Fabrizio Baldassarre

University of Bari Aldo Moro Department of Business and Law Studies, Italy E-mail: fabrizio baldassarreuniba.it

Raffaele Campo

University of Bari Aldo Moro Department of Business and Law Studies, Italy

Amedeo Falcone

University of Bari Aldo Moro Department of Business and Law Studies, Italy

ATTITUDES TOWARDS FOOD PRODUCTS FOR CHILDREN: A PARENTAL VIEWPOINT

JEL classification: M3

Abstract

During the last decades sociological changes have modified the role of children within families: participatory models have become more widespread, to the detriment of more authoritative ones: this change has had consequences also in reference to families' purchases. In scientific literature some scholars show that this influence is real and marketers try to take advantage of this through a communication style which attempts to "teach" children how top ester their parents: this is so-called nag factor. This is a quantitative research. In order to understand which are the parental attitude towards kids food products, a questionnaire has been administered both in some schools (nursery and primary) to a random sample of parents, representative of a larger sample of kids (200 in all). Findings showed that pestering is a real attitude, in particular among the littlest children. Moreover these findings reflect in part the reality described by marketing literature: children influence the purchasing decisions of their parents, but this influence decreases when mothers and fathers are more aware of the importance of a quality based diet.

Key words: food marketing, children, quantitative research

1. INTRODUCTION

Sociological changes during the last decades have revolutionized the role of children within families: authoritative educational model made space to a more participatory one, and this arises also in reference to purchasing decisions. Contemporary children, moreover, are more and more involved in different marketing initiatives and are also pressed by advertising, making them more aware of their role as consumers. In spite of this, parents remain the real purchasers and the real reference of children's food habits. From this point of view Mitchell et al. (2013) distinguish five typologies of influence of parents on children's food habits. These are:

- exposure: it is important to make children trust and taste a food they did not know. According to research they need up to 15 exposures;
- role-modelling: parents' tastes and preference will inevitably influence those of their children;
- coercive feeding practice: this is related to the parental behaviour during the mealtime. For example pressure to eat is linked to neophobia and food avoidance:
 - restriction, rewards, and using food to soothe;
- -parenting styles: in particular there are four kind of styles to distinguish, that are authoritative, authoritarian, indulgent and uninvolved. According to research through the authoritative model parents could obtain more positive outcomes from children.

Studying the aspects relative to kids' influence on parents is essential to understand the way marketers have to match little consumers' desires with the necessity of quality required by mothers and fathers. From this point of view this research investigates how children condition parents' purchasing decisions, initially through a review of the main studies relative to this topic and then through an empirical survey, with the objective to understand these dynamics within families.

2. A LITERATURE REVIEW

Literature on children and marketing is various. First of all there are some scientific studies relative to the analysis of children as consumers. Valkenburg and Cantor (2001) distinguish four stages of development:

- infant and toddlers, who love music and slow language (so called motherese). At 4-5 months they begin to appreciate advertising and Tv programmes characterized by the presence of coloured characters; between the age of 18-24 months they begin to require products to their parents (McNeal, 2007);

- preschoolers (2-5 years old): they do not understand the difference between tv programmes and advertising, moreover they pay their attention to specific details and in psychological terms this is the phenomenon of centration. At 4 they begin to appreciate faster rhytms and have a preference for magic and childish creatures as well as animals and familiar contexts; at 5 children begin to negotiate their requests with their parents;

- early elementary school (5-8 years old): adventure situations are particularly appreciated during this period;
- later elementary school (8-12 years old): the most important feature is their realistic and incisive approach, which emerges in a more rational ability to compare products; they begin to appreciate sport champions and actors as testimonials.

McNeal (2007), on the other side, describes how the relationship between parents and kids during the shopping experience evolves. Up to 6 months newborns observe their parents behaviour in the points of sale; from 6 to 24 months children begin to require some products, also when they are not able to speak (using their hands or making noises); from 24 to 48 months they beg leaves to their parents to purchase some products and, at the same times, they learn to grab and put them in the shopping cart; from 48 to 72 months they become more aware about the purchasing process, learning that it is composed by the phases of selection, payment and consumption; finally from 72 to 100 months they can make their indipendent purchases using their pocket money.

Kids marketing studies include, moreover, some topics such as the relationship between kids and brands (Tatlow-Golden et al., 2014; Bachmann Achenreiner and Roedder John, 2003), the role of characters (Castonguay et al., 2013; Acuff and Reiher, 1998) and the marketing communication to children through the new technologies (Henry and Story, 2009).

In reference to the influence of children on family's purchasing decisions there are some studies to cite. Ward and Wackman (1972), for example, studied the way children affect their mother's purchases in reference to a series of products, finding that most of their attempts were focused on food; Wilson and Wood (2004) examined, through a qualitative research, the particular situation of supermarket shopping, finding that kids play an effective influence during this experience, in particular considering those products specifically studied for themselves: on the contrary, according to Mangleburg (1990), this influence is minor in the case of products which are sold for an older target (for example there are references to cars and televisions). Similar conclusions were highlighted by Thomson et al. (2007) who underlined the knowledge resource as one of the most influential on children and in fact, as stated by these scholars, "more knowledge a child had in relation to a product, the more influence they had over the purchase decision" (p.194).

Shoham and Dalakas (2005) studied Israeli children, finding that their influence on parental shopping is similar to that exercised by American kids, highlighting that it overcomes cultural differences.

A research field linked to this topic is that relative to the so-called pester power also denominated nag factor, which can be defined as the attempt of children to influence their parents' purchases through a pestering behaviour with fathers and mothers. Through a particular communication style, marketers "teach" children to pester their parents, with the objective to make them surrender. According to Idell (1998) there are two typologies of nagging:

- persistent nagging: children torment their parents through tantrums, with a loud tone of voice and insistent requests, with the clear aim to make their parents exhausted and more inclined to satisfy their desires;
- importance nagging: it is more elaborated because children try to be persuasive with their mothers and fathers, especially explaining them the "fundamental" reasons to buy the product they want. Henry and Borzekowsi (2011) showed the power of nag factor to influence children: in particular they organized a survey with 64 mothers of preschoolers, which highlighted that actually children pester their parents during the purchasing experience and the most attractive elements for these little consumers are packaging, presence of characters and advertising.

Nicholls and Cullen (2004) describe a child-parent consumption matrix, in which pester power occupies the fourth quadrant: it represents, according to them, the child's necessity for self-realization through consumption, overcoming parents' control. In the first quadrant "Parental Power", children try to exert power but parents control their desires, also trying to convince them to other purchases; in the second quadrant "unresolved conflict" both the parts attempt to control the purchases: children try to plead but also to threat, in a persistent way. The self-realisation is achieved in the situation described in the third quadrant "Consensual shopping" when both parents and children reach their self-definition.

Figure 1 The Child-Parent consumption matrix according to Nicholls and Cullen (2004)

	Desire for control	Parental Power	r Unresolved conflict	
Child	Self-realisation	Consensual shopping	Pester Power	
		Self-realisation	Desire for control	
		Parent		

Source: Adaptation from Nicholls and Cullen (2004)

Lawlor and Prothero (2011) distinguish four main kind of reactions to pester power, in the case of parents: negotiation, wait, refusal or surrender.

According to Ebster et al. (2009) children'requests are more frequent:

- considering the age, when they are at the early developmental phase;
- from the point of view of visual merchandising, when products are more visible so when they are placed at children's eye level;
 - when they are free to move, so when they are not in shopping cart.

Age and family communication are two variables that affect children's purchasing influence, as shown by Rose et al. (2002) in a study carried out in the USA and in Japan involving 3 to 8 years old children. Nagging is also related to quality of food: according to Kelly et al. (2006), in fact, unhealthy food are often bought to children as treats.

An important variable of influence is definitely advertising. Gorn and Goldberg (1974) have shown, studying a sample of 8-10 years old children, that the evaluation of a product (in this case a toy) becomes more positive after observing a spot; moreover this was confirmed in another research conducted by these scholars (1977); the same Gorn and Goldberg (1982) studied the influence of advertising on nutrition, finding that it affects children's preferences, both for healthy and unhealthy food. Another study to cite is that of Ferguson et al. (2012), carried out considering a sample of 75 children, from 3 to 8 years old. They had to watch some fast food advertising, relative both to unhealthy food and to a healthier one; then they had to select their favourite food and their parents tried to convince them to chose the healtier one. Actually they did not listen to their parents and selected the kind of food observed during the advertising time, confirming that it is a powerful tool of communication, because of its influence on their food tastes and preferences.

3. THE EMPIRICAL RESEARCH: PARENTAL ATTITUDES TOWARDS KIDS FOOD PRODUCTS

This quantitative research is aimed to understand how children influence adults' grocery shopping.

The choice of an interview directed to parents has come from the will of understanding how their behaviour changes under the kids' pressure: the focus was on parents and not on children because they hold the purchasing power concretely.

3.1. Sample, data collection methods and statistical methods

The statistical analysis has concerned a sample of parents interviewed through the administering of 300 questionnaires handed out in some educational institutions (nursery and primary schools).

Researchers have chosen people from the south of Italy: the decision was taken because of the worsened economic conditions caused by the economic crisis in this territory, which enphasize a more rational parents' buying bheaviour.

133 valid completed questionnaires, representative of a larger sample of kids (200 in all) were reteurned out of the 300 questionnaires dispatched.

Demographically the sample was composed by a prevalence of women \ moms and by a high percentage of parents between 36 and 45 years old:

- 68% mothers and 32% fathers;
- from the point of view of age this was the composition:
 - 36 -44 years old parents (65%)
 - 26-35 (24%),
 - over 45 (10%)
 - 18-25 (1%);
- from the point of view of education 56% had a high school diploma while 31% a University degree.

Male GENDER 1% (FATHER) AGE 10% 18-25 32% over 45 24% 26-35 Female (MATHER) 65% 68% 36-45

Figure 2 Composition of the sample

Source: Authors' own elaboration

Questions' typology was various: there were a multiple choice options, Likert Scale questions as well as point based ones.

Data were elaborated through the use of the statistical software SPSS. The objective of this research is essentially to highlight the dynamics of children and parents relationship during the food shopping.

3.2. Results and discussion

The first part of this survey has been focused on the influence of nag factor on parents' purchasing decisions: the relative question indicated five items, which represented differentlevels of intensity of this phenomenon. Changing the classic subdivision made by Acuff (1998), in order to obtain a more precise

analysis of children, researchers considered three main age groups that were 3 to 5, 6 to 7 and 8 to 11 years old: findings show that pestering is a real attitude, in particular among the youngest children, in fact parents confirmed that they request persistently or insert spontaneously in the shopping cart some products (52% of 3-5 years old kids). Even if the nag factor is traceable also in the other two segments, it can be observed that elder children develop a more collaborative attitude (61% of tweens contribute to select products): in other words pester power techniques lose gradually their efficacy with the development of cognitive abilities by children.

Another important insight about this first analysis highlights that most of children like going to grocery shops, confirming that in this "playful scenario" the shopping process is lived by kids as a funny experience, in fact a high percentage of them is present in each of the three segments.

In order to understand where parents decide to purchase food products both forthemselves and for their children two specular questions were asked: researchers have used a Likert scalefrom 1 to 5 (1=never; 2=Rarely; 3=Sometimes; 4=Often; 5=Always) to get a view on the parents' attitudes for different kinds of store. Differences emerged in reference to discount stores because parents declared to pay more attention to quality of food for their children, also paying higher prices.

The differences detected show, in particular for the format "Discount", that parents are more attentive to direct purchases to their children, showing more attention to quality. The analysis highlights that parents are more willing to make more sacrifices for children, to the detriment of the quality of products direct to themselves.

These data are in contrast with Innocenti Report Card 12 made by the Research Centre of United Nations Children's Fund (UNICEF), which show how a lot of families, afflicted by economic crisis, have been trying to save money through puchase of less quality products. Since 2008, the percentage of households with children that are unable to afford meat, chicken, fish or a vegetable equivalent every second day has more than doubled in countries like Estonia, Greece, Islanda and Italy. The effects of recession are clear, but the survey shows an attitude likewise clear to preserve the children's quality of life.

This is in part shown also by other data obtained analysing an importance scale question with seven purchase drivers (brand, price,packaging, promotions, advertising, children's requests, characteristics described on labels).

Table 1

Mean points relative to this question

		Mean
1.	Brand	3,38
2.	Price	3,26
3.	Packaging	2,14
4.	Promotions	3,47
5.	Advertising	1,80
6.	Children's requests	3,29
7.	Characteristics described on labels	3,95

Source: Authors' own elaboration

Averages show that brand is considered a reliable element but also promotions and prices seem to play an important role; moreover most of the sample has highlighted the propensity to listen and satisfy children's requests. As indicated in the following table advertising, analyzed from parent's viewpoint, plays a secondary role so children represent the real vehicle of information.

In relation to the previous question it was carried out a cluster analysis (Bailey, 1994), aimed at identifying the segments based on the driver of purchase.

Table 2
Cluster Analysis

	Component			
	1	2	3	
Brand	.619	054	.128	
Price	.095	.854	011	
Packaging	.761	.126	303	
Promotions	.137	.728	.067	
Advertising	.686	.134	.230	
Children's requests	.097	.042	.948	
Product's characteristics (label)	.321	393	.019	

Source: Authors' own elaboration

Starting from these results a cluster analysis has been conducted in order to identify market segments on the base of these drivers: extraction method was a principal component analysis and the rotation method a Varimax with Kaiser normalization (The Varimax method is commonly accepted because it emphasis

on the simplification of the structure of the factors in terms of variables. The matrix Λ is simplified by amplifying the highest correlations of each factor and reducing the lower ones, facilitating data interpretation).

As a result this analysis has generated three components, which identify three demand segments:

Identified segments

Table 3

Components	Drivers	Segments	
Component 1	Brand, packaging,	Preference only for noted	
	advertising	products	
Component 2	Price, promotions, label	Searching for a good	
	_	relation between quality	
		and price	
Component 3	Children's requests	Every child's desire is an	
		order	

Source: Authors' own elaboration

Then there were two similar questions in order to understand if there are differences between the purchase made in solitude and that carried out in the company of the kid. In this case the analysis was based on the average scores. The key item among these questions had the function to underline the parents' tendence to spend more to satisfy kids' demands, in order to confirm the effect of kidfluence on parents. The first fact that stands out, in fact, was that the difference between the scores was quite clear, demonstrating that parents "suffer" the presence of their children somehow, tending to spend more.

On the other hand, data show that there is enough self-control in the expenditure process: parents, probably due to the current economic period, try to reach a compromise between saving money and satisfy the requests of their child.

Another issue explored by the researchers concerns also the comparison between children's influence and that of other typology of subjects: the relative questions have been organizedconsidering the theory of planned behaviorby Ajzen (1991), which highlights that theintention to act influences the individual behaviour: findings show that parents' purchasing decisions are influenced also by the paediatrician and the partner.

The analysis separates the influence in two types: immediate and general. The first one coincides with the ability to modify the will of purchasing during buying decision process and it is characterized by a greater presence of impulse purchases, while the second one coincides with a long term change in the attitude. This influence can be explained in this way: children exercise an immediate influence, which consists in modifying the will to purchase during the

same shopping experience (short period influence)while paediatricians' and partners' advices are linked with general food habits (long period influence).

In order to investigate the role of television on influence attitude, the researchers have examined a crosstab considering two different dimensions, that are the duration of exposureto TV programmes (low or high) and the parents' tendency to spend more in order to satisfy their children's desires. Adding together the percentages relative to strongly disagree and disagree on the one hand and the other responses on the other hand, a link between high TVexposure and propensity to request was found: probably the guilt feeling of some parents for having neglected their children could be "compensated" by a greater availability to satisfy their requests.

In order to obtain more detailed information on the relationship between parents and big brands, understanding whether for the kids market food the term "brand" takes on the meaning of "quality and reliability"; to get this answer it was compared with private labels. The study was carried out, once again, through the analysis of the average scores.

In terms of brands particular significance has been given to private labels: brand as synonymous of reliability and quality but this regards famous brands as well as suppliers'ones. Analysing the mean points given by parents (expressing their degree of agreement from 1 to 5 in reference to a series of sentences) it came to light that private labels are appreciated not simply for their lower price, but because of their quality.

Table 4 Importance of brands

Item	Mean point
I absolutely trust in well-known brands	2.79
I compare ingredients of well-known brands with private labels'ones	3.09
If the quality is the same I prefer private labels	3.20
I purchase private label productsbecause their price is Lower	2.65
I purchase unbranded products	1.68

Source: Authors' own elaboration

The highest score about item 3 followed by the item 2 underline the growing consensus for private labels in the competition area of larger distribution companies.

Parents' perception in reference to some food for children has been measured through a Fishbein Analysis. According to Fishbein (1967) the mental attitude towards a products depends on two factors: the awareness of products' characteristics and the level of importance that an individual appoints to the benefits that these characteristics give (Castaldi and Mauri, 2008). The sample had to evaluate six types of food (from 1 to 7), selected from the most consumed by children, on the basis of six attributes: good taste, playful aspect, quality of ingredients, affordable prices, children's wants and, finally, nutritional values.

Nutritional values and quality of ingredients are the components with the highest differentiation coefficient, followed by playful aspect and children's wants. Price, on the contrary, does not represent a differentiation variable and this can explain the reason why food products for kids are often sold at a higher price than the corresponding version for older targets. It is clear, examining these data, that healthiness and quality are the most important criteria of choice for parents.

Table 5 Fishbein Analysis

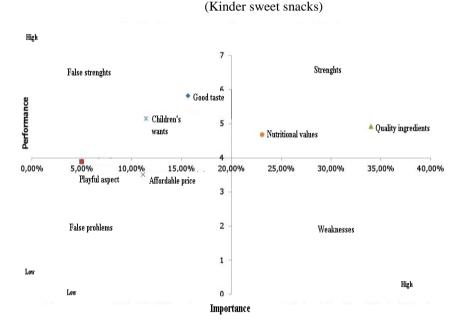
Product	Goo	Playfu	Quality of	Affordabl	Children'	Nutrition	Weighte
	d	l	ingredient	e prices	s wants	al values	d mean
	taste	aspect	s	-			point
Kinder							
(Ferrero) snacks	5.82	3.89	4.92	3.51	5.15	4.68	3.811
Coca cola	4.30	2.86	1.93	3.29	3.88	1.69	2.01
Fruits	6.27	3.41	6.77	5.02	4.01	6.87	4.74
Chips	4.45	4.92	2.47	3.74	4.92	2.34	2.51
Happy meal	3.59	4.34	2.42	3.38	3.46	2.54	2.21
Ice creams	6.22	5.48	5.13	4.45	5.92	5.01	4.27
Import. %	15.6 6	4.99	34.02	11.15	11.45	23.10	100%
Differen.	2.07	2.24	2.28	1.95	2.20	2.36	
Determi n.	0.32	0.11	0.78	0.22	0.25	0.54	2.22

Source: Authors' own elaboration

Considering the analysis more in detail, the importance-performance matrices highlight real strengths, real weaknesses, false strengths and false problems of every selected product: nutritional values and quality of ingredients

turned out strengths for Kinder snacks, fruits and ice – creams while, on the contrary, are weaknesses for Coca-Cola, Happy-Meal and chips. In spite of their high sugar content Kinder snacks and ice creams are linked to healthy features: for these kind of products it will be essential, from a communication strategy point of view, to highlight these characteristics.

Figure 3 Example of importance-performance matrix



Source: Authors' own elaboration

4. CONCLUSIONS

Findings of this research reflect in part the reality described by marketing literature: children influence the purchasing decisions of their parents, but this influence decreases when mothers and fathers are more aware of the importance of a quality based diet. They are ready to spend more for food their children's nutrition, but this does not depend by the will to satisfy kids' tantrums but substantially to make them eat healthier food. In this context the largest companies are not always the reference point for parents, who often decide to privilege private labels because of their quality and lower prices. This means that from a strategic viewpoint, companies should focus their attention to find a balance between more competitive prices, quality ingredients and a good nutritional value.

The topic analyzed can be considered very current because parents are the responsible of their children's diet, and the preferences developed during the childhood will influence those of the following ages: from this point of view marketing could play an important role to collaborate with mothers and fathers. In spite of this, sometimes the relationship between parents and marketing is a little bit conflicted because of the traditionally unhealthy nature of food advertised for kids: it is not simple for parents to reach a compromise between their children's desire to consume the food they see on commercials and the rules of an adequate nutrition. Considering their influence on families' purchases, companies should exlore the extraordinary opportunities of healthy food: marketers should work with families, pediatricians and psychologists in order to improve their supply and to match parents' needs. In other terms marketing should take advantage from the children's influence on parents, creating strategies to satisfy all the parts involved in the purchasing process.

This study has some limits: first of all the sample is unbalanced between men and women and this can have influenced the findings; moreover the sample has to be enlarged in order to have more a more grounded explanation of the phenomenon. For future research it will be important to understand the differences between mothers and fathers to be influenced by children: their different approach could highlight a different attitude towards their children's choices.

REFERENCES

Acuff, D., Reiher, R. (1998). What Kids Buy and Why: The Psychology of Marketing to Kids. New York: Simon & Shuster.

Ajzen, I. (1991). Theory of planned behaviour. Organizational Behaviour and Human Decision Processes, 50, pp.179-211.

Bachmann Achenreiner, G., Roedder John, D. (2003). The meaning of brand names to children: a developmental investigation. Journal of Consumer Psychology, 13, pp. 205-219.

Bailey, K. (1994). Numerical Taxonomy and Cluster Analysis. Typologies and Taxonomies, Thousand Oaks: Sage.

Castaldo, S., Mauri, C. (2008). Store Management. Il punto vendita come piattaforma relazionale. Milano: Franco Angeli.

Castonguay, J., Kunkel, D., Wright, P., Duff, C. (2013). Healthy characters? An investigation of marketing practices in children's food advertising. Journal of Nutrition Education and Behavior, 45, pp. 571-577.

Ebster, C., Wagner, U., Neumueller, D. (2009). Children's influences on in-store purchases. Journal of Retailing and Consumer Services, 16, pp. 145-154.

Fishbein, M. (1967). Attitude and the prediction of behavior, Readings in attitude theory and measurement. New York: Wiley.

Ferguson, C.J., Muñoz, M.E., Medrano, M.R. (2012). Advertising influences on young children's food choices and parental influence. The Journal of Pediatrics, 160, pp. 452-455.

Gorn G., Goldberg M. (1974). Children's reactions to television advertising: an experimental approach. Journal of Consumer Research, 1, pp. 69-75.

Gorn G., Goldberg M. (1977). The impact of television advertising on children from low income families. Journal of Consumer Research, 4, pp.86-88.

Gorn G., Goldberg M. (1982). Behavioral evidence of the effects of televised food messages on children. Journal of Consumer Research, 9, pp. 200-205.

Henry, A.E., Story, M. (2009). Food and beverage brands that market to children and adolescents on the internet: A content analysis of branded web sites. Journal of Nutrition Education and Behavior, 41, pp. 353–359.

Henry, H.K.M., Borzekowski, D.L.G. (2011). The Nag Factor. A mixed-methodology study in the US of young children's requests for advertised products. Journal of Children and Media, 5, pp.298-317.

Idell C. (1998). The Nag Factor, report commissioned by the Western International Media, Los Angeles.

Kelly, J., Turner, J.J., McKenna, K. (2006). What parents think: children and healthy eating. British Food Journal, 108, pp. 413-423.

Lawlor M.A., Prothero A. (2011). Pester power – A battle of wills between children and their parents. Journal of Marketing Management, 27, pp. 561-581.

Mangleburg, T.F. (1990). Children's influence in purchase decisions: a review and critique. Advances in Consumer Research, 17, pp. 813-825.

McNeal J.U. (2007). On becoming a consumer, the development of consumer behavior patterns in childhood. Burlington: Butterworth-Heinemann,.

Mitchell, G.L. Farrow, C., Haycraft, E. (2013). Parental influences on children's eating behaviour and characteristics of successful parent-focussed interventions. Appetite, 60, pp.85-94.

Nicholls, A.J., Cullen, P. (2004). The child–parent purchase relationship: 'pester power', human rights and retail ethics. Journal of Retailing and Consumer Services, 11, pp. 75-86.

Rose, G.M., Boush, D., Shoham, A. (2002). Family communication and children's purchasing influence: a cross-national examination. Journal of Business Research, 55, pp. 867-873.

Shoham, A., Dalakas, V. (2005). He said, she said ... they said: parents' and children's assessment of children's influence on family consumption decisions. Journal of Consumer Marketing, 22, pp. 152-160.

Tatlow-Golden, M., Hennessy, E., Dean, M., Hollywood, L. (2014). Young children's food brand knowledge. Early development and associations with television viewing and parent's diet. Appetite, 80, pp.197-203.

Thomson, E.S., Laing, A.W., McKlee, L. (2007). Family purchase decision making: exploring child influence behaviour. Journal of Consumer Behaviour, 6, pp. 182-202.

Valkenburg, P.M., Cantor, J. (2001). The development of a child into a consumer, Journal of Applied Developmental Psychology, 22, pp. 61-72.

Ward, S., Wackman, D. (1972). Children's purchase attempts and parental yielding. Journal of Marketing Research, 9, pp. 316-319.

Wilson, G., Wood, K. (2004). The influence of children on parental purchases during supermarket shopping. International Journal of Consumer Studies, 28, pp. 329-336.