (3). One child mentioned: *“I go to the store with my mom, but I do not ask for anything, because I know she won’t buy it. But if I can, I prefer LEGO, they have it at Spar.”* It is also interesting to note that in addition to the above two brands, the only further brands mentioned regarding shopping is ‘Kinder chocolate’.

Parents influence on children’s brand awareness, preference, consumer behaviour

The interviews with the participants made clear, that availability of brands within the household has a great impact on children. The wording and phrases used, often hinted which products are the ones, that are selected primarily by the parents for their children. Especially meat and fish products were mentioned vastly, such as sausage and tuna brands. Furthermore, various fruit juices were specifically mentioned several times too.

“Well the sausage can be whatever type, but I usually buy the Saga the thinner one that is smaller” (Female, 37, Budapest).

Another reoccurring factor was not only the influence of parents, but also their extended families influence on children's brand awareness. Grandparents were mentioned the most during the interviews, some examples

"It wasn't food but a toy, Johanna wanted a Lissi dog before Christmas, I didn't even know what it was, She saw it from a Regio newspaper with Mom" (Female, 37, Budapest).

Besides grandparents and siblings, cousins and godparents were mentioned too.

"We've come this far that it shouldn't be Chinese, but for little Angel it should be, but now she also asked me, 'Can you buy me Nike shoes?' I said 'No Nike shoes', but she sees it from her brothers and sisters" (Female, 36, Veszprém).

"He once got it at a celebration, perhaps from his godfather, and he was very pleased with them, that's how it came" (Female, 37, Budakeszi).

Even the neighbours were mentioned as a popular source of influence:

"There's a Romanian brand which the neighbour surprises them with, some puffed, coloured rice that is dyed pink that's their favourite" (Female, 37, Budakeszi).

Furthermore, when comparing the income levels of the parents and their answers regarding their child's brand preferences, those parents who mentioned the most brands in connotation with their child had a higher average income in comparison to the entire sample.

It also has to be noted, that according to the deep interviews, food allergies influence the brand choices of children and their entire families consumption behaviour. During the interviews several parents reported, that their child had some sort of food intolerance and how this affected their consumption. However, two interviewed cases were extremely severe. Parent 5, had two children, a 5 year old and a 4 year old girl with seed allergies. This meant that they could not eat nuts, various fruits and vegetables that have seeds, but even certain type of fish. The allergy of the girls was so bad, that eat breakfast at home and they have to be picked up from preschool every day before lunch ensuring that they do not eat anything they are not supposed to. Parent 15 and 14 had children with fructose allergies and various skin sensitivities. This meant that she could not eat anything containing sugar, the family has prepare everything for themselves, from baking bread to making their own soaps and deodorants. Furthermore, all three parents who claimed to have children with some sort of food allergies belonged to those who could hardly recall named brand preferences of their children.

Finally, the in-store observations of the deep interview respondents were able to bring numerous interesting insights on the way parents might influence their children in a store setting. Table 16 presents adult-child interactions during food selections. In thirteen cases a child initiated the food request. In 62.5% of the time, the adult agreed to a child's request for a food item. Four of these requests were for some type of sweets, three were for various dairy product and one was for a popular drink called Kubu. Out of these 8 products four belonged to the brand Kinder.

Table 16: Parent child shopping interactions over food (n=9)

Negotiated selections	Frequency
Child requests (n=)	
Interactions where parent said yes	8
Interactions where parent said no	5
Parent requests (n=)	
Interactions where child said yes	9
Interactions where child said no	2

Source: Own construction

Table 17: Food items considered for selection during the observation

Characteristics	Frequency
Fruits and Vegetables	2
Dairy	6
Grains and cereals	3
Beverages	3
Sweets	5
Salty snacks	2
Meat	2
Total	24

Source: Own construction

Table 17. presents food items being considered for selection at the moment of observation. The largest category of food item observed dairy products followed by sweets. In addition to adults granting requests, 11 observations were made where parents asked their child if they would like a food item or asking them to pick between various flavours. Three of the nine items offered and accepted were dairy products, the same amount of grain products were offered as well, followed by fruits and vegetables. Considering the "yes" category as including both the requests granted and the food items

parents successfully offered to children 70.83% of the total negotiated selections resulted in a yes. Taking all children's requests together (i.e., those receiving "yes" and "no" responses), 24% were for dairy products and 20.83% for sweets.

All in all, it can be said that numerous factors within the family environment deeply influence the food consumer behaviour of preschool children. Especially the deep interviews made clear that availability of brands within the household, extended families influence, the income level of the family as well as possible food allergies influence the brand choices of children and their entire family's consumption behaviour. The deep interviews as well as the in-store observations further reflected, that the presence of the children during shopping visits influences both the parents as well as the children's consumption habits vastly, highlighting especially the influence on the selection of dairy products.

4.3 Peer influence on child food consumer behaviour

In order to analyse the way social surroundings influence children's brand preference the respondents were asked the following questions during the deep interviews: *Has your child ever requested a certain product because a friend was using it? What was this product? How often did this occur?*

Out of the fifteen respondents, only one mother claimed, that her child was not affected by their friends or peers in any way, in the same section of the interview, the respondent went back to discussing how the television has affected her child a lot, especially during Christmas. One other mother claimed that, her pre-school child was too small to be affected, however her elder daughter in second grade is very much influenced in terms of toys and candy. However, she also added:

„Because you can't bring food (to the preschool) he can't see what others eat at home. It is also not allowed to bring in toys, only sleeping animals and books. His friend Armin also likes Paw Patrol, and when Santa brought him a toy figure, he said he would show Armin. But he doesn't ask for something because of this” (Female, 37, Budakeszi).

All other respondents mentioned mainly food and toys, a few mentioned clothes. Different types of food were mentioned by eight respondents while toys were mentioned by five. One mother, whose children hardly consume any form of media at home mentioned, that her child mostly asked for tablets, due to the influence of peers:

„Well, they influence them. We always listen: now they got this and that, now the Easter bunny brought them a tablet. And Daddy and Mom bought the four year old a tablet or a phone. We tell the kids, that we can get them a tablet, we also explain to them that they can choose, and then we wouldn't be able to spend that much time together. If there is no tablet, we can go hiking, biking, exercising” (Female, 31, Siofok).

As mentioned, food was the most popular category. However, what was even more interesting was the source, namely the peers, was different in numerous responses, one mother mentioned that her child had a discussion of her favourite chocolate (Kinder Joy) with an unknown boy in the grocery store. Another mentioned that her daughter asked for gummy bears after first trying them at her cousin's house. A third mother mentioned that her child saw another child eating chips at the playground, and later asked for the same brand (Pombear). The pre-school was also mentioned as a source of influence for the children by various respondents.

Always in kindergarten, 'Mom Gergő brought an I don't know what, and he said he bought it here and there and we should get one like that too'. (What was it specifically?)

Biscuit. Because moms love to bring little snacks in before or after preschool. She'll see it and then 'mom will you buy me one too?' Last time it was a Coconut pole (Kókusz rúd), a little boy was eating it" (Female, 36, Veszprém).

"The RioMare tube, they have a lovely friend from their nursery, who eats it without anything else, this is the Luca-kind tunacream and they like to eat it that with bread" (Female, 37, Budapest).

The second most popular category was toys, together with this category the pre-school as a source was also often mentioned. In addition, multiple respondents mentioned the fact, that when children ask for specific toys their reasoning behind it often is that a specific friend of theirs also owns that toy. Interestingly the respondents could only recall three toy brands, LEGO, Ninja Go and Frozen.

„Rather with cartoon characters, the little one is currently obsessed with the green Ninja Go, he has never seen it on TV, but a friend of his likes it, he even asked for it to be his birthday cake. What's interesting right now is, he doesn't want a product, but a real hamster because his friend just got one" (Female, 30, Budapest).

„Yes, there was a doll I think from the Frozen movie that was making music and spinning, this was brought into preschool by a friend, She fell in love with this doll and was nagging me for a couple of weeks to buy it, she finally got it for Christmas" (Female, 34, Salgotarján).

Two mothers, both of girls mentioned clothes:

„Clothes, of course, a Frozen skirt, because her friend has it in kindergarten too". (Female, 30, Törökszentmiklós).

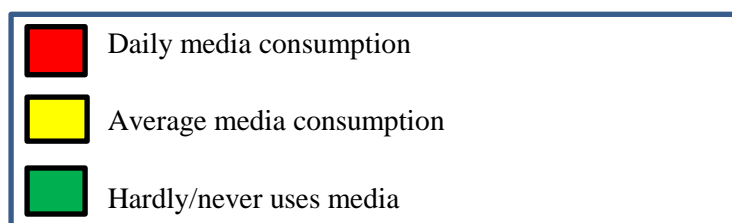
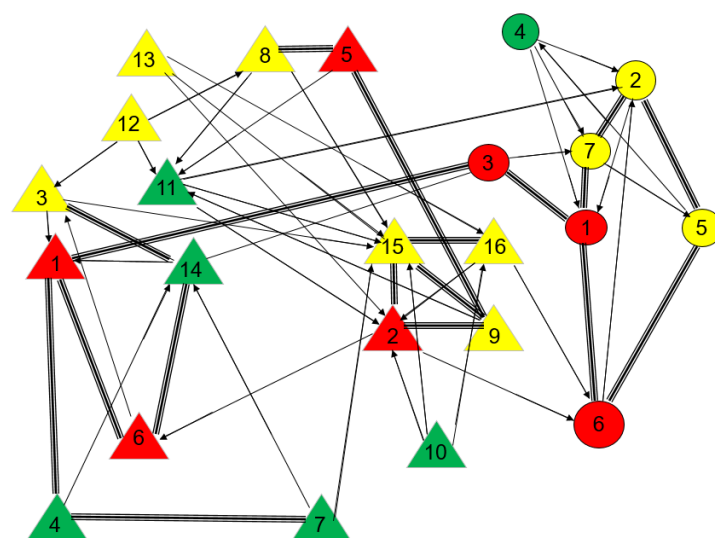
As mentioned in the methodology section, sociometries were conducted in two different preschool classes in order to compare how logo recognition is linked to friendship groups. The first sociometry was conducted during the brand awareness test (n=23). The results of the postman game can be seen above in the sociometry matrix and the sociogram below (see Table 18. and Figure 32). The number one's in the horizontal rows indicate who the child selected, and the numbers in the vertical columns indicate who that child has been selected by. Mutual occurrences are then noted as a mutual friendship between the children. The results obtained in the matrix are marked on a sociogram (see Figure 32), where the square represents boys and the circle represents girls. Circles and squares are connected by arrows. The arrow moves from the selector to the chosen one. Thicker arrows indicate mutual friendships.

Table 18. Sociometry Matrix of the Postman game

	Agoston	Lili	Zoli	Tomi	Anna	Eszti	Szili	Vince	Danun	Bende	Rosi	Barnuz	Dávid	Gyula	Letti	Andris	Bazzi	Lorand	Máté	Berci	Dani	Adél	Zsiga
Agoston	X					1	1			1													
Lili		X				1									1								1
Zoli			X							1					1							1	
Tomi	1			X																1	1		
Anna		1			X						1												1
Eszti	1	1				X																	1
Szili	1						X					1								1			
Vince								X					1	1			1						
Danun		1			1				X														1
Bende	1				1					X										1			
Rosi					1				1		X					1							
Barnuz						1						X								1	1		
Dávid								1					X				1					1	
Gyula								1						X			1					1	
Letti		1			1					1					X								
Andris			1													X					1		1
Bazzi			1		1												X					1	
Lorand				1									1				1	X					
Máté				1															X		1		1
Berci	1				1					1										X			
Dani			1											1							X		1
Adél		1			1						1											X	
Zsiga			1												1						1		X
Total:		5	5	5	2	5	3	2	2	1	3	3	1	2	2	4	0	4	0	0	4	9	4

Source: Own Construction

Figure 32. Sociogram of the Postman game:



Source: Own Construction

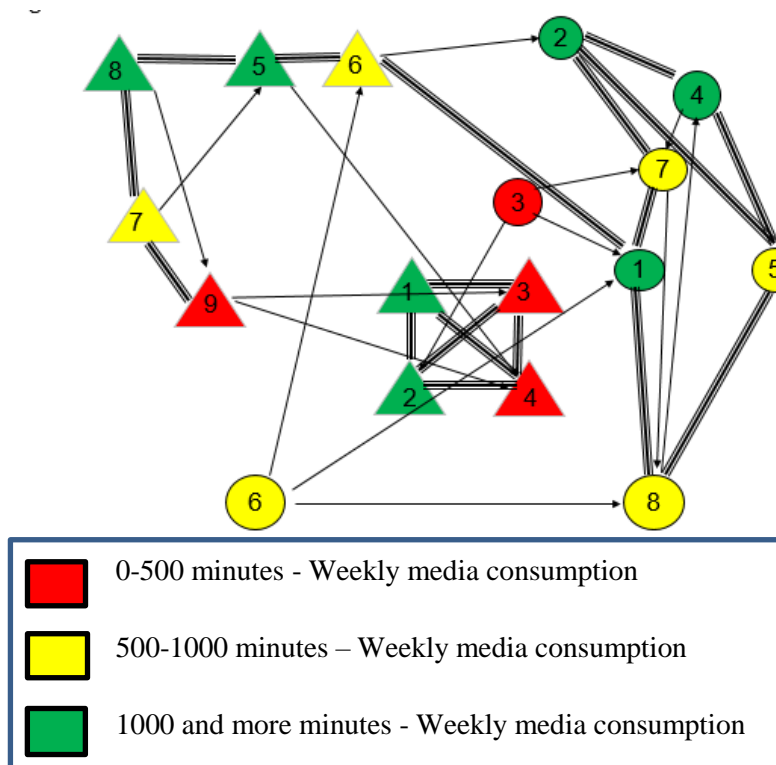
Five children had no mutual relationships in the group, while three had the maximum of three mutual relationships. All in all, from the 6 children with a low logo recognition, four had no mutual friend relationships. From the 7 children with high logo recognition, all had either three or two mutual friend relationships. The Kubu product needs to be highlighted, as four children recalled they know the product from a commercial, four claimed to know it through a girl in the class (the circle number 5 in Figure 32). Indicating a relationship between the number of friendships a child has and their logo recognition.

In order to validate these results, the sociometry was conducted during the Hungarian Brand Awareness Instrument study as well, within a preschool class where everyone filled out the instrument (n=17). The sociometry matrix and the sociogram are presented below (see Table 19. and Figure 33). Two children had no mutual relationships in the group, while seven had the maximum of three mutual relationships and six had two mutual connections. All in all, from the 5 children with a low logo recognition, one had no mutual friend relationships, three had two mutual and one had three mutual relationships. From the 6 children with high logo recognition, three had the maximum of mutual relationships, one had two, one had one and one had no mutual relationships. Thus, it has to be noted, that from the two children with no mutual friendships, one girl was in the top three of the media consumers in the given class, thus is it very likely that her high media consumption had great influence on her brand recognition. Still in general, in terms of logo recognition, this sample had no clear patterns as to the number of mutual friendships influencing logo recognition. When looking at media consumption and logo recognition, a few patterns do arise, such as the fact that the top three media consumers of the class all belonged to the high logo recognition group. In general a pattern could be seen between the level of media consumption and logo recognition, however, there were a few outliers such as girl number 1, who had a rather low level of media consumption, yet she was one of the best at the logo recognition. Interestingly, she is the child with the most social interactions, while she has three mutual relationships, two other children selected her as a friend. This underlines the findings in the first sociometry, that the relationship between the number of friendships a child has increases their logo recognition (even without a high media consumption).

Looking at particular brands and links between peers relationships, two particular products (Dörmi and Kinder) were both mentioned in a group of friends that all had mutual relationships. Finally when looking at the brand preference of children in

comparison to peers relationships, out of the two girls with no mutual relationships, one had by far the lowest preference for branded products, even though she had an average media consumption. Out of the 10 possible choices, she only picked three branded products (the mean answer of the group was 6,8). Comparing this preschool class to the previous one, it can be said, that there are far more mutual relationships. Hardly anyone is left out, possibly due to the size of the class, which is smaller than the previous group, this could also be the reason why there are not as big differences between brand recognition within this group than the previous one. A further possible reason for the different outcomes could be that one of the sociometries was conducted in a public preschool group, while the other was conducted in a private preschool group. This suggests, that there are most likely gaps within the income levels of the various parents in the two groups, which could result in differences in the level of brand usage amongst children.

Figure 33. Second Sociogram of the Postman game



Source: Own Construction

Table 19. Sociometry Matrix

	<u>1 (M)</u>	<u>2 (M)</u>	<u>1 (F)</u>	<u>3 (M)</u>	<u>4 (M)</u>	<u>5 (M)</u>	<u>2 (F)</u>	<u>3 (F)</u>	<u>6 (M)</u>	<u>7 (M)</u>	<u>4 (F)</u>	<u>5 (F)</u>	<u>6 (F)</u>	<u>7 (F)</u>	<u>8 (M)</u>	<u>9 (M)</u>	<u>8 (F)</u>
<u>1 (M)</u>	X	1		1	1												
<u>2 (M)</u>	1	X		1	1												
<u>1 (F)</u>			X						1					1			1
<u>3 (M)</u>	1	1		X	1												
<u>4 (M)</u>	1	1		1	X												
<u>5 (M)</u>			1			X			1	1							
<u>2 (F)</u>							X				1	1		1			
<u>3 (F)</u>		1	1					X							1		
<u>6 (M)</u>					1	1	1		X								
<u>7 (M)</u>					1					X					1	1	
<u>4 (F)</u>							1				X	1		1			
<u>5 (F)</u>							1				1	X			1		
<u>6 (F)</u>			1						1				X				1
<u>7 (F)</u>			1				1							X			1
<u>8 (M)</u>					1					1					X	1	
<u>9 (M)</u>				1	1					1						X	
<u>8 (F)</u>			1					1								1	X
Total:	3	4	5	4	5	3	4	1	3	3	2	2	0	4	2	3	3

Source: Own construction

All in all, the interview respondents underlined, that peers have an effect on the consumer behaviour of children, especially regarding snacks and toys. A slight gender difference was also noticed, that girls are also influenced regarding clothes, while none of the parents of boys mentioned this. The Sociomerty studies also brought numerous interesting insights on how peers might influence brand recognition, which ultimately could influence brand preference in the long run. In the first sociometry test a link between high logo recognition and vast mutual friendships arose, while in the second sociametry a link between low brand preference and low mutual friendships could be witnessed. Yet, as the results are rather different, further studies in this specific section would be necessary.

4.4 Other factors influencing children's brand awareness and preference

The conceptual framework found in chapter 2.4 also discusses individual factors influencing the food consumer behaviour of children besides the socialization agents discussed in the research questions. Furthermore, in-store factors are not part of the research questions but a part of the framework, thus some results from the various methodologies used in the dissertation reflect on these individual factors as well as the in-store influences presented in the current chapter.

A reoccurring theme regarding other factors influencing children's brand preference and purchasing behaviours was the in-store environment, especially the packaging of products within stores that target children. Several parents recalled, that children often spontaneously ask for certain products, they never asked for before primarily in a store setting.

"If we go shopping and they see a nicely packaged product, it influences them. So it influences them while shopping" (Male, 43, Győr).

Packaging; from the colours, forms, shapes, accompanying toys and cartoon characters printed on to the package itself, all these topics were brought up by more than half of the participants. A text search for the word packaging also clearly shows, that the answers given from participants are mainly associating packaging to an influencing factor for their children (see Figure 34). Especially the Disney's cartoon „Cars“ was mentioned on a dairy product by several mothers with boys:

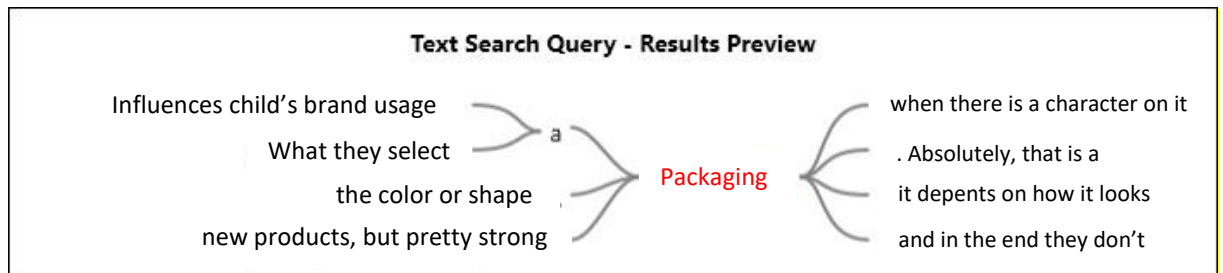
„Yes, Dominic had this. He saw an ad, a pudding, with a little toy, he said he needed it. Then a box of cereal with the figure from Cars. Or that beverage, with the label on it ... like that ... He didn't necessarily see that in an advertisement, or if he liked the packaging in the store, he asked for the pudding from the TV ad, but he also ate the pudding" (Female, 29, Brigitta).

„The packaging, if it has a cartoon on it there is a bigger chance that he asks for it, that's how the Tiger cheese started. And this is how they choose cereal too, once they want the one with Lightning McQueen and once the one with the Tiger. Once I absolutely knew that he didn't even like the type of cereal, but he still asked for it because of the packaging. I talked him out about it because in the end we (the parents) have to eat it if they refuse" (Female, 30, Budapest).

The Disney cartoon „Frozen“ was mentioned of mothers with girls:

“Lately we have to buy things with Frozen, now it was a shower gel, for example. If corn had Frozen on it she might even eat that “(Female, 36, Veszprém).

Figure 34: Word tree for the text search packaging



Source: Own Construction using NVivo

Finally as mentioned, health was a big factor influencing the brand preferences of parents. Especially for those parents whose children suffer from intolerances or allergies this was a reoccurring theme which also vastly impacts the brand preference of the families:

“I first excluded cacao, but she got a rash, because they were drinking Nesquik, but now they can't drink that anymore. They can eat the Aldi chocolate snail without getting a rash, with the Interspar one they get a rash” (Female, 32, Veszprém).

„They can eat chocolate every 2-3 days, the only one they can eat is Kinder chocolate which has no hazelnuts. Everything else has it, starting with biscuits, everything. With household biscuits Györi has none. In Aldi I can find most of the products that don't have peanut or nut” (Female, 32, Veszprém).

„My kids also eat sweets, they just know what. They know that they have biscuits or Kinder chocolate in their preschool bag too, if they forget to tell me that somebody else is bringing cake” (Female, 32, Veszprém).

Other popular health aspects considered by parents in their and the families brand selection was the sugar content of foods, as well as the meat and fat content:

“A mayonnaise. I used to buy Hellman's before, but when it turned out to be high in sugar, I searched, searched, and found Aldi's mayonnaise” (Female, 31, Siofok).

“I buy at Lidl because it's about 90% meat” (Female, 31, Siofok).

„Müller has an oatmeal. Long time ago in DM you could also get some organic soup cubes that aren't that greasy stuff” (Female, 37, Budakeszi).

Purchasing items due to their added health value was also discussed:

The drinks, sugary liquids. Sió apple juice and Pear juice, and DM has a very bright coloured bottle with a sport flask, I don't know the name, a polar bear is on it, but I always buy it because it says extra calcium and vitamins, so because of its vitamin content, if she

is already drinking such sugary juice, it should have extra vitamin. Rauch! (Female, 35, Szalkszentmárton).

Finally, not only food related issues were brought up, but detergents for skin health and shoes for other health related reasons:

„I usually buy this type of detergent for the children on the Internet, because next to the food allergies they also have eczema. I order this from DM online” (Female, 36, Nográd).

„Health. With shoes, I don't buy them cheap shoes because it might fall apart in three months, so I stick to this brand because it's good for the kid's feet and in terms of health, I don't buy clothes for everyday use that are not cotton. They have exceptional costumes” (Female, 32, Veszprém).

The in-store observations with the respondents also highlighted, that the placement of products within the store influenced children too. From the requested products by the children, four could be found right on the eye level of the children, three were below eye level, and one over eye level, while one product was placed at the cashiers desk.

The Hungarian Brand Awareness Instrument brought some interesting insights in terms of age and gender compared with brand awareness. As mentioned in the previous subchapter, the Pearson's correlation coefficient was used to examine the relationship between brand awareness and age, there was a medium strength, positive correlation between brand awareness and age, which was statistically significant ($r(57) = .301$, $p = .021$). Independent sample t-tests were performed to assess any differences in the mean of gender and brand awareness, brand preference, brand recall and brand recognition. The t-test revealed that there were no statistically significant differences in the means of gender and the other variables tested.

There was also a difference between the recall of certain logos within genders. Within the pilot brand awareness test, the Barbie logo was only known to two children, both of whom were girls. Interestingly, more girls than boys identified the LEGO logo correctly. McDonalds was recognized by 6 children, 4 boys and 2 girls (siblings). Although many children knew that Volkswagen is a car, only 5 knew the brand name, 1 girl and 4 boys. Significantly, more girls recognized Minimax than boys did. Regards to the Rovio logo, 3 children recognized the logo, but all of them called it "Angry Birds" (which was expected because Rovio developed the Angry Birds game and the logo appears at the beginning of each game). Only boys recognized the logo, 2 average and one frequent user.

5. Discussion

In the context of this study, the influence of environmental and social surroundings on the individual food consumer behaviour of children are defined and analysed. The results of the study brought numerous interesting insights. Regarding the influence that the media has on preschool children as consumers. Results underlined, that there is no correlation between the amount of television watched and children's knowledge about advertising. This phenomenon was supported by a number of researches (Levin, Patros and Patrella, 1982; Oates, Blades, and Gunter, 2002; Blades; Oates and Li, 2013). However, it is worth highlighting the study of Oates, Blades, and Gunter (2002), states that even many 10-year-old children do not understand the persuasive intent of advertising. The research results clearly reflect that at this age, children are unaware of the selling intention of advertisements, yet alone know exactly what these are. This already influences their consumer behaviour, as they perceive advertisements and subsequently the products advertised in a completely different way than adults do.

Furthermore, television consumption does in fact impact the extent to which brands are present on a daily basis within the lives of families as confirmed by the analysis of the deep interview results. As mentioned, food is the most frequently advertised product category on children's television program (Fiates, Amboni and Teixeira, 2008a), thus television advertisements mainly impact the food consumer behaviour of children. Interestingly, this was not the case with internet consumption. The results of the Child Eating Behaviour Questionnaire further suggest that media consumption influences various aspects of eating behaviour such as picky and emotional eating, this suggests that the brand selection chosen by children might be narrowed down through the media as their picky eating increases with increased media consumption.

The relationship between media consumption of pre-school aged children and their brand awareness was also looked into in more detail. As brand awareness is supposedly a reflection of food marketing exposure, it was expected that certain food-marketing related variables, including consumption of frequently promoted foods and TV viewing, would

be related to brand awareness (Turner et al., 2015). This was underlined by the pilot studies, the sociometry as well as the in-depth interviews. The research results reflect, that the knowledge of logos and brands was much higher amongst those children, who viewed television on a daily basis. These children demanded more branded products and felt a greater need to consume than those children who rarely or never watched television. The pilot logo study revealed, that those children who viewed television daily for several hours knew more logos than children who hardly watched any television. The LEGO example further highlighted, that while all children recognized the product, children who do not watch television as much, had difficulties naming the actual brand name from looking solely at the logo.

The logo test of the sociometry research went even further and considered both television and internet use of the children. There was a pattern between children who hardly guessed any logos correctly and the lack of media consumption. Television and internet consumption were also looked at separately. The results yet again showed that brand awareness is positively linked to the volume of television consumption, underlining the results of Valkenburg and Buijzen (2005). On the contrary, once again, hardly any pattern could be noticed regarding the internet consumption frequency and the logo recognition of the children. The current results suggest that while children are influenced by advertisements on television, this is not necessarily the case with advertisement on the internet. A possible explanation for this is on the one side, that internet advertisements can be skipped easier than television advertisements, while playing diverse applications that have no advertisements at all on tablets is often also regarded as internet use by parents which distort the results. Finally, the current advertisements online are very different from the ones on commercial television, while it is very easy to find data on what exact advertisements run on various broadcast channels, this is not the case with various online platforms currently used by children.

The Hungarian Brand Awareness study also found a positive correlation between brand awareness and media consumption, yet this was only of medium strength. Indicating, that there is a link between some form of media consumption and brand awareness, however it might not be the most important influencing factor in the children's lives. These findings are contradicting to the results of Turner et al. (2015), who found no correlation significant between brand awareness and media consumption at all. While they are

partially in line with the study of Valkenburg and Buijzen (2005) who explored commercial TV exposure in relation to brand recognition and reported weak positive correlations ($r = 0.16$, $p < 0.05$). All other International Brand Awareness Instruments conducted did not test for the media consumption variable, thus a comparison is not possible. However, in this case, it also has to be highlighted, that there are five years between the execution of the two studies, furthermore average screen time in Australia could be lower compared to Hungary.

The findings also highlighted, that media consumption does in fact influence the brand preferences of pre-school aged children. According to the data gathered in the course of the current dissertation, media was proven to influence brand preferences positively in numerous ways. Already the Santa Claus question in the first brand awareness pilot study underlined this, as all branded toys were requested from children who watched several hours of television on a daily basis, also underlining the findings of Pine and Nash (2002). This was further underlined by the in depth interviews, nearly all respondents recalled several incidents, when their child asked for a specific product due to an advertisement. The type of products mentioned were toys and various types of food (mainly dairy in this sample). However, apart from television advertisements, the respondents also mentioned that advertisements on tablets and magazines influenced their child's brand preference. Christmas was a re-occurring theme too, which is understandable, as advertisements targeted at children peak right before Christmas. As for a specific brand, Paula pudding by Dr. Oetker was the brand mentioned the most by various parents during the in-depth interviews. The fact that this product was highlighted is also no surprise. Paula pudding, is a chocolate and vanilla flavoured pudding targeted at children aged 4-9. It was the most advertised cooled milk pudding in 2014 (Trandmagazin, 2016). The mascot being a friendly, animated, rapping cow with sunglasses. The packaging is recognisable by its distinctive cow-like splodges which can be seen through the transparent pot. In the television advertisements, numerous children sing and dance to the catchy song about the cow Paula. The fact that this product was mentioned explicitly as one of the products that children saw in an advert and asked their parents to purchase strongly underlines the impact such commercials have on the brand preference of children.

The Hungarian Brand Awareness Instrument further found that from 10 different branded vs. non branded products, only the selection of branded chips was significantly influenced

by television consumption. The findings suggest that television consumption can influence brand preference of children, while internet consumption does not. A possible reason why only the chips turned out to significantly influence brand preference could be that this specific brand is currently being highly advertised on commercial channels watched by children.

Family influence on child consumer behaviour, has also been looked into extensively throughout the dissertation. Findings of the in-depth interview underlined that parents are a large influencing factor of children, their daily actions impacting children's brand awareness and preference daily. Firstly, interviews and observations showed that parents do allow their preschool aged children to make their own individual selections with certain grocery items such as snacks and dairy products, however the majority of the brands are still selected by parents. Consequently, they have a great influence on the availability of brands within the household, which ultimately allows children to become more acquainted to certain products. In terms of food consumption, parents influence children by having the decision over what will ultimately be bought in the store. Although children have considerable influence over family purchases, parents remain the main gatekeepers to a child's food intake. The observations showed that children often initiate purchase requests, but it is often up to the parents to make the final decision, that limit or support what product or brand will be used by the child at home, acting as gatekeepers to their consumption. Besides this aspect, parents were also observed offering their children purchase options of various food products, in these cases children were asked if they would like to purchase the brand giving them the opportunity to be the actual decision makers (please see the typology created in chapter 2.1.4). Also giving the option of choice, making them the selector of alternatives. These aspects all influence what children end up consuming in the future. The fact, that 24% of the children asked for some type dairy products, while 21% of them asked for some type of snacks, point to the need for parents to employ effective refusal strategies and encouragement for children's interest in fruits and vegetables as underlined by O'Dougherty et al. (2006).

Findings also emphasized the importance of extended families, the income level of the family as well as possible food allergies that influence the brand choices of children and their entire family's consumption behaviour. Income levels of the parents were compared to not only the amount of brands mentioned but also to their child's brand preferences.

Parents with a higher average income recalled more brands in connotation with their child. Indicating that parents with a higher income purchase more branded products whilst acting as role models, as their children as a result grow up surrounded by more branded items, shaping their brand preferences positively.

Finally, the extent to which peers influence the child's consumer behaviour was also studied using numerous different methodologies. Both the sociometry as well as the in depth interview indicated, that peers and friends influence children's brand awareness as well as their brand preferences. This was however limited to certain products such as toys and various snacks, the extent is not as high as the families influence, yet more than previously expected in literature (such as Drenten, Peters and Thomas, 2008). Almost all respondents in the in depth interview were able to recall several situations where their child requested items due to their peers past influence. Interestingly, the extent to which peers influence each other was highly dependent on preschool rules. The sociology study also underlined the current findings, as one study found, that a positive relationship between exists between the number of friendships a child has and their logo recognition. This was however, not validated in the second sociometry. As mentioned earlier, social network analysis is a relatively novel practice, to date, the current dissertation is the only study where a sociometry was applied to compare brand awareness and preference within children. Farrow et al. (2011) used a similar technique on pre-adolescent children, yet only compared their levels of dietary restraint and body dissatisfaction, to friendship groups. The study suggested, that peer group levels of dietary restraint are related to individual eating, children, however, were asked to name a much larger volume of friends. While the current sociometry studies brought numerous interesting insights, this form of test should be looked into further in the future as it bears great potential.

A further daily action impacting today's children that has shifted in the past is the involvement of children in grocery shopping. Findings emphasized the influence that various forms of packaging exert on children in a store setting as well as the importance of product placement. The health of the children was also a large factor influencing the food consumption behaviour of the entire family. A positive relationship between brand awareness and age could also be found, these findings go in line with the findings of Turner et al. (2015), the main reason for this could be linked to Piaget's cognitive theory discussed earlier, the younger children not only lack the cognitive skill sets to fully

comprehend certain brands that are advertised to them on a regular basis, but the amount of media exposure also grows drastically with age.

6. New Conceptual Framework

Based on the findings above, it can be stated that various additional factors influence the consumer behaviour of preschool aged children than previously expected. On the contrary, some factors from the initial framework do not contribute to influencing children's food consumption behaviour to that extent, as assumed initially. Figure 35. depicts the revised conceptual framework that has been changed slightly compared to the original framework in Figure 24.

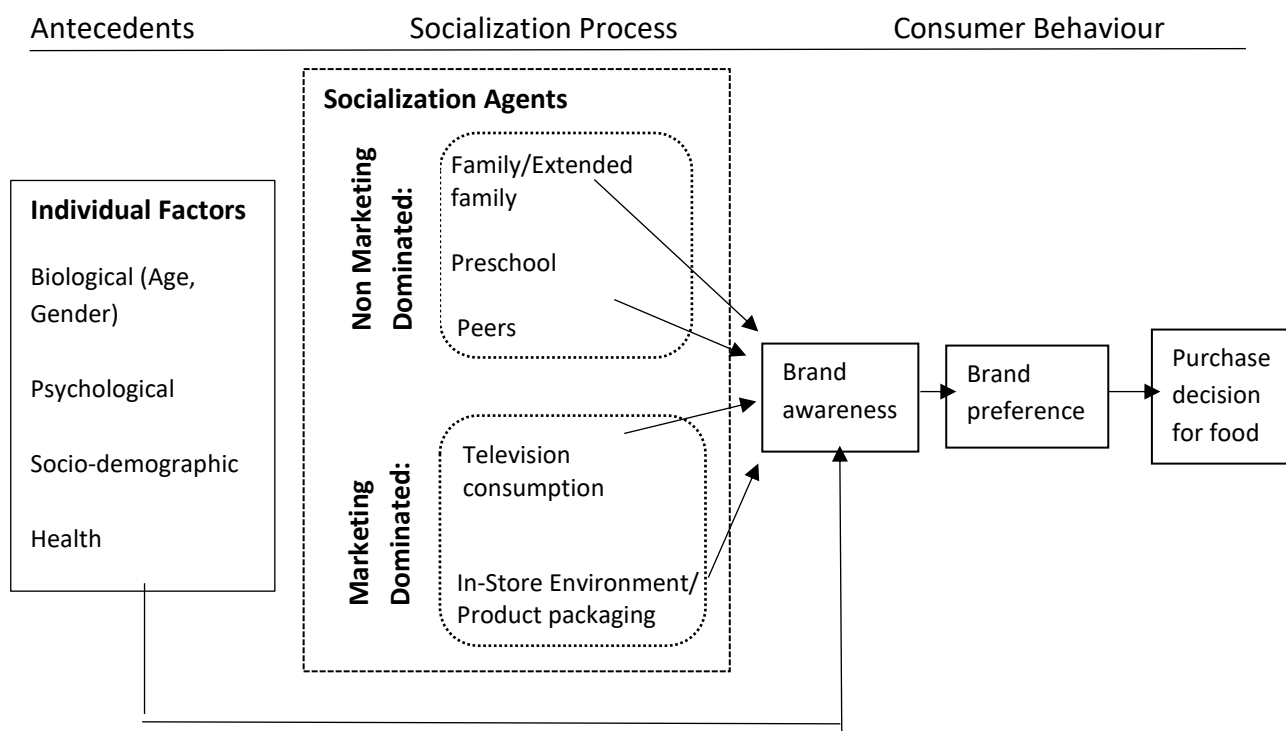
The first research questions underlined, that the amount of media exposure is very much in line with brand awareness, however, results also indicated, that within the media consumption variable, it is mainly television exposure that influences the food consumer behaviour of children. Internet exposure was not an influencing factor of brand awareness and preference compared to television exposure. This the variable media consumption is modified to television consumption.

There were two reoccurring themes within the second research question regarding the influence of parents that was not mentioned by literature. One being the amount of influence the extended family not just the siblings and parents have on children. The second one being various health related factors that have a great impact on the brand knowledge and preference of the children as well as their families. Due to this, both factors "extended family" and "health " were added to the conceptual framework. "Extended family" was added to the "Family" variable. While "Health" was added to the Individual Factors as a separate variable, as most food allergies and intolerances develop over time, thus they do not belong to the biological factors. A factor that seemed to greatly impact the families affected was the "marital status" of the parents. Sadly, only the tip of the iceberg was discussed with participants, even so this subject deserves to be continuously studied with further participants as this factor seemed to have a great impact on the families consumption and brand preferences, however, as it fits to the socio-demographic factors, it will be included within them.

Analysing the influence of peers resulted in the addition of another socialization agent “preschool”. This reoccurring theme in the interviews made it clear, that not only do peers greatly impact children, more so than previously assumed in past literature. The rules preschools follow regarding eating, but also bringing toys and snacks into the institution greatly impacts the extent of brand preference a child may develop towards a certain product. The distinction between private and public institutions may also play a role, thus it is added to the definition of the preschool variable.

The findings from the various studies conducted in the current dissertation underlined, that while family, media and peers are the main forms of influence in terms of consumer behaviour on preschool aged children, the in-store environment does in fact shape their brand awareness as well. Furthermore, issues such as packaging and the use of cartoon characters on different products aimed at children shape their brand preference immensely, deserving to be mentioned separately in the consumer socialization section of the conceptual framework. The “product packaging” variable was added within the in-store environment variable as the packaging of products does not fall under the definition of the stores environment rather than its content.

Figure 35: Revised conceptual framework: Factors affecting the consumer behaviour of children.



Source: Own construction

Based on the findings of the current dissertation, there is still room for future studies especially in the section of peer influence. While according to my opinion, applying the sociometries in this context was an innovative solution. Especially due to the fact, that according to my knowledge no other paper to date has used a sociometry to compare the peer influence of food consumption on children. It has to be noted, two sociometries were not enough, especially as the results of the two sociometries were in fact not fully consistent regarding the results. However as discussed, there could be numerous reasons for this, conducting a few more studies of this matter could help answer these questions. The sociometries of the two current classes could also be redone over time, comparing them to previous answers. The same is true for the observations applied in the current study. Currently only the deep interview participants were observed, thus the sample size for this specific study was rather low. The same observations could be repeated even as with the approach of Page et al. (2018), who analyzed completely random people shopping in grocery store with their children. Only observations were made with no follow up interviews whatsoever.

Another point that is still worth further research as the results were surprising to some extent is the internet consumption of children and the influence of this on brand preference and brand awareness. Nearly all studies conducted within the dissertation found no relationship between internet consumption quantity and the level of brand awareness and brand preference. However, as the recent trends are shifting towards an increased internet consumption in preschool children, it would definitely be important to monitor and study this phenomenon over time. As if there is no relationship between internet use and brand awareness, and children watch less television over time, it could well be, that their brand awareness in certain areas highly advertised in television currently will decrease over time as they consume more and more internet over television.

6.1 Managerial Implications

The current study has several practical implications, the results of the study aim to give practical advice to decision makers regarding policies regulating the media usage of preschool aged children, as well as the types of products, advertisements and packaging targeted at preschool aged children. In light of the findings above, it is important for policy makers to ensure that the consumer socialization of children takes place in correct and ethical manner. The current study also gives ethical managerial implications to retailers and manufacturers. Sadly, current marketing practice mainly promotes low nutrition foods and beverages. Rebalancing this food marketing landscape is key. A systematic review on the issue highlighted, that little progress towards policy aims has been achieved in the past decade (Cairns et al., 2013). Due to this, the managerial implications will focus on summarizing what has been done so far in this specific field in terms of media usage and food marketing regulations and how this could be improved in order to become more efficient. The chapter then continues by giving retailers ethical managerial implications based on the current findings.

The Infants Relief Act in 1874 was one of the first attempts to protect children as unique participants in the free market, by declaring contracts concluded by children as invalid. As legislators believed, that children could be overloaded by merchandising and unable to react suitably to the commercial interests of retailers (Kunkel et al. 2004). This is similarly the case in Hungary, the first law to protect children in such a way was established in 1891, by the Child Law XV. t.c.. However, a lot has changed in the last few decades and policy makers are failing to keep up with the changes in order to protect children.

In the year 1978, the Federal Trade Commission in the U.S. asked for a ban on all commercials directed to children under age 7, on the basis that they were too young to understand their intent and thus advertising was unfair, this request that was overruled by Congress in the 80s (Shifrin, 1978). With purchases of children aged four to twelve in the U.S. increasing from 6 billion in 1989 to 30 billion in 2002, the money at stake now is too much, thus a ban as the one suggested back in 1978 is very unlikely to ever be executed. However, other countries have different approaches. TV ads to children are banned in Sweden and regulated in the UK, where food advertisements for HFSS high

fat, sugar and salty foods have been removed in programs of special appeal to children aged 4 to 15 years (WHO, 2013), a similar approach in Hungary would without a doubt benefit children in numerous ways as well.

a. Regulating Media Usage and Advertisement directed to children

Unfortunately, this research has shown that a large proportion of children under the age of 8 are exposed to a harmful amount of media, which in many cases can increase their brand awareness as well as their brand perception, which ultimately influences their consumer behaviour as well as their eating habits. While the results suggest, that the media influence affects preschool children in numerous ways, thus it lies in the responsibility of the advertising companies and decision-makers to protect the future generations and to ensure that they develop in an adequate and healthy manner. What makes the problem more serious, is the health related behaviours of Hungarians in specific. According to Hofmeister-Tóth (2016) while health is the most important value to Hungarians, in terms of achievement it is only ranked 14th for the general population. Thus, health-conscious consumption cannot be detected amongst a significant section of the Hungarian consumers. Healthy eating and food shopping is not a significant factor for Hungarians, although a small segment was detected who are health-conscious and seek healthy nutrition characteristics (Dörnyei et al., 2014), in the form of young couples and empty-nest households (Neulinger and Simon, 2011). As a matter of fact, 19% of the Hungarian children aged 8-12 visit fast-food chains at least once a month (Neulinger, 2015). Meaning the majority of Hungarian households will initially eat less-healthy options, which are generally more popular with young children.

Even though in many countries advertising ethics require that advertisements should not be directed at children because they tend to absorb information without filtering it, this is not the case in Hungary. The current Media Act Chapter I. Under the heading 'Protection of children and minors', deals with the ethics of advertisement to children from the § 9. onwards. The law was passed in 2011, but some points were amended in 2019. Article 13 of the Code of Advertising Ethics, entitled "Protection of Children and Young People". However, for the most part it deals with age rating, discussed how children are not to be depicted in advertisements of certain products and that advertisements should not be misleading to children. Furthermore, the formulation is very vague and what is most important, is not obligatory by law to stick to these decrees, but it is expected. Thus the

best outcome would be, to achieve policies that actually take advertising to children more seriously and to pass harsher rules and regulations regarding this issue.

Although current results clearly demonstrate, that advertisements can affect children, whether they are the advertisers' target or not (Oates et al., 2003). The current dissertation also underlined, that while children can distinguish between advertising and normal television programmes, it does not mean that they actually understand its persuasive role. Which adds to the debate as to whether advertising targeted at children should be permitted or not. The first steps in the right direction could be some form of stricter legislation regarding advertisements directed to children. Furthermore, it is necessary to educate parents (through kindergartens and schools) of the affects excessive media consumption can have on their children, as they are often completely unaware of this specific issue. It is essential that parents learn how to properly guide their children in the inevitable world of media. Teaching parents of child friendly applications such as YouTube kids as well as time and content restriction settings on tablets and mobile phones is key. Educating them, that while the exposure to cartoons is not necessary harmful, a high exposure to advertisements can be, thus switching to DVDs instead of cable television could already make a large impact.

Furthermore, there is great need for a policy recommendation as for how much screen time is appropriate for a child at what age in order to hinder children for any kind of negative media affects, unofficial recommendations exist, especially in the US, but Hungary has yet to make an official statement. At the same time, policy makers must realize that technology is becoming fundamental in the lives of children and that policy recommendations for no or limited screen time are just not realistic for today's families. The term developmentally appropriate use of technology is rising in popularity, however a clear definition of what "developmentally appropriate use" means with regard to young children is lacking. This is also the case in Hungary, as media use in preschools is currently not regulated. It is clear that early childhood educators are using mobile devices in diverse ways, but to what extent they are actually implementing media in developmentally appropriate ways remains unclear. Strong professional development specifically in educational technology is needed to help support teachers' understanding of how to use technology to effectively support young children's learning in the classroom (Barr and Linebarger, 2017).

A recent report by Critchlow et al. (2019) with the title 'Digital Feast: Navigating a digital marketing mix, and the impact on children and young people's dietary attitudes and behaviours' demonstrates the urgent need for policy action to regulate the online marketing space as well. While television remains popular with children, the use of online platforms by young people has been increasing. The report underlines, that policies move too slowly to keep pace with digital marketing campaigns. To ensure consistency in regulation with television and a level playing field between platforms, and to avoid displacement of advertising spend to online, restrictions must apply across all digital media not just television. Existing methods to determine a user's age online are not sufficiently accurate, companies cannot guarantee that children are not exposed to unwanted adverts. Furthermore, it is currently not possible to independently monitor and verify these numbers because online media platforms do not share audience data for their adverts. Exactly how to regulate online marketing appropriately, and who is best to oversee that process, will be a key question for governments worldwide in the coming months and years (Critchlow et al., 2019). Gladly, the first steps have been made in Hungary. The Child Protection Internet Roundtable was created due to the 2001 CVIII law regulating electronic commerce services. On the basis of Section 4 of the Act, president of the National Media and Communications Authority, Monika Karas, created the 21-member roundtable, to promote the protection of minors on the World Wide Web. The roundtable develops resolutions and recommendations for the dissemination of child-friendly internet, including the effective use of filtering software, and raising media awareness among children and their parents. The organization does not have the power to establish binding legal norms, but it can become an effective player in media regulation by promoting self-regulation and good practices. The Board also investigates individual cases, anyone who finds that a content provider publishes information that disregards child protection aspects that could seriously impair the mental and psychological development of minors, such as cruel or natural depictions of sexuality, may appeal to them (Nemzeti Média- és Hírközlési Hatóság, 2019). Still, advertising on the internet as such is still not regulated unfortunately. All in all, there is a great need to further regulate online marketing to children, especially online content needs increased attention of policy makers in regards to explicit marketing (such as social media pages) and subtle marketing (such as celebrity endorsement).

b. Regulating Food Marketing to Children

Much of the prior literature examining food marketing to children has focused on school-age children. The results of the current study further illustrate that the influence of food marketing may begin in the pre-school age, as young as the age of 3. Marketers exploit developmental differences among children of different ages by tailoring their promotional efforts to suit the developmental stage of the children being targeted by the communications. They know that there are great differences in what promotional strategies will work best with children of different ages (Hastings et al., 2003). The review of the literature as well as the findings shows that, there is a lot of food advertising to children. The advertised diet is often healthier than the recommended one. Food promotion is having an effect, particularly on children's preferences, purchase behaviour and consumption and this effect is true for brand and category level. The current dissertation provides sufficient evidence to conclude that an effect exists. The debate should now shift to what action is needed, and specifically to how the power of commercial marketing can be used to bring about improvements in children's eating habits (Hastings et al., 2003).

To move forward several important policy steps must be considered. It is the responsibility of the public health policy makers to take specific measures so that the content of food advertisements during children's television programs as well as online advertisements promote healthy food choices. An example of the current situation is summarized by the study of Song, Halvorsen and Harley (2014). The study found that nutritionally, child-targeted cereals overall are less nutritious than adult-targeted cereals and have higher rankings of sugar sources in the ingredients (Song, Halvorsen and Harley, 2014). Thus advertisements but also the products advertised on children's television channels need to be regulated. A further argument for stricter policies lies in the fact that children's brand loyalty already starts evolving at this extremely young age, which later on has an effect on their entire lives, as the media can persuade children to favourite brands of unhealthy foods. There are currently no regulations and policies regulating this very important issue. A possible solution would be to regulate the products that are advertised to children by only allowing cereals of snacks below a certain sugar content to use certain types of packaging that is highly likely to influence children. Secondly, another option would be to regulating shelf space, by giving healthy products display place at a lower rate in noticeable middle-of-the-aisle distance, and making products that

are high in sugar pay extra for these shelf spaces. Currently in Hungary only the sugar content in foods served at preschools is regulated. The only decree (Act 62/2011. (VI.) VM) that deals with public catering (which is also preschool catering) is also not legally binding and is very vague. There are not many specifics in it, mainly the proportions of materials used are regulated.

Concerns over the effects of television food advertising on children led the UK broadcast regulator, to introduce statutory legislation from 2007 with the aim of limiting ‘the exposure of children to foods high in fat/sugar and/or salt advertising (Ofcom, 2008, p. 1). The introduction of regulations differed between dedicated children’s channels and other channels. For all channels other than dedicated children’s channels this legislation came into force in two phases. In phase one adverts were not permitted in or around programmes made for children or that were likely to be of particular appeal to children aged 4–9 years. While in phase two adverts were not permitted in or around programmes likely to be of particular appeal to children aged 4–15 years (Ofcom, 2007). It was also stressed that promotional offers should not be targeted directly at pre-school or primary school children, and that adverts should not encourage children to consume a product purely to take advantage of a promotional offer, nor should excessive purchase or consumption (e.g. in order to complete a set of collectable items) be encouraged (Ofcom, 2007). Regarding the use of characters and celebrity endorsement, the content rules stated that licensed characters ‘those characters that are borrowed equities and have no historical association with the product’ (Ofcom, 2007, p. 48) and celebrities popular with children may not be used in high in fat/sugar and/or salt advertising targeted directly at pre-school or primary school children. However, the prohibition does not apply to characters, defined as “those that have been created by the advertiser and have no separate identity outside their associated product or brand” (Ofcom, 2007, p. 48). Entertainment techniques such as the use of animated and other fictional characters are more likely to be used in food advertisements than in non-food advertisements aimed at children (Cairns et al., 2013). While faces, particularly those of familiar characters, are remarkably effective at getting noticed in cluttered environments. Using characters (whether they are known ones from the television programs and movies or just simple company mascots) need to be regulated as soon as possible, as this is not regulated at all in Hungary currently and urgently needs to be.

Another popular trend amongst food marketers is adding various toys to cereals, snacks and chocolates, lately even certain beverages aimed at children. While this addition to the packaging obviously is popular amongst children, first steps have been made to regulate this approach. The decree 8/2011 regarding the "Safety of Children's Toys" was the first step in the right direction, as points 4.5, 4.6 and 4.7 in the annex point out, that toys that could be swallowed by children are not allowed to be packaged with food, furthermore, toys that are added to foods have to be packaged separately. However, it has to be noted that obviously these regulations have been made for safety reasons and not to protect children from unethical advertisement techniques.

Finally, a study by Morton et al., (2005) underlined, that even though legislations preventing advertisement to children exist, these are often breached by advertising companies. The study analysed a sample of food advertisements shown during 63 hours of children's programming to investigate compliance and non-compliance with one of the Australian Children's Television Standards (CTS): CTS 20.2a. It was found that 31% of food advertisements breached the standard during children programs. Showing that even when sensible regulations do exist, the work does not end there. These regulations also need to be enforced properly in order to be effective.

c. Managerial implications to retailers

Although one can argue that marketing products to children is unethical, due to the numerous reasons that are stated in the current dissertation. In order to give complete managerial implications, it is important to also look at the current topic in the perspective of retailers. Underlining that marketing to children is highly unethical if products are marketed in deceptive ways that only make the current child obesity epidemic of our time worse. Retailers as well as manufacturers of various healthy product options can develop numerous strategies to help them gain a competitive advantage in an ethical manner.

An ethical yet highly effective technique could be to bridge the gap between children and parents. This could be done through various different promotions or even certain products specially created for this issue. For example, Harley Davidson dealerships organize their events, such as grand openings and rides, with a highly family-oriented atmosphere, leading to positive brand-oriented experiences in children (Paul, 2002). The same could

be done for product launches of healthy food products, involving the entire family from the launch onwards of certain brands.

As children are more involved with in the shopping process today, it would be important to ease the amount of advertising noise a child has to deal with during a shopping visit. As little children ride in carts, it would be important to regulate that only healthier options should be on the eye-level of the child in the cart. Furthermore, the child in the cart is locked into it during a shopping visit, sometimes restless, hungry for focus and stimulation. Many moms would be pleased to have their children concentrating on in-cart media, which plays educational videos to the child, maybe even teaching them about health related issues such as the differences in vegetables and the food pyramid rather than having them bored and frustrated. Creating an opportunity to communicate healthy marketing information to the shopping party in such a way that it provides genuine benefits to both parent and child. Furthermore, children that ride in carts or even accompany their parents by foot are confronted with an overwhelming amount of stimuli during every grocery store visit. Especially children in carts have very limited abilities to scan a great range of new stimuli and process them (Rust, 1993), due to this recognizable elements are crucial. It is important to make packaging and display materials of healthy products stand out more by using colours that are more appealing and memorable for this age group, while banning the same for unhealthy options.

Finally, the current dissertation underlines the importance of two underserved potential markets for producers of various healthy food products. One focusing on allergies and intolerances, the other one being the single parent market. Families where children are prone to allergies turned out to be very brand loyal as they knew exactly which brands were the ones their children could consume without any risks. Creating healthy brands targeting children with specific allergies could not only be extremely successful but potentially make the lives of many families a lot easier.

6.2 Limitations of the dissertation

Unfortunately, the current dissertation not without limitations. Firstly, the literature was not systematically searched using a pre-defined protocol, and therefore there is no guarantee that all relevant studies on the topic were identified. Secondly, there are a number of issues regarding the methods of analysis in particular which must be addressed. One of the most important internal validity threats lies within the in-depth interview itself. As the interview was semi-structured, the interviewer sometimes phrased certain questions differently, which might have affected the answers of the participants slightly. Reactivity is a validity threat, as one cannot avoid either influencing or being influenced when being in such a surrounding. It is not possible to getting rid of the reactivity threat completely, however having an informal conversation with the participants prior to the interview might help the participants to loosen up. Bias also needs to be discussed, as it influences the validity and reliability of study findings, while misinterpretation of data can have important consequences for practice (Smith and Noble, 2014). The possible power asymmetry between the interviewer and the interviewee can also lead to bias, as the interview is not an open everyday conversation between equal partners. It is the role of the researcher to make the participant feel comfortable to open up about the questions discussed so that counter-control does not take place by the participants' withholding information. This can especially be the case in the media usage topic, as parents often do not want to admit openly how much media their children consume on a daily basis. The same is true for any unhealthy eating practices. Also, one of the main limitations of the study, lies in the skills of the interviewer, as a rather skilled interviewer is needed with in-depth interviews to make sure all topics are covered and to get in-depth responses at the same time.

Regarding the pilot brand awareness study and the sociomerty study it can be argued, that certain children were excluded due to theory validity, however this is not the case. The parents were questioned about the children's media consumption in order to compare these with the child's answers and to filter out children, who for some reason choose to make up answers completely during the interviews. These children were not excluded, because they did not suit the theory, they were excluded to keep only accurate and true answers for further analysis. The process of selecting preschools for both the pilot brand

awareness study occurred partially through convenience sampling. As preschools were selected, where some form of prior relationship existed with the researcher, however the main logic behind the sampling was to build a sample that incorporates extreme or deviant cases (Horváth and Mitev, 2015) of media consumption (especially finding children that do not consume any form of media is a rather great challenge in today's world). Due to this, more than one preschool was sampled, however the region where the sampling took place could have been more diverse, as this could have possibly lead to different results. Another issue with the sociometries but also the brand awareness tests were, that the logos tested on the children differed in the two tests, this was mainly for the reason that the second study also looked into online consumption, thus, it made sense to test for logos that can be found in online advertisements too. However using the same set of logos would have made possible comparisons between the two samples a lot more logical.

The same can be said about the preschool sample for the brand awareness study. As mentioned, due to the current COVID-19 pandemic, it became merely impossible to conduct the study while being physically present. Due to this, the decision was made to select a preschool, where all parents of a given class would be willing to fill out the questionnaire online. It was crucial to receive answers from the entire class in order to conduct the sociometry analysis later on. Due to this, the preschool was selected through convenience sampling and although all parents received detailed instructions on how to fill out the questionnaire together with their children online. In order to increase sample size, the questionnaire was then further distributed online to parents outside of the given preschool. The selection of brands for the Brand Awareness Instrument also raises concern, as there is no definitive list of brands heavily marketed to children in the Hungarian context. It is therefore possible that brands that are popular and widely promoted within Hungary have been left out. To stay as close to the original Brand Awareness Instrument, primarily brands that were used by Forman et al. (2009) and Turner et al. (2015) were selected if they were present in the Hungarian market, the rest was substituted by popular, highly advertised Hungarian brands. In addition, the lack of specificity concerning the amount and nature of advertisements to which respondents had been exposed will have affected findings regarding TV viewing in relation to brand awareness. Viewing could have been selected into commercial and non-commercial, or the exact time of day the viewing occurred. Similar to this, the nature of the websites the children viewed was not explored for internet usage. Due to the nature of the online

questionnaire, the data relies on the self-reporting of parents about their children's media usage, this could be potentially inaccurate at times. Due to smaller sample size the results are also limited in a statistical sense.

7. Conclusion

As far as is known, this research is the first attempt to identify all the influencing factors of food consumer behaviour in children, and introduce them in a conceptual framework. The drivers of children's food consumer behaviour have been explored in several studies in the past decade, but each study mostly addressed specific factors or set of factors. This thesis attempted to examine the literature regarding the role environmental and social surroundings have on the individual consumer and buyer behavior of children. To further, present and cluster all the factors and their relating models influencing food consumption behaviour of children to then create a conceptual framework that presents the factors influencing the food consumer behaviour of preschool children. The frameworks were then tested with three qualitative and two quantitative methods in order to find and test the relevant factors that could support the result from each method. Finally, the paper aimed to suggest ways to modify and enhance policies currently applied in Hungary aiding policymakers as well as parents. Moreover, previous studies, focused on measuring one form of influence, while this study aimed to gather all influential factors within the environment of children in their preschool age. Thus, the results from this study give the first overview on food buying and consumption influencing factors on children in Hungary.

Results outlined, that television advertisements are the most influential product information source from the types of media children consume, shaping both their brand awareness, their brand preference as well as their eating behaviour. Besides television advertisements, family members are most likely the most important source for children. Deep interviews revealed, children's selection of food and their eating habits are partly shaped by their family setting and depend on the routines of everyday family life. Biological and socio-demographical factors of children and their families also play a role in the level of brand awareness and preference of children. Family status, income and extended family all partially shape the level of brand awareness of children, as do the age and gender of the children to a certain extent. At the same time, any possible health issues,

food intolerances and allergies family members might have can drastically change the food consumer behaviour of certain families. Sociometry tests as well as interviews with parents revealed friends also give each other information about food products which might also influence their consumer behaviour on the long term.

When it comes to buyer behaviour children have both a direct and indirect influence on family food buying and the consumption process. Indirect influence occurs when the parents buy food that they know that their children will eat. Children insert direct influence when during grocery shopping, where they act as the sales representatives for their preferred foods. Dairy products are the most requested food items by children followed by various snacks, this is where mostly advertisement and peer influence becomes visible in the form of requests. Their opinions are vastly asked for when it comes to these products too. Children have less influence on the last stage of buying decision process, meaning parents usually have the last word in the decision making process ultimately deciding and influencing the brand usage of the family.

New and novel scientific results of my dissertation were formulated in five points. Firstly, the dissertation was able to systematize the models explaining the factors affecting the consumer behaviour of children. Secondly, using the knowledge gained through analysing past literature, a novel research model was presented that explains the factors affecting the food consumer behaviour of children. Thirdly, the dissertation was able to develop the country specific Brand Awareness Instrument for preschool children, namely the Hungarian Brand Awareness Instrument. This tool gives an indicator of the awareness of major food brands of children. Additionally, the tool can be useful in experimental trials that expose groups of children to advertising conditions, as a measure of baseline brand awareness, to explore the impact of episodic exposure to promotions on food-related attitudes and choice. Such baseline awareness is likely an important modifier of responses to episodic marketing exposures. Developing instruments specific to each country, is important for studying the changes in our food environment, and helping to understand the potential role that unhealthy food marketing has had in the recent rise of childhood obesity (Turner et al, 2015). The Hungarian Brand Awareness Instrument or any similar instrument have not been performed in Hungary so far and are therefore novel scientific results on its own. At the same time, as mentioned earlier using a sociometry to test brand awareness is a completely novel methodological approach, that has great

potential for future research within this specific field thus, it is the fourth novelty of the current dissertation. Finally, the current dissertation explores the main connections between the various types of socialization agents and their influence on children's food consumer behaviour within various samples. Hopefully, the current framework and dissertation may help authorities have a deeper understanding of the way socialization agents influence the eating behaviour of children, enabling more effective policies to step into place promoting healthier eating behaviour patterns for preschool aged children in the future.

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9. Appendix

1. Brand Awareness Pilot Study Interview Questions

I. Interview questions for the children:

1. Do you watch TV?
2. If yes, when? Before or after preschool? On days when there is no preschool?
3. Do you usually watch TV alone or with mom, dad, your siblings?
4. What TV shows do you usually watch?
5. Who chooses what you watch on TV? Do you know how to use the remote control? What do you need to press to turn it on?
6. Do you usually watch cartoons elsewhere? Are you allowed to use mom or dad phone / tablet or computer?
7. Do you go shopping with mom or dad? If so, who decides what to buy? Does mom ask you if you like what she buys? Do you usually ask for something in the store? What? Why? 8. How do people you see in the TV get in there?
9. What is advertising? What are commercials? Do you know some commercials? Are there any you like? Have you ever seen something on TV and asked mom to buy it?
10. What do you want from Santa for Christmas?

II. Questions for parents:

1. Name of child
2. Age of child
3. Daily / weekly TV consumption in minutes (approx.)?
4. What TV program does your child watch? Can he or she choose himself?

2. Brand Awareness Pilot Study Survey Questions

Children's eating behaviour questionnaire

Please read the following statements and mark on the scale below the eating behavior that is most characteristic of your child.

1. **My child loves food** Never Rarely Some-times Often Always
2. **My child eats more when worried**
3. **My child has a big appetite**
4. **My child finishes his/her meal quickly**
5. **My child is interested in food**
6. **My child is always asking for a drink**
7. **My child refuses new foods at first**
8. **My child eats slowly**
9. **My child eats less when angry**
10. **My child enjoys tasting new foods**
11. **My child eats less when s/he is tired**
12. **My child is always asking for food**
13. **My child eats more when annoyed**
14. **If allowed to, my child would eat too much**
15. **My child eats more when anxious**
16. **My child enjoys a wide variety of foods**
17. **My child leaves food on his/her plate at the end of a meal**
18. **My child takes more than 30 minutes to finish a meal**
19. **Given the choice, my child would eat most of the time**
20. **My child looks forward to mealtimes**
21. **My child gets full before his/her meal is finished**
22. **My child enjoys eating**
23. **My child eats more when she is happy**
24. **My child is difficult to please with meals**
25. **My child eats less when upset**
26. **My child gets full up easily**
27. **My child eats more when s/he has nothing else to do**
28. **Even if my child is full up s/he finds room to eat his/her favourite food**
29. **If given the chance, my child would drink continuously throughout the day**
30. **My child cannot eat a meal if s/he has had a snack just before**
31. **If given the chance, my child would always be having a drink**
32. **My child is interested in tasting food s/he hasn't tasted before**
33. **My child decides that s/he doesn't like a food, even without tasting it**
34. **If given the chance, my child would always have food in his/her mouth**
35. **My child eats more and more slowly during the course of a meal**

General questions:

36. **Gender of my child:** Boy Girl
37. **Age of my child:** 3 4 5 6 7
38. **Does my child have siblings?** Yes No

39. How much TV does your child watch? a) Daily - More than 3 hours b) Daily - between 2-3 hours c) 1-2 hours per day d) Maximum 1 hour per day e) 4-5 times a week f) 2-3 times a week g) Weekly once a week h) Other:

40. Which channels? Minimax, Jim Jam, Disney, Disney Junior, Nickelodeon, Nick Jr., Cartoon Network, Megamax, Baby TV, Duck TV, Boomerang, Kiwi TV, Rtl Club, Tv2, M1, M2, VIVA, NatGeo, Animal Planet, TLC, Sport 1, RTL +, FOX, Eurosport, HBO, Comedy Central, Danube Cool, Other foreign tax, Other Hungarian tax, Other:

41. Does your child consume other media? Select all that apply. YouTube, Apps, Other Internet, Radio, Nothing else

42. Does your child play online games? If so, what games are these?

43. Can your child operate the remote control? Yes No

44. Is your child diabetic? Yes No

45. Is your child lactose (milk) intolerant? Yes No

46. Is your child sensitive to gluten? Yes No

47. Is your child egg sensitive? Yes No

48. Is your child allergic to nuts (hazelnuts, nuts, etc.)? Yes No

49. Is your child sensitive to any other food? Yes No

50. Family's income:

- ☐ Poor
- ☐ Below average
- ☐ Average
- ☐ Good
- ☐ Very good

51. Please indicate in which region you live:

- ☐ Central Hungary (Budapest)
- ☐ Central Transdanubia
- ☐ Western Transdanubia
- ☐ Southern Transdanubia
- ☐ Northern Hungary
- ☐ Northern Great Plain
- ☐ Southern Great Plain

3. Deep Interview Questions

1. Parent's personal information:

- 1.1 How old are you?
- 1.2 What is the highest level of education?
- 1.3 What is your current marital status?
- 1.4 Where are you currently working?
- 1.5 How many children do you have?
- 1.6 How many people live in your household?
- 1.7 Where do you live (area/district)?
- 1.8 What percentage of the family income is spent on food?

2. Data of the child/ren:

- 2.1 How old is your child/ren?
- 2.2 Gender of the child/ren?
- 2.3 Does the child have any food allergies?
- 2.4 Does the child have any developmental disorder?
- 2.5 Are you wearing glasses?
- 2.6 Does your child take any medication?
- 2.7 How long has your child attended kindergarten?
- 2.8 How long does the child stay in the institution daily?
- 2.9 Who else looks after your child?
- 2.10 In what areas do you think your child has outstanding talents?
- 2.11 In your opinion, which skills of your child should be developed more intensively?
- 2.12 Do you already have plans for further studies?
- 2.13 What is your child's behaviour like?
- 2.14 Are they aggressive with anyone? What could be a possible reason?
- 2.15 How would you describe your child's attention?

3. Media:

- 3.1 How many televisions are in your household?
- 3.2 How many tablets?
- 3.3 Does your child/ren have their own device?
- 3.4 Does your child watch TV every day? If so how much?
- 3.5 What kind of channel do they watch?
- 3.6 What program?
- 3.7 Do children watch television on their own?
- 3.8 Can your child decide on their own what he or she watches?
- 3.9 Can your child use the remote control?
- 3.10 Are the children under surveillance when watching TV?
- 3.11 If your child is using a tablet or phone, what applications do you use?
- 3.12 What kind of videos does your child watch on these devices?
- 3.13 Is there any way you monitor your child's tablet / phone usage?
- 3.14 How much time does your child spend daily/weekly with such devices?
- 3.15 Have you ever had to restrict any media use? If so, why did they decide to do so?
- 3.16 What is your general opinion about your child's media use?

4. Children's eating habits:

- 4.1 What does your child like to eat?
- 4.2 What does your child usually not eat?
- 4.2.1 Is there any particular reason for this? How do you explain this?
- 4.2.3 How long has your child disliked these foods?
- 4.2.3 Is your child extremely selective: do they only eat certain types of food? Maybe of a certain color and under certain circumstances?
- 4.2.4 Is your child drawn to taste inedible things, does your child often want food or drinks that are too hot or too cold?
- 4.3 How long has your baby received breast milk?
- 4.4 At what age did your child start eating solid foods?
- 4.4 Was your child a good eater during infancy?
- 4.6 How is your child sleeping now? (In infancy?) 4.7 How much does your child eat? Do they eat too much or too little?
- 4. 5 What habits are linked to your child's eating? (e.g. does he or she take away other people's food, throw food that is no longer needed, keep running away from the table, messy eating smudging, burping at the table etc.).
- 4.6 Does your child have any emotional attachment to eating? (does he or she eat more or less when they are happy or sad etc.)
- 4.7 Frequency of consumption of whole grain/ seed products
- 4.8 Frequency of fruit and vegetable consumption
- 4.9 Frequency of fish consumption
- 4.10 Frequency of meat consumption
- 4.11 What kind of sweets does your child consume and when does he or she eat between main meals?
- 4.12 Does your family consume organic food?
- 4.13 Does your child consume food in front of the television or other media?
- 4.14 If so, does it affect his or her food intake or appetite?
- 4.15 What are the home meal times?

5. Shopping habits (food):

- 5.1 Where do you purchase your groceries?
- 5.2 Why this Grocery Store(s)?
- 5.3 Frequency of purchases? (daily, weekly, monthly). What is the reason for this?
- 5.4 Who goes grocery shopping? Does your child accompany you?
- 5.5 If so, does the presence of the child influence the purchase?
- 5.6 What articles (if any) does the child decide to buy? What is the reason of this?
- 5.7 Tell me about an average shopping trip to the grocery store, from start to finish, imagine what you are buying with your child in the store, in what order and what they are buying. What do you take off the shelf?
- 5.8 How much do promotions or coupons influence your purchase? And your child?

6. Brand preference:

- 6.1 What brands of consumer goods are you loyal to?
- 5.9 Why? (eg it is used in the family for generations, likes the brand due to a sample, price, advertising, promotion, etc.)
- 5.10 Have you ever replaced such a brand because of your child?
- 5.11 Does your child have any preferred consumer goods? What are they and why?
- 5.12 Do you also prefer these articles?

- 5.13 Has your child ever requested certain products because they saw them in an ad? What was this ad? Where did they see it? How often does this occur?
- 5.14 Has your child ever requested a product because a friend used it? What was this product? How often does this occur?
- 5.15 How does the family influence your child's brand use / brand awareness?
- 5.16 Apart from family, advertising, and friends, what influences your child's brand use?
- 5.17 Has your child's product preference ever led to conflict in the family?

7. Meals:

7.1 What is your breakfast routine?

- When?
- Who prepares it?
- What do you eat?
- What brands do you use?
- Who sits where? Are there fixed places in a family?
- Does anyone have a favourite plate / glass / cuttlery?
- Does everyone participate?
- Does everybody eat the same thing?
- What conversations do you have?
- Other family specific habits?
- What's different on the weekends?

7.2 What is your lunch routine?

- When?
- Who prepares it?
- What do you eat?
- What brands do you use?
- Who sits where? Are there fixed places in a family?
- Does anyone have a favourite plate / glass / cuttlery?
- Does everyone participate?
- Does everybody eat the same thing?
- What conversations do you have?
- Other family specific habits?
- What's different on the weekends?

7.3 What is your dinner routine?

- When?
- Who prepares it?
- What do you eat?
- What brands do you use?
- Who sits where? Are there fixed places in a family?
- Does anyone have a favourite plate / glass / cuttlery?
- Does everyone participate?
- Does everybody eat the same thing?
- What conversations do you have?
- Other family specific habits?
- What's different on the weekends?

- 7.4 Does your child eat snacks throughout the day?
- 7.5 What kind of snacks does he or she eat?
- 7.6. How regularly?
- 7.7 Does snacking behaviour change on weekdays?
- 7.8 How often to you eat out at restaurants? Tell me a little about a typical restaurant visit.
- 7.9 How often do you order food delivery? What do you usually order?

4. Hungarian Brand Awareness Instrument

1) Questionnaire

The child questionnaire is designed to measure variables considered to be related to the measure of brand awareness.







Questionnaire is based on Turner et al. (2015), the Australian Brand Awareness Instrument

- i) basic demographic information (age, sex, region);
- ii) frequency of consumption of the ‘big 5’ foods and beverages: Vegetables. Protein. Fruits. Grains. Dairy.
- iii) amount of weekly TV viewing time (minutes/week), divided into commercial, non-commercial and pay TV, number of TVs per household and frequency of watching TV whilst eating dinner;
- iv) frequency of supermarket attendance, frequency of visit with child
- v) amount of weekly internet usage (cumulative minutes/week).

A parental questionnaire was developed using similar questions to the child questionnaire aiming for a parent-child paired sample, as the quality of self-report data is generally poorer for children younger than 14 years.

2) Flash cards – part 1

In order to test for how the media consumption influences the brand preferences of pre-school aged children, children will also be asked to pick between branded and non-branded products from the list above.

<i>PRODUCT</i>	<i>BRANDED</i>	<i>NON-BRANDED</i>
<i>COLA</i>		
<i>SURPRISE EGG</i>		
<i>CHEETOS</i>		

NUTELLA



CEREAL BAR



SALAMI



TURO RUDI



*CHOCOLATE
POWDER*



GUMMY BEAR



CEREAL



3) Flash cards – part 2

Like Forman (2009), these foods were selected to represent both well recognizable and lesser known food brand images in addition to brands from healthy and unhealthy foods. The table below will be printed on laminated cards of the total of 30 brand logos, and 120 foods (4 per brand logo), enabling the children to participate in a forced-choice procedure where each food brand logo has to be matched with one of the foods.

The Hungarian Brand Awareness Instrument

No	Brand	Answer	Product (A)	Product (B)	Product (C)	Product (D)
1	Boci	B	Cerbona	Chocolate	Pringles	Coke
2	Cheetos	C	Frosties	Pombair	Cheetos	M&Ms
3	Coca Cola	A	Coke	Coco Pops	Nesquik	KFC chicken
4	Riomare	A	Tuna	Chocolate	Coke	KFC Chicken
5	Kelloggs	D	Chicken & chips	Chips	Kinder egg	Corn Flakes
6	Pizza Hut	C	Chicken & chips	Big Mac	Pizza	Subway sandwich
7	Pombear	B	Corn Flakes	Pombear	Red Bull	Oreos

8	Fanta	A	Fanta	Nesquick	Corn Flakes	Haribo
9	Kubu	A	Kubu	Tea	Nesquick	KFC chicken
10	Dörmi	A	Dörmi	Haribo	Mars Bar	Energy drink
11	Turo Rudi	C	Chips	Kinder egg	Turo Rudi	Cola
12	Chio Chips	D	Cheetos	Chicken & Chips	Energy drink	Chio Chips
13	Kinder	B	Cerbona	Kinder egg	KFC chicken	Chio Chips
14	KFC	A	KFC chicken	Pizza	Pringles	Oreos
15	M&Ms	D	Coco Pops	Oreo	Kinder egg	M&Ms
16	Mars	C	Dorritos	Coke	Mars Bar	Cereal
17	McDonalds	D	KFC chicken	Pizza	Pringles	Big Mac
18	Pilota keksz	A	Pilota keksz	Cerbona	Oreo	Mars bar
19	Nesquick	C	Coke	Kubu	Nesquick	Oreos
20	Nutella	C	Coke	Chio chips	Nutella on Toast	M&M
21	Cerbona	C	Subway	Coke	Cerbona	Chio chips
22	Oreos	B	Coco Pops	Oreos	Coke	Cheetos
23	Pepsi	B	Cerbona	Coke	KFC	Mars bar
24	Pringles	A	Pringles	KFC chicken	Haribo	Oreos
25	Red Bull	D	Burger	Nesquick	Tuna	Energy drink
26	Pick	A	Salami	Hamburger	Chicken & chips	Corn Flakes
27	Babybell	A	Babybell	Cola	Chips	Burger
28	Danone	C	Babybell	Fanta	Danone joghurt	Mars Bar
29	Mogyi	B	Pringles	Peanuts	Pizza	KFC Chicken
30	Harbio	D	Pringles	KFC chicken	Energy drink	Harbio

Example of flashcards:



4) Sociometry

Finally, a sociometry will be drawn with the answers given by the children.

5. Correlations for various variables including brand awareness

Table: Pearson correlation output

		Correlations					
		Amount of weekly TV viewing time (minutes/week)	Amount of weekly internet usage (minutes/week)	Brand recall	Brand recognition	Brand awareness score	How old is your child?
Amount of weekly TV viewing time (minutes/week)	Pearson Correlation	1	,443**	,350**	,433**	,483**	,175
	Sig. (2-tailed)		,000	,007	,001	,000	,180
	N	60	60	59	59	59	60
Amount of weekly internet usage (minutes/week)	Pearson Correlation	,443**	1	,351**	,420**	,473**	,465**
	Sig. (2-tailed)	,000		,006	,001	,000	,000
	N	60	60	59	59	59	60
Brand recall	Pearson Correlation	,350**	,351**	1	,318*	,759**	,168
	Sig. (2-tailed)	,007	,006		,014	,000	,204
	N	59	59	59	59	59	59
Brand recognition	Pearson Correlation	,433**	,420**	,318*	1	,857**	,309*
	Sig. (2-tailed)	,001	,001	,014		,000	,017
	N	59	59	59	59	59	59
Brand awareness score	Pearson Correlation	,483**	,473**	,759**	,857**	1	,301*
	Sig. (2-tailed)	,000	,000	,000	,000		,021
	N	59	59	59	59	59	59
How old is your child?	Pearson Correlation	,175	,465**	,168	,309*	,301*	1
	Sig. (2-tailed)	,180	,000	,204	,017	,021	
	N	60	60	59	59	59	60

**. Correlation is significant at the 0.01 level (2-tailed).

6. Independent Samples Test: Chips

Table: Independent sample T-test - Chips

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Amount of weekly TV viewing time (minutes/week)	Equal variances assumed	6,360	,014	1,862	58	,068	,646	,347	-,048	1,340
	Equal variances not assumed			2,399	25,834	,024	,646	,269	,092	1,199
Amount of weekly internet usage (minutes/week)	Equal variances assumed	1,349	,250	1,815	58	,075	,708	,390	-,073	1,490
	Equal variances not assumed			1,867	17,552	,079	,708	,379	-,090	1,507