Master Thesis

How to get out of the lunch box zone?

Color and shape preferences for the package of children drinks in different consumption occasions

Student: E.J. Oldeboer
Master: Communication Studies
Specialisation: Marketing Communication
University: University Twente

First tutor: Dr. A. Fenko
University Twente
Second tutor: Dr. J.V. Bittner
University Twente

Date: December 12, 2012
Place: Enschede

Summary
In recent years it becomes more difficult to reach consumers with advertisements, that is why larger budgets are available for new package designs. The package type affects the way consumers will perceive and experience the food items during consumption. Due to package consumers draw inferences about for example attributes and the product as a whole and they may even influence future product experiences. Nowadays, critical points of product evaluation are shape and color. Various brands try to distinguish themselves by shape and/or color. In addition, it can be expected that people will show different sides of their personality in different consumption occasions with different people and prefer various shapes and colors. A special item, action or coupon added to the package makes it more appealing for children. Price can also be influenced by shape, color and consumption occasion; moreover, price influences consumer decision making.

The goal of this research was to investigate how a regular daily children drink package can be design for other occasions than the lunch box situation. The research question was: "In which manners can daily children drink packages be designed so the product will also be used during other occasions than the lunch box situation?" and five hypotheses were created. The visual materials were images of children drink package designs in various shapes and colors.

In this research a pre study and two studies were done concerning children drink package design and consumption occasion. The pre study and Study 1 were quantitative studies with parents with at least one child in the age category 6-12 years old. Parents are the children's role models and the food and beverages that children consume are strongly affected by the parents. Adults and children differ in their shape and color preferences. The colors included in the pre study were black, red, blue and green and the shapes included were bottle, pack, container and pouch. The participant's feelings were measured with elements of the PAD emotions and other questions. In Study 1 (parents) and Study 2 (children) the shapes bottle and pack and colors blue and green were used. The images in Study 1 were a blue bottle, green bottle, blue pack and green pack and the three consumption occasions were normal school day, normal weekend day and special day out. Also questions about price, premiums and volume were included in Study 1.

To conclude, both parents and children prefer the color blue. The package shape and price differ per consumption occasion; moreover, parents and children agree on the package shape per consumption occasion. During a normal school day the preferred package design is a blue pack of 200 ml in the price caterogy 0 – 0.50 euro. During a normal weekend day the preferred package design is a blue bottle of 200 ml in the price category 0.50 – 1.00 euro and during a special day out the preferred package design is a blue bottle of 200 ml in the price category 1.00 – 1.50 euro. Parents are willing to pay more for children drinks during special days and normal weekend days than during school days; the most should be spend on a bottle in all consumption occasions.

Keywords
Children drinks, package shape, package color, consumption occasions

Samenvatting
In de afgelopen jaren zijn consumenten moeilijker te bereiken met advertenties, vandaar dat grotere budgetten beschikbaar worden gesteld voor nieuwe verpakkingsontwerpen. Het verpakkingstype beïnvloedt de manier waarop consumenten etenswaren zien en ervaren tijdens consumptie. Mede door verpakkingen oordelen consumenten over bijvoorbeeld attributen en het hele product en dit kan van invloed zijn op toekomstige productervaringen. Op dit moment zijn vorm en kleur kritische punten van productevaluatie. Verschillende merken proberen zich te onderscheiden door vorm en/of kleur. Bovendien, kan worden verwacht dat mensen verschillende kanten van hun persoonlijkheid laten zien in verschillende consumptiesituaties met verschillende mensen en hierdoor verschillende vormen en kleuren prefereren. Een verpakking met daaraan gekoppeld een speciaal item, actie of coupon, maakt het aantrekkelijker voor kinderen. Prijs kan ook worden beïnvloed door vorm, kleur en consumptiesituatie; daarbij, kan prijs consumentenbeslissingen beïnvloeden.

Het doel van dit onderzoek was om erachter te komen hoe reguliere dagelijkse kinderdrankverpakkingen kunnen worden ontworpen voor andere consumptiesituaties dan de broodtrommelsituatie. De onderzoeksvraag was: “Op welke manieren kunnen dagelijkse kinderdrankverpakkingen worden gecreëerd, zodat het product ook tijdens situaties buiten de broodtrommelsituatie wordt gebruikt?”, vijf hypothesen hielpen bij het beantwoorden van deze vraag. De visuele materialen waren afbeeldingen van kinderdrankverpakkingen in verschillende kleuren en vormen.

In dit onderzoek werden een vooronderzoek en twee studies uitgevoerd gerelateerd aan kinderdrankverpakkingen en consumptiesituaties. Het vooronderzoek en studie 1 waren kwantitatieve onderzoeken met ouders met tenminste één kind in de leeftijdscategorie 6-12 jaar. Ouders zijn de rolmodellen van kinderen en zij beïnvloeden sterk de eet- en drinkgewoonten van hun kinderen. Volwassenen en kinderen verschillen in hun vorm- en kleurvoorkeuren. De kleuren gebruikt in het vooronderzoek waren zwart, rood, blauw en groen en de vormen waren fles, pakje, container en pouch. De gevoelens van de respondenten werden gemeten met elementen van de PAD emoties en andere vragen. In studie 1 (ouders) en studie 2 (kinderen) werden de vormen fles en pakje en de kleuren blauw en groen gebruikt. De volgende afbeeldingen werden gebruikt in studie 1; blauwe fles, groene fles, blauw pakje en groen pakje en de drie consumptiesituaties waren; normale schooldag, normale weekend dag en speciaal dagje uit. Ook waren er in studie 1 vragen opgenomen over prijs, extras en volume.

De conclusie is dat ouders en kinderen de voorkeur geven aan de kleur blauw. De verpakkingsvorm en prijs verschillen per consumptiemoment, de ouders en kinderen zijn het echter met elkaar eens welke vorm in welke consumptiesituatie past. Tijdens normale schooldagen gaat de voorkeur naar een blauw pakje van 200 ml in de prijs categorie 0 – 0.50 euro. Tijdens normale weekenddagen gaat de voorkeur naar een blauwe fles van 200 ml in de prijs categorie 0.50 – 1.00 euro. Tijdens speciale dagjes uit gaat de voorkeur naar een blauwe fles van 200 ml in de prijs categorie 1.00 – 1.50 euro. De respondenten zijn bereid meer te betalen voor kinderdranken tijdens speciale dagjes uit en normale weekenddagen dan tijdens normale schooldagen; het meeste zijn zij bereid te spenderen aan een fles in alle consumptiesituaties.

Sleutelwoorden
Kinderdranken, verpakkingsvorm, verpakkingskleur, consumptiesituaties

Table of content

1. Introduction

Did you ever have a special day out at an amusement park where the children were sitting quietly on a chair and were drinking black coffee from a white cup? In that case you belong to the minority. Dutch people like to spend days out or weekend days together with family and friends and food and beverages are important elements during these events. Especially during these consumption occasions children would like to have food and beverages with attractive packages. The question is why do people buy various package designs in different consumption occasions?

2. Theoretical framework

Product packages

Product packages do have different functions. Technical requirements of the package are that it gives the product a temporary coverage and shelter during transportation and to ensure the quality of the product (Floor & Van Raaij, 2010). However, nowadays companies shift their focus towards aesthetic or symbolic product and/or package characteristics (Van Rompay, 2011). Products are becoming more and more homogeneous in terms of for example price and quality and extra values are almost always identified for the brand choice (Floor & Van Raaij, 2010). According to Jansen, Mulkens and Jansen (2010) visual appeal is important for attractiveness of a product and people need to recognise the product (Blackwell, Miniard & Engel, 2006). User friendliness is also important for consumers; packages should be easy to open and should be reclosable (Rodiers, 2006).

Usually, the package design is a part of the marketing (communication) strategy and located under the segment product (Blackwell et. al., 2006). In recent years it becomes more difficult to reach consumers with advertisements, that is why larger budgets are available for new package designs (Floor & Van Raaij, 2010). A lot of purchase decisions are made in store; around two-third. In retail shelves the package should communicate a certain identity (Schifferstein, 2009). According to Schifferstein (2009) the package type affects the way consumers will perceive and experience the food items during consumption. According to Becker, Van Rompay, Schifferstein and Galetzka (2011) when consumers are shopping their daily food and beverages their purchase decisions are often based on the visual appearance of products. It is shown that various shape features, like size, height and angularity, influence consumer evaluations (Becker et. al., 2011). So, consumer decision making could be driven by product package. Due to package consumers draw inferences about for example attributes and the product as a whole and they may even influence future product experiences (Becker et. al., 2011).

Shape

Nowadays, a critical point of product evaluation is shape. Various brands try to distinguish themselves by shape, for example the potato chip Pringles with its round package or Toblerone chocolate with its triangle package (Rodiers, 2006). Besides, companies create new innovative children drink packages like a flexible pouch (Mehta et. al., 2010) and a bottle. Various researchers mention a difference between angular and round shapes. Berlyne (1976) for example argued that harmony, friendliness and approachability are related with rounded shapes and angular shapes are related with strenght, energy and thoughness. Zhang, Feick and Price (2006) showed that rounded shapes are more seen as gentle and harmonious; however, angular shapes are more related with aggressiveness and conflict. In can be said that “in situations in which a perceiver seeks harmony, rounded features are more attractive; when individuality and toughness is sought, angular features are more attractive” (Zhang et. al., 2006, p. 796). Also,

according to Becker et. al. (2011) shape (and color) does influence product evaluation. The expectation in this research is:

H1: Shape does have an influence on the evaluation of the product.

In most package designs shape and color are related. Ares and Deliza (2010) investigated in their study if consumer milk dessert expectations were influenced by package color and shape. The results were that shape and color do influence consumers expected liking and sensory expectations regarding the shown images (Ares & Deliza, 2010).

Color

Wheeler (2003) mentioned that the primary determinant of buying decisions is color. Colors can have an influence on product evaluations, price expectations, brand impressions and much more. Research shows that colors communicate specific information; however, it is possible that this occurs outside people's conscious awereness (Elliot & Maier, 2007). In addition, consumers give fast moving consumer goods a limited time to present themselves, so the attention has been grabbed in a very short time (Floor & Van Raaij, 2010). The package should be eye-catching and deviating colors. Contrasting packages are more attention grabbing; companies can look to the brand category and pick a different distinct color, like power cleaner Cilit Bang with its dark purple color, Milka chocolate with its purple/white color (Rodiers, 2009) or children drink Taksi with its black color. Doyle and Bottomley (2006) make a distinction between functional products and sensory-social products. Functional products are needed for prevention and problem solving (utilitarian needs), for example kitchen rolls. Sensory-social products are used to fulfil symbolic needs, for example chocolate; these products give pleasure and stimulation. In their research was found that cold colors can best be used for functional products and warm colors for sensory-social products. However, a lot of products have a functional and sensory-social function for example shampoo; so, the brand positioning has to be clear (Doyle & Bottomley, 2006).

Valdez and Mehrabian (1994) investigated emotional reactions towards color brightness, saturation and hue by using the Pleasure-Arousal-Dominance (PAD) emotion model. In their research the most pleasant hues were "blue, blue-green, green, red-purple, purple, and purple-blue" (Valdez & Mehrabian, 1994, p. 394). The least pleasant hues were green-yellow and yellow (Valdez & Mehrabian, 1994). "Green-yellow, blue-green, and green were the most arousing, whereas purple-blue and yellow-red were the least arousing" (Valdez & Mehrabian, 1994, p. 394). Mehrabian and Russell (1974) argued that the measures pleasure and displeasure, arousal and nonarousal, dominance and submissiveness could give a general emotions description (Valdez & Mehrabian, 1994). Colors can also be ranked from most to least preferred; blue, green, purple, violet, red, orange, yellow, where blue is most preferred and yellow least (Guilford, 1934 and Guilford & Smith, 1959). Eysenck (1941) "proposed a consistent rank order for fully satured hues, from blue as the most preferred, through red, green, purple, and orange to yellow" (p. 66). Adams and Osgood (1973) found that blue was evaluated most positively followed by green and white. Hogg (1969) found that blue and purple were the most preferred colors, red was in the middle, and green and yellow were in his research the least preferred colors. When asking people worldwide 'what is your favorite color' most people will answer blue (Singer, McCuUey, Chamblisss, Charles, Smith, Waddell & Winfield, 1988). Red and green are also rating high with this question. Yellow seems to be disliked and purple is rated with great variation in various studies (Crozier, 1996). In addition, Wexner (1954) investigated feelings connected with colors, his findings were that red is related with stimulating and exciting (pleasure and high arousal), blue with tender/soothing and comfortable/secure (pleasure and low arousal) and black is

related with masterful/strong/powerful (high dominance). Moreover, Ou, Ronnier Luo, Woodcock and Wright (2004) mentioned that colors are important in consumer' decision making, colors can decide which products consumers like and do not like. The expectation in this research is that:

H2: Color does have an influence on the evaluation of the product.

People's minds are influenced by personality, traits, moods and emotions; however, all these elements can be changed. It can be expected that people will show different sides of their personality in different consumption occasions with different people. The elements are estimated to the environment the human is in (Norman, 2003). Emotions and feelings are critical consumption characteristics in many situations; however, many purchases and consumptions are experienced with little emotions (Blackwell et. al., 2006). According to Blackwell et. al. (2006) "colour alone accounts for somewhere between 62 – 90% of these initial reactions. Because colours convey meaning, consumer's product judgments may depend on its colour" (p. 627). In addition, consumers are looking for signals in the shelf and on the products (Blackwell et. al., 2006). Signals can be defined as "stimuli used to make inferences about the product" (Blackwell et. al., 2006, p. 135). So, package color and shape can be a signal for product evaluations.

Special item or coupon

As Pine and Gilmore (1999) mention the society we are living in becomes more and more an experience economy. Consumers would like to buy an experience and not just a product or service anymore (Pine & Gilmore, 1999). According to Pine and Gilmore (1999) consumer participation and connection are important elements in an experience. Premiums can be used to create an experience; these elements make the product more appealing. For example the Kinder Surprise, a chocolate egg with a surprise toy inside; the candy rolls were the candy is packaged in a candy dispenser; or the toys included in McDonalds happy meals. However, the premium should be renewed regularly because the attractiveness will wear off (Jansen et. al., 2010). It becomes extremely difficult for a designer to create something attractive for everyone at all times and in every situation (Norman, 2003).

Mehta, Phillips, Banytis, Ward, Coveney and Handsley (2010) found that various methods are used to market products to children. Techniques are for example bright colors, lunchbox/kids size packs, cartoon characters, unusual shape, innovative package and celebrities (Mehta et. al., 2010). In their study semiotics (e.g. celebrities, cartoons) was the marketing technique used most often, they were found in 99% of the items and novelty and lunch box size package were seen in 55% of the items (Mehta et. al., 2010). Also Chapman, Nicholas, Banovic and Supramaniam (2006) found that the marketing techniques most times used are TV, cartoon characters and (movie) celebrities. Coupons can also be used to attract children (and parents) to buy the product, for example Kelloggs offers Adelaide Zoos coupons with their cornflakes (Mehta et. al., 2010) and the brand Wicky is offering coupons for Dolfinarium (ocean animals park) on their package (Wicky, 2012). Also collection items and give-aways score well even as puzzles and competitions (Mehta et. al., 2010). Novelty package can for example be seen as attractive sucking tubes, pouches or chocolates in the shape of sporting equipments (Mehta et. al., 2010). The special item, action or coupon added to the package makes it more appealing for children, that why the following is expected:

H3: Consumers are willing to pay more for a package including a special item or coupon.

Price

Price can be influenced by shape, color and consumption occasion; moreover, price influences consumer decision making. Color and shape can have an influence on price expectation or create beliefs about the product. One of the most common forms of beliefs is price-quality inferential beliefs "consumers use price information to form beliefs about a product's quality" (Blackwell et. al., 2006, p. 380). In the research of Becker et. al. (2011) the angular packages were evaluated as more expensive than the rounded packages; in addition, 50% satured color package was seen as more expensive compared to the 100% saturated color package. Consumption occasion can have an influence on price as well. At home the 1.5 litre packs are most often used, because they are cheaper than the 0.2 litre portions. Usually, portion packs (0.2L) are used during school days, but also during swimming lessons or birthdays. In this research the following is expected:

H4: The consumption occasion does have an influence on the product price.

Parents and children

Children drink's brands are focussing on the age group 6-12 years old following lessons at primary schools and parents of these children. The primary buyers of food and beverages are the parents, mostly mothers, of the children. Parents are the children's role models and the food and beverages that children consume are strongly affected by the parents (Jansen et. al., 2010). However, children in the primary school age don't only drink children drinks. They convince their parents to buy drinks the parents actually do not like their children to drink (Blackwell et. al., 2006), for example soft drinks like Coca Cola and Fanta.

Choungourian (1969) investigated the color preferences of American and Lebanese adults and children. Adults and children seem to prefer different colors. The rank order for adults was "green, red, blue, yellow-green, orange, yellow, green-blue, purple" (Crozier, 1996, p. 67). The rank order among 5-year-olds was "red, blue, purple, orange, yellow, yellow-green, green-blue, green" (Crozier, 1996, p. 67). "The most striking change with age involved green, which was the least preferred at age 5 and 14, in the middle rank by age 15 and most preferred at age 20" (Crozier, 1996, p. 67). Meerum Terwogt and Hoeksma (1995) also compared color preferences of adults and children. Adults rank the colors as follows "blue, red, green, white, black, yellow" (Crozier, 1996, p. 67). Seven-year olds rank the colors as follows "blue, yellow, red, white, black, green" (Crozier, 1996, p. 67). The most preferred color by all participants in all ages was blue. Red was liked consistently, black and white were not (Crozier, 1996). Also in this study green was shown the most changes in preferences among age; preference increases by age (Crozier, 1996). In addition, colors can be connected with emotions, for example when a person likes blue and happiness, these elements can be combined (Crozier, 1996). Children link blue and happiness, while adults link yellow and happiness; however, adults do not like yellow as a color (Crozier, 1996). In addition, people turn red/purple when they are angry, get a white skin when they are afraid and turn blue when having cold; children can observe these elements directly (Crozier, 1996). Moreover, colors can have a certain temperature and be seen as cold or warm. Cold colors are for example green, blue and violet. Warm colors are for example orange, red and yellow. Adults and children differ from each other in their temperature rates of colors (Crozier, 1996). Based on previous studies the expectation for this research will be:

H5: Parents and children will differ in color and shape preferences.

3. Research design

Package is investigated widely in the past years; however, the combination of specific consumption occasions and package designs is research minimally. Studies are done about package and obesity (e.g. Dennison, Rockwell & Baker, 1998), package and color (e.g. Doyle & Bottomley, 2006), shape and slogan (e.g. Van Rompay & Pruyn, 2011) shape, taste and color (e.g. Becker et. al., 2011) but not a lot about occasion type or consumption situation and package. However, this topic can give valuable information for designers and companies. Companies and designers can get an inside in package designs related to consumption occasions and adapt it to the wishes of the consumers.

Research goal

The goal of this research is to investigate how a regular daily children drink package can be design for other occasions than the lunch box situation. During occasions like birthdays and days out, parents would like to buy something extra/special for their children. Can this be done with the package color, a specific shape, added premiums, coupons or other innovative ideas. Which shapes and colors are preferred for a children drink during various consumption occasions by parents and children? The research is aiming at parents and children between 6 and 12 years old.

Visual materials

The visual materials will be images of children drink package designs in various shapes and colors.

Research question

In which manners can daily children drink packages be designed so the product will also be used during other occasions than the lunch box situation?

Hypotheses

Hypothesis 1: Color does have an influence on the evaluation of the product.
Hypothesis 2: Shape does have an influence on the evaluation of the product.
Hypothesis 3: Consumers are willing to pay more for a package including a special item or coupon.
Hypothesis 4: The consumption occasion does have an influence on the product price.
Hypothesis 5: Parents and children will differ in color and shape preferences.

Operationalisation of the research

In this research a pre study and two studies will be done concerning children drink package design and consumption occasion. The pre study and Study 1 will include a questionnaire for parents with at least one child in the age category 6 -12 years old. The results of the pre study will be used to create the questionnaire for Study 1. Study 2 will be with children in the age category 6-12 years old. The participants will not receive the drinks or consume them, they only have to answer closed (pre study, Study 1 and 2) and open (Study 1) questions.

4. Pre study

The pre study will be a quantitative study with parents with at least one child in the age category 6-12 years old. Parents are the ones how buy groceries and cook diner for their children and function as role models. The food and beverages that children consume are strongly affected by the parents (Jansen et. al., 2010). So, it is important to know how the parents think about the children drink package designs and in which consumption occasions they would like to use them.

4.1 Research colors and shapes

In this pre study the researcher would like to know which colors and shapes are most preferred for children drinks by the participants. These colors and shapes will be used to create the research instruments in Study 1. The colors included are black, red, blue and green and the shapes included are a bottle, pack, container and pouch.

The colors black, red, blue and green are included in this pre study. When asking people 'what is your favorite color' most people will answer blue (Singer et. al., 1988). Blue is chosen because it is the most preferred color worldwide (Crozier, 1996). Red and green are also rating high with the question 'what is your favorite color'. Red is chosen because it is connected with excitement and happiness and it is a warm color. Green is chosen because it shows the most changes in preferences among age and preference increases by age (Crozier, 1996); in other words, parents and children differ in their opinion about the color green. Besides, green and blue are cold colors, while red is a warm color. However, adults and children differ from each other in their temperature rates of colors (Crozier, 1996). Black is chosen because it is not often used for a children drink. This color is associated with expensive (Vos, 2009). In addition, these four colors are connected with different emotions; red is related with stimulating and exciting (pleasure and high arousal), blue with tender/soothing and comfortable/secure (pleasure and low arousal) and black with masterful/strong/powerful (high dominance) (Wexner, 1954).

The shapes bottle, pack, container and pouch are included in this pre study. The pack is chosen because it is the most standard package for children drinks in the Netherlands. Besides, the pack has an angular shape and Berlyne (1976) argued that energy, strength and thoughness are related with angular shapes. The container is chosen because it is a package with rounded forms and according to Berlyne (1976) harmony, friendliness and approachability are related with rounded shapes. Zhang et. al. (2006) showed that rounded shapes are more seen as gentle and harmonious; however, angular shapes are more related with aggressiveness and conflict. Besides, confrontational associations are related with angular shapes while rounded shapes are related to comprise associations (Zhang et. al., 2006). The bottle and pouch are chosen because these package designs are seen as new innovative packages. Besides, user friendliness is important for consumers (Rodiers, 2009); maybe these new package designs are more fitting the consumer's wishes.

4.2 Population

The participants of the pre study are parents with at least one child in the age category 6-12 years old living in the Netherlands. Around 30 completed questionnaires are needed for this study. The parents will be contacted personally by the researcher and asked to fill out the questionnaire. The parents will be found at primary schools, early childhood centres and at a singing choir.

4.3 Research instrument

The participants have to fill out a questionnaire with closed questions. The first questions in the questionnaire are demographic questions about gender, education level, age, amount of children and age of the child(ren). After that the participants are asked where they go or which activity they do together with their children on a normal weekend day or during a special day out. Next the participants will see four package shapes and four package colors all with the same questions. The participants will see the following shapes: pack, container, bottle and pouch all in the color black (Figure 4.1) and the following colors black, red, blue and green, all illustrated in pack shape (Figure 4.2). In the questionnaires the eight images will be shown in different order, so one person starts with the bottle, a second person with the pouch and so on.

Pack Container Bottle Pouch

Figure 4.1: Shapes

Black Red Blue Green

Figure 4.2: Colors

4.4 PAD emotions

In this research the PAD emotions will be used to discover the consumer's feelings towards shapes and colors. Russell and Mehriabian (1974) introduced the 'environmental psychology model', to describe the relationship between human behavior and surroundings. This relationship can be influenced and determined by approach and avoidance behavior. The model exists of three components, the PAD-emotions; these are pleasure, arousal and dominance (Russell & Mehriabian, 1974). The questions asked with all eight images are related with the PAD emotions. The emotions for pleasure are happiness – unhappiness, happy – irritation, satisfied – unsatisfied, fulfilled – unfulfilled and promising – desperate. The emotions for arousal are aroused – relaxed, excited – calm, worked up – drained, alert – lazy and awake – drowsy. Dominance is not included in this questionnaire. Avoid – approach emotions are included, these are useless – usefull, valuable – valueless, unpleasant – pleasant, sensible – senseless and comfortable – uncomfortable. After the PAD emotions, general questions are asked about the shape or color in various situations like; 'I will buy this package design for a normal weekend day'; 'I will buy this package design for a special day out'; 'The package is appealing to me'; 'The package will be appealing to my children'; 'The package is suitable during a birthday'; and 'The package is suitable during a school day'.

5. Results pre study

5.1 Data Analysis

The data are analysed by using the program PAWS Statistics 20, before called SPSS. Repeated Measures is used to analyse the data. Thirty one questionnaires where collected, 28 of these questionnaires were suitable for the research.

5.2 Cornbach's Alpha

The Cornbach´s Alphas for pleasure are reliable. After deleting some items for arousal and package also these data are reliable.

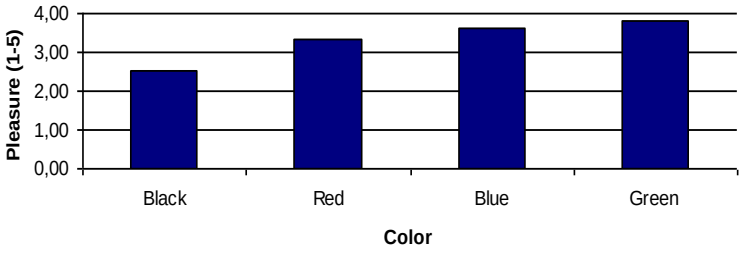
5.3 Participants

In this research 24 women and 4 men were participating. The majority of the participants had a HBO degree (42.9%), followed by a MBO degree (32.1%), a College degree (17.9%) and a University degree (7.1%). The oldest participant is born in 1961 and the youngest one in 1978, the majority is born in 1969 (14.3%), 1970 (14.3%) and 1973 (14.3%).

5.4 Results color

Pleasure

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the colors black, red, blue and green on pleasure. The main effect of color on pleasure is significant (F(3,22)=11.092, p=.000). Pairwise comparisons show that black and red (p=.015), black and blue (p=.000) and black and green (p=.000) differ significantly. It can be seen that red, blue and green are generating more feelings of pleasure than the color black. Red and green (p=.031) differ significantly, it can be seen that green generates more feelings of pleasure than red.

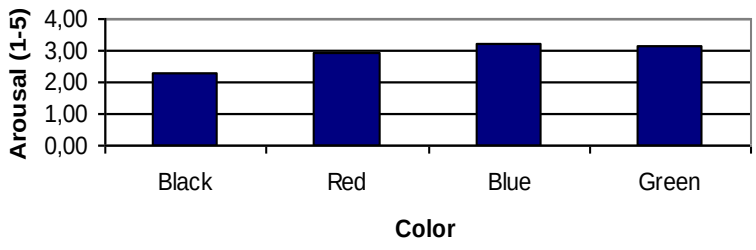


	SD
Black	0.821
Red	0.759
Blue	0.707
Green	0.821

Figure 5.1: Results pleasure color

Arousal

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the colors black, red, blue and green on arousal. The main effect of color on arousal is significant (F(3,22)=8.319, p=.001). Pairwise comparisons show that black and red (p=.004), black and blue (p=.000) and black and green (p=.000) differ significantly. It can be seen that red, blue and green are generating more feelings of arousal than the color black.

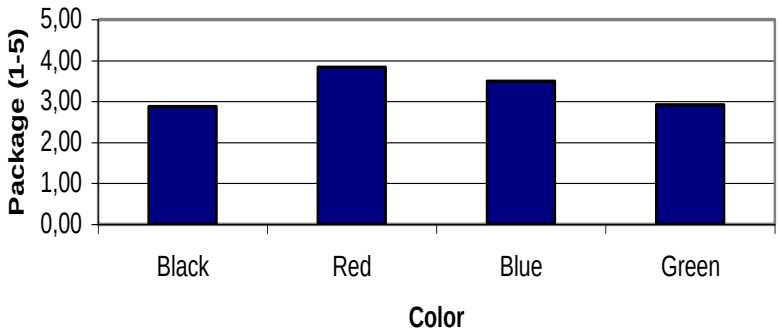


	SD
Black	0.551
Red	0.560
Blue	0.534
Green	0.496

Figure 5.2: Results arousal color

Package

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the colors black, red, blue and green on package design. The main effect of color on package design is significant (F(3,22)=7.225, p=.002). Pairwise comparisons show that black and blue (p=.040) differ significantly. It can be seen that the color blue is more suitable as a package color than black. Also blue and green (p=.006) differ significantly; blue is seen as more suitable as package color than green.

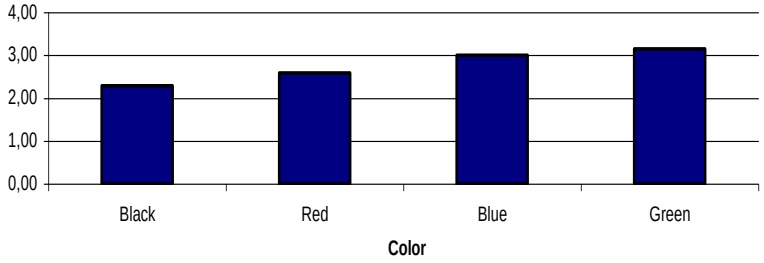


	SD
Black	1.089
Red	2.412
Blue	0.681
Green	0.563

Figure 5.3: Results package color

Normal weekend day

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the colors black, red, blue and green on a normal weekend day. The main effect of color on normal weekend day is significant (F(3,24)=4.133, p=.017). Pairwise comparisons show that green and black (p=.033) and green and red (p=.039) differ significantly. It can be seen that green is more suitable for a normal weekend day package than black and red.

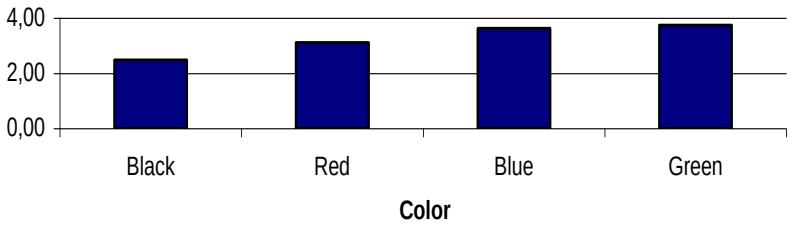


	SD
Black	1.171
Red	1.083
Blue	1.209
Green	1.322

Figure 5.4: Results normal weekend day color

Special day out

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the colors black, red, blue and green on a special day out. The main effect of color on special day out is significant (F(3,24)=10.163, p=.000). Pairwise comparisons show that black and blue (p=.004), black and green (p=.001) and red and green (p=.009) differ significantly. It can be seen that blue and green are seen as more suitable for a special day out than black. Besides, green is seen as more suitable for a special day out than red.

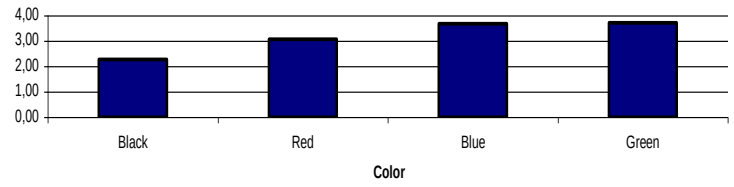


	SD
Black	1.369
Red	1.086
Blue	0.884
Green	0.944

Figure 5.5: Results special day out color

Appealingness parents

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the colors black, red, blue and green on appealingness to parents. The main effect of color on appealingness to parents is significant (F(3,23)=7.333, p=.001). Pairwise comparisons show that black and blue (p=.001) and black and green (p=.001) differ significantly. It can be seen that blue and green are more appealing to parents than black.

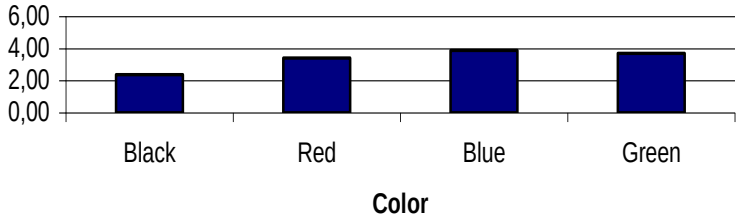


	SD
Black	1.251
Red	1.164
Blue	0.884
Green	1.079

Figure 5.6: Results appealingness parents color

Appealingness children

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the colors black, red, blue and green on appealingness to children. The main effect of color on appealingness to children is significant (F(3,24)=7.631, p=.001). Pairwise comparisons show that black and red (p=.034), black and blue (p=.000) and black and green (p=.003) differ significantly. It can be seen that red, blue and green are seen by parents as more appealing to children than black.

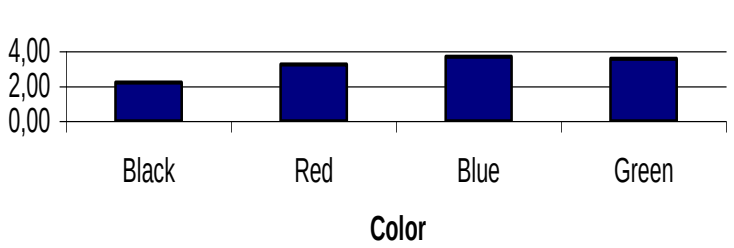


	SD
Black	1.334
Red	1.185
Blue	0.974
Green	1.103

Figure 5.7: Results appealingness children color

Birthday

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the colors black, red, blue and green on birthday. The main effect of color on birthday is significant (F(3,24)=13.123, p=.000). Pairwise comparisons show that black and red (p=.044), black and blue (p=.000) and black and green (p=.000) differ significantly. It can be seen that red, blue and green are more suitable colors during birthdays than black.



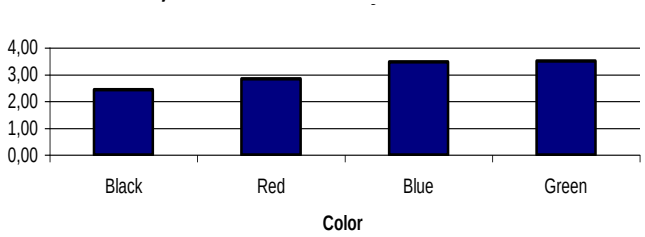
	SD
Black	1.251
Red	1.259
Blue	0.993
Green	1.185

Figure 5.8: Results birthday color

School day

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the colors black, red, blue and green on school day. The main effect of color on school day is significant (F(3,24)=6.908, p=.002). Pairwise comparisons show that black and blue (p=.008) and

black and green (p=.005) differ significantly. It can be seen that blue and green are seen as more suitable during a school day than black. Also is shown that red and green (p=.020) differ significantly. It can be seen that green is seen as more suitable for a school day than red. Red and blue (p=.099) differ marginal significantly. It can be seen that blue is seen as more suitable for a school day than red.



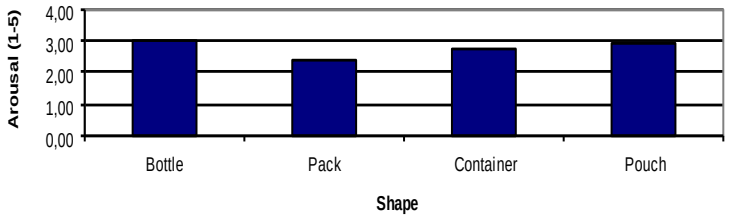
	SD
Black	1.311
Red	1.292
Blue	1.189
Green	1.156

Figure 5.9: Results school day color

5.5 Results shape

Arousal

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the shapes, bottle, pack, container and pouch on arousal. The main effect of shape on arousal is significant (F(3,21)=21.835, p=.000). Pairwise comparisons show that bottle and pack (p=.000), container and pack (p=.000) and pouch and pack (p=.000) differ significantly. It can be seen that a bottle, pouch and container are generating more feelings of arousal than a pack. Container and pouch (p=.096) differ marginal significantly. It can be seen that a pouch generates more feelings of arousal than a container.

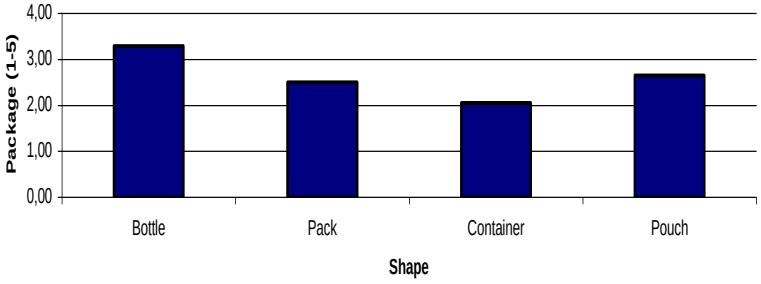


	SD
Bottle	0.398
Pack	0.395
Container	0.510
Pouch	0.298

Figure 5.10: Results arousal shape

Package

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the shapes, bottle, pack, container and pouch on package design. The main effect of shape on package design is significant (F(3,17)=7,705, p=.002). Pairwise comparisons show that bottle and pack (p=.009), bottle and container (p=.001) and bottle and pouch (p=.036) differ significantly. It can be seen that a bottle is more liked as package shape than a pack, a container and a pouch. A container and a pouch (p=.009) differ significantly. A pouch is more liked as package shape than a container.

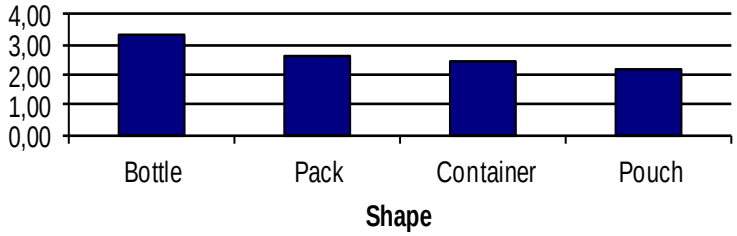


	SD
Bottle	1.108
Pack	0.919
Container	0.778
Pouch	0.826

Figure 5.11: Results package shape

Special day out

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the shapes, bottle, pack, container and pouch on special day out. The main effect of shape on special day out is significant (F(3,25)=6.221, p=.003). Pairwise comparisons show that bottle and container (p=.012) and bottle and pouch (p=.001) differ significantly. It can be seen that a bottle is seen as more suitable than a container and a pouch during a special day out.

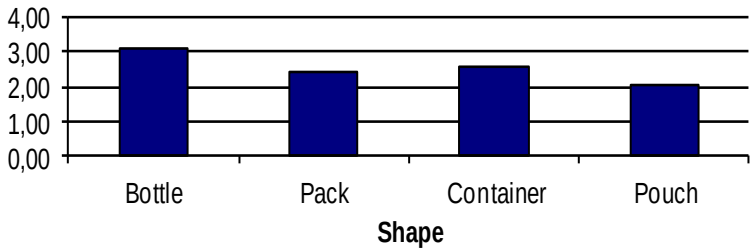


	SD
Bottle	1.467
Pack	1.131
Container	1.201
Pouch	1.090

Figure 5.12: Results special day out shape

Appealingness parents

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the shapes bottle, pack, container and pouch on appealingness to parents. The main effect of shape on appealingness to parents is significant (F(3,25)=8.959, p=.000). Pairwise comparisons show that bottle and pouch (p=.000) differ significantly. It can be seen that a bottle is seen as more appealing than a pouch. Bottle and pack (p=.082) and bottle and container (p=.080) differ marginal significantly. It can be seen that a bottle is seen as more appealing than a pack and container. A container and a pouch (p=.081) differ marginal significantly. It can be seen that a container is seen as more appealing than a pouch.

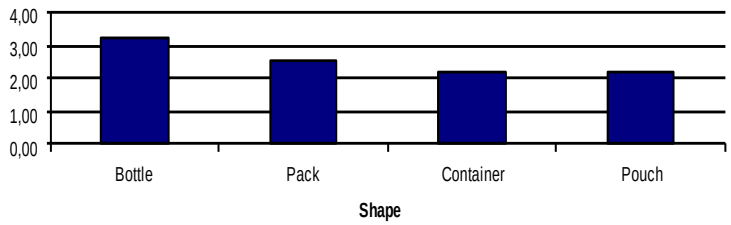


	SD
Bottle	1.397
Pack	1.289
Container	1.230
Pouch	1.016

Figure 5.13: Results appealingness parents shape

Appealingness children

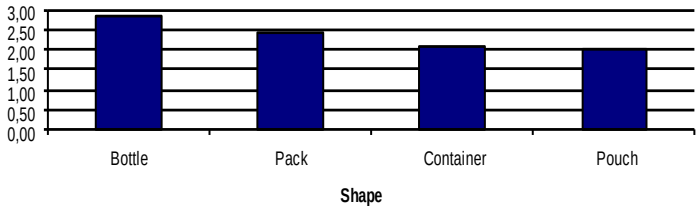
A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the shapes bottle, pack, container and pouch on appealingness to children. The main effect of shape on appealingness to children is significant (F(3,23)=5.834, p=.004). Pairwise comparisons show that bottle and container (p=.006) and bottle and pouch (p=.002) differ significantly. It can be seen that a bottle is seen by parents as more appealing for children than a container and a pouch.



	SD
Bottle	1.394
Pack	1.303
Container	1.243
Pouch	1.059

Figure 5.14: Results appealingness children shape

School day
A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the shapes bottle, pack, container and pouch on school day. The main effect of shape on school day is marginal significant (F(3,25)=2.662, p=.070). Pairwise comparisons show that bottle and container (p=.075) and bottle and pouch (p=.053) differ marginal significantly. It can be seen that a bottle is seen as more suitable than a container and a pouch during school days.



	SD
Bottle	1.458
Pack	1.201
Container	1.133
Pouch	0.922

Figure 5.14: Results school day shape

Birthday A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the shapes bottle, pack, container and pouch on birthday. The main effect of shape on birthday is not significant (F(3,25)=2.261, p=.106, *ns*). However, pairwise comparisons show that bottle and pouch (p=.083) differ marginal significantly. It can be seen that a bottle is seen as more suitable for birthdays than a pouch.

Pleasure A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the shapes, bottle, pack, container and pouch on pleasure. No main or interaction effects were found (F(3,19)=1,933, p=.159, *ns*).

Normal weekend day A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the shapes, bottle, pack, container and pouch on normal weekend day. No main or interaction effects were found (F(3,25)=1.926, p=.151, *ns*).

Scenarios
During a normal weekend day people with children go cycling (75%) or walking (53.6%) in the area, visiting a birthday (60.7%) or go to a children's farm (32.1%). During a special day out people with children go to an amusement park (78.6%) and/or the zoo (67.9%).

6. Discussions Pre study

The main question of the pre study was which two shapes (of four) and which two colors (of four) would be most suitable and appealing for consumers, in this case parents with at least one child in the age category 6-12 years old. According to parents blue and green are more appealing than black; however, they think their children will also find red more appealing than black. It is shown that green generates more feelings of pleasure than red; also during special days out, school days and weekend days green is seen as more suitable than red. However, it can be seen that blue is seen as more suitable as package color in general than green; also blue is seen as more suitable than red during normal school days. The color blue will be used in Study 1 because this color generates feelings of pleasure, arousal and liking as package design color. Besides, the color blue is seen as suitable during a normal weekend day, school day, special day out and birthday. Moreover, this color is seen as appealing for parents and according to parents also appealing to children. In addition, it is the most preferred color worldwide (Singer et. al., 1988) and blue is a cold color suitable for functional products (Doyle & Bottomley, 2006). The color green will be used in Study 1 because it is generating feelings of pleasure and arousal. Besides,

green is seen as suitable during normal weekend days, special days out, birthdays and school days. Moreover, the color green is seen as appealing to parents and children (according to parents). In previous research is seen that parents and children differ in their liking of the color green (Choungourian, 1969). The researcher is curious if this study will have the same results. In addition, the shape bottle will be used in Study 1 because it is most appealing to parents and children (according to parents) and preferred in all emotional elements and consumption situations in the pre study. In other words, the bottle is liked more than the container and/or pouch as a package and during a special day out, birthday and school day. The bottle is seen as more appealing by parents than a pack and container. Parents think the bottle will be more appealing than a container and pouch to their children, the pack is not mentioned. Moreover, the bottle is an innovative and relatively new package design. The pack will be used in Study 1, because this shape is after the bottle most appealing to children, according to parents. Moreover, the pack is the standard shape taken to school and other occasions like sporting lessons. So, in Study 1 (parents) and Study 2 (children) the shapes bottle and pack and colors blue and green will be used to answer the main research question. Furthermore, in Study 1 the normal weekend day scenario will include the following activities; cycling in the area and visiting a children's farm. The special day out scenario will include visiting an amusement park. The pre study results show that parents do these activities during these specific days.

7. Conclusions pre study

The colors red, blue and green, are generating more feelings of pleasure and arousal than black. Moreover, these colors are seen as appealing to children and parents and suitable in various consumption situations and black is not. However, according to parents blue and green are more appealing than black; but, they think their children will also find red more appealing than black. However, the colors green and blue are preferred in most emotional elements and consumption occasions. The colors green and blue will be used in Study 1. In addition, the bottle is most appealing to parents and children (according to parents) and preferred in all emotional elements and consumption situations. In addition, the pack does generate less feelings of arousal in comparison with the bottle and has gained a second place in the rank list. The innovative bottle and standard pack will be used in Study 1.

8. Study 1

Study 1 will be a quantitative study with parents with at least one child in the age category 6-12 years old. In this study the researcher would like to know how parents think about the combined children drink package shapes and colors which were most preferred in the pre study. Besides, in Study 1 package price, volume and premiums are shortly included.

8.1 Population

The participants of Study 1 are parents with at least one child in the age category 6-12 years old living in the Netherlands. Around 90 completed questionnaires are needed for this study; 30 participants for each scenario. The participants will not receive the drinks or consume them, they only have to answer closed and open questions. The parents will be contacted personally by the researcher and asked to fill out the questionnaire. The parents will be found at primary schools and early childhood centres.

8.2 Research instrument

The participants have to fill out a questionnaire with closed and open questions. The first questions in the questionnaire are demographic questions about gender, education level, age, amount of children, age of the child(ren) and if the children have diabetes or other reasons they cannot drink children drinks. After that the participant will read a short scenario. The scenario can be written about a normal school day, a normal weekend day or a special day out. The scenarios are as follow:

Normal weekend day "Imagine …. You and your family are going on a cycling trip to the nearest children´s farm with playground on a normal weekend day. The children are enjoying the various animals and play at the playground as they do many weekends. After a while they get thirsty and ask you for a drink. You brought some 0.2L children drinks for them and see them enjoy the drinks".

Special day out "Imagine …. You and your family are going on a special day out, you are going to visit an amusement park where you only go ones or twice a year. Your children are really looking forward to be in the amusement park and to try the various attractions. After being in the amusement park for a while your children get thristy and would like to have a drink. You brought some 0.2L children drinks for them and see them enjoy the drinks".

Normal school day "Imagine …. You are bringing your children to school. It is a normal school day in the middle of the year. Your children need to take something to drink in the morning and afternoon break. One day you are at school during the break and look at the children playing together. In the break your children get thristy and would like to have a drink. You brought some 0.2L children drinks for them and see them enjoy the drinks".

These three scenarios are chosen, because these are three different situations where children need and/or want something to drink. The activities mentioned in the scenarios are based on the activities mentioned in the pre study. Children go to school and need something to drink in the morning and afternoon break. Also during a normal weekend day; a cycling trip, a visit to the children´s farm or playground can be combined with a drinking moment. Special days out to a zoo or an amusement park occur only ones or twice a year, these days are special for the children, the food and beverage consumption wishes are maybe different during these special days.

Each participant will get one of the three scenarios. After the participant read the short scenario, (s)he will see four package designs after each other, where the two most preferred colors of the pre study (blue and green) are combined with the two most preferred shapes of the pre study (bottle and pack). In the questionnaires the four package designs will be shown in different order, so one person starts with the blue bottle, a second person with the green bottle and so on. All participants will see all four package designs: blue bottle, green bottle, blue pack and green pack (Figure 8.1).

Blue bottle Green bottle Blue pack Green pack

Figure 8.1: Four package designs Study 1

The questions asked are related with the PAD emotions; the same questions as in the pre study (pleasure, arousal and package (avoid-approach). After the PAD emotions, two general questions are asked about the package design, namely 'The package is appealing to me'; and 'This package will be appealing to my children'.

8.3 Price, premiums & volume

Recently the economy in the Netherlands is in a regression. So, it is important to create an appealing and attractive design for various consumption occasions, but to keep the price reasonable. The following price related questions are included: 'How much are you willing to pay for a children drink during a normal weekend day/ normal school day/ special day out?'; and, 'How much are you willing to pay for a bottle/pack during a normal weekend day/ normal school day/ special day out?'

Nowadays, children are already online at a very young age, playing outside becomes less and sitting behind the computer increases. Creating a special package design or adding a toy can let children play offline and (maybe) spend time together. Besides, when the package can for example be fold into an airplane, children can run around with it, so they will get exercise and stay at a healthy weight. The questions included about premiums are 'How much are you willing to pay more for a drink with a special item (e.g. toy)?'; and, 'How much are you willing to pay more for a drink with a special action (e.g. coupons for a(n) zoo/ amusement park)?'

Usually, children drink mini portions contain of 0.2L. However, maybe people would like to have 0.5L or bigger portion sizes for children at school, during normal weekend days or during special days out. Two questions about volume are included in the questionnaire: 'Which volume is most suitable for your children to drink during a normal weekend day/ normal school day/ special day out?', followed by an open question why the participants think this amount is suitable.

8.4 Overall preference

The last six questions ask the participants to choose between the four package designs in the

three different consumption occasions and to give a reason for their choice. The participants can choose between the blue bottle, green bottle, blue pack and green pack in the consumption situations normal school day, normal weekend day and special day out. The specific question is; 'Which package design would you prefer most during a normal weekend day/ normal school day/ special day out?' The open question included is; 'Why do you prefer this package design most during a normal weekend day/ normal school day/ special day out?'

9. Results Study 1

9.1 Data Analysis

The data are analysed by using the program PAWS Statistics 20, before called SPSS. Repeated Measures, Chi Square, Krusskal Wallis and various tables are used to analyse the data. A total of 141 questionnaires where collected, 107 completed questionnaires were suitable for the research. The questionnaires not included where not completed; parents were approached to fill out the questionnaires before the school went out. Sometimes when the school went out the parents were not finished yet and gave the questionnaire back, without filling it in completely; these were excluded from the research. The questionnaires were divided per scenario, normal school day 35 completed questionnaires, normal weekend day 38 completed questionnaires and special day out 34 complete questionnaires. A minimum of 30 was needed per scenario.

9.2 Cornbach's Alpha

The Cornbach´s Alphas for pleasure and package are reliable. However, the Cornbach's Alphas are not sufficient enough for arousal. So, arousal will be deleted from Study 1.

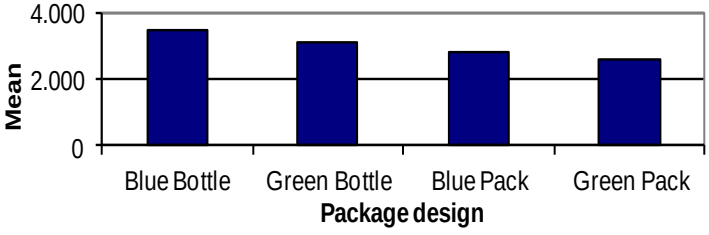
9.3 Participants

In this research 84 women and 23 men were participating. The majority of the participants had a MBO degree (57.9%), followed by a HBO degree (26.2%), a College degree (7.5%) and a University degree (5.6%). The oldest participant is born in 1961 and the youngest one in 1986, the majority is born in 1974 (14%), followed by 1971 (12.1%) and 1975 (11.2%).

9.4 Results

Appealingness children Special Day Out

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of package on the appealingsness to children in a special day out situation. The main effect of package on appealingness to children is significant (F(3,29)=4.719, p=.008). Pairwise comparisons show that a blue bottle and a green pack (p=.003) differ significantly. A blue bottle is seen as more appealing than a green pack. A blue bottle and a blue pack (p=.084) and a green bottle and a green pack (p=.076) differ marginal significantly. A blue bottle is seen as more appealing for children than a blue pack. Besides, a green bottle is seen as more appealing to children according to parents than a green pack during a special day out.

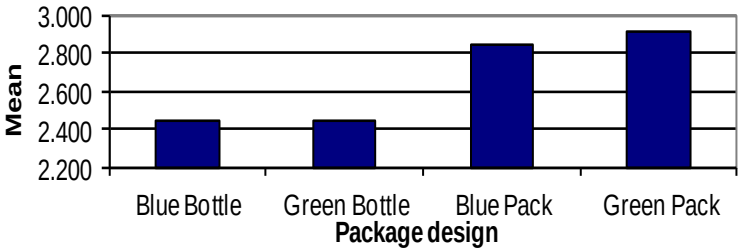


	SD
Blue Bottle	1.268
Green Bottle	1.146
Blue Pack	1.139
Green Pack	1.045

Figure 9.1: Appealingness children special day out

Appealingness parents Normal School Day

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of package on the appealingsness to parents in a normal school day situation. The main effect of package on appealingness to parents is marginal significant (F(3,31)=2.354, p=.091). Pairwise comparisons show that a blue bottle and a blue pack (p=.084) differ marginal significantly. It can be seen that a blue pack is more appealing to parents than a blue bottle during a normal school day.



	SD
Blue Bottle	1.160
Green Bottle	1.160
Blue Pack	0.925
Green Pack	0.965

Figure 9.2: Appealingness parents normal school day

A multivariate analyse of variance (Repeated Measures) was conducted for the other measures (pleasure, package, appealingness parents total/ weekend day/ special day out, appealingness children total/ school day/ weekend day) the differences between these stimuli were not significant.

Price Normal School Day

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the children drink, bottle and pack on price in a normal school day situation. No main or interaction effects were found ($F(2,33)=2.414$, $p=.105$, *ns*). However, pairwise comparisons show that a pack and a bottle differ marginal significantly ($p=.098$). It can be seen that people are willing to pay more for a bottle than for a pack. The majority of the parents is willing to pay 0 – 0.50 euro (62.9%) for a children drink during a normal school day, followed by 0.50 – 1.00 euro (28.6%); 0 – 0.50 euro (68.6%) for a pack during a normal school day, followed by 0.50 – 1.00 euro (25.7%); and 0 – 0.50 euro (57.1%) for a bottle during a normal school day, followed by 0.50 – 1.00 euro (31.4%).

Price Normal Weekend Day

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the children drink, bottle and pack on price in a normal weekend day situation. The main effect of children drink, pack and bottle on price is significant ($F(2,36)=13.351$, $p=.000$). Pairwise comparisons show that a children drink and a bottle ($p=.001$) and a pack and a bottle ($p=.000$) differ significantly. People are willing to pay more for a bottle than a children drink in general and a pack. Childen drink and pack differ marginal significantly ($p=.0.93$). People are willing to pay more for a children drink than a pack. In figure 9.3 the differences between a children drink, pack and bottle can be seen during a normal weekend day.

Figure 9.3: Price normal weekend day

The majority of the parents (44.7%) is willing to pay 0.50 – 1.00 euro for a children drink during a normal weekend day, followed by less than 0.50 euro (36.8%); 0 – 0.50 euro (60.5%) for a pack during a normal weekend day, followed by 0.50 – 1.00 euro (23.7%); and 0.50 – 1 euro (42.1%) for a bottle during a normal weekend day, followed by less than 0.50 euro and 1 – 1.50 euro (both 23.7%) (Figure 9.4).

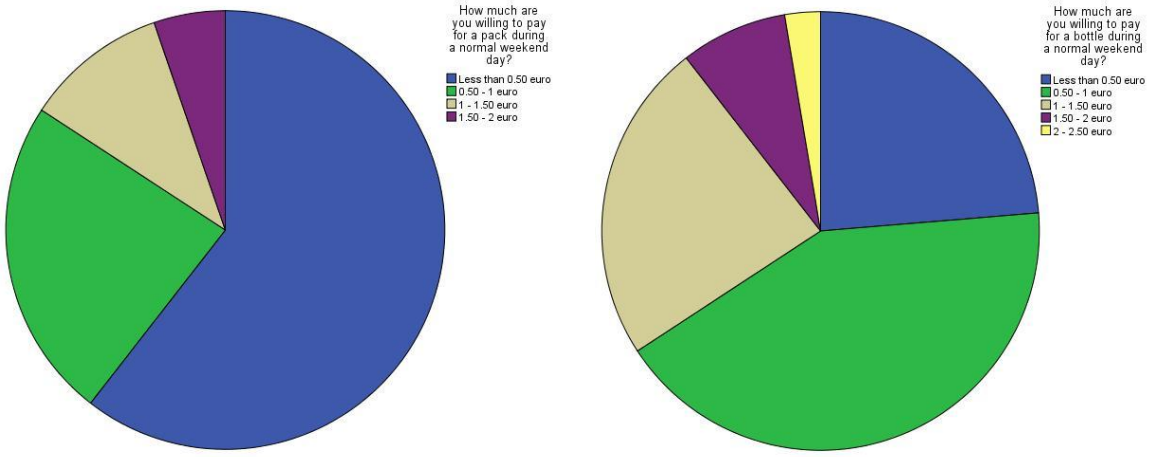


Figure 9.4: Price normal weekend day pack and bottle

Price Special Day Out

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the children drink, bottle and pack on price in a special day out situation. The main effect of children drink, pack and bottle on price is significant ($F(2,32)=8.887$, $p=.001$). Pairwise comparisons show that a children drink and a pack ($p=.015$) and a pack and a bottle ($p=.001$) differ significantly. People are willing to pay more for a children drink and a bottle than for a pack. In figure 9.5 the differences between a children drink, pack and bottle can be seen during a special day out.

Figure 9.5: Price special day out

The majority of the parents (44.1%) is willing to pay 0.50 – 1.00 euro for a children drink during a special day out, followed by 1.00 – 1.50 euro (20.6%); 0.50 – 1.00 euro (58.8%) for a pack during a special day out, followed by less than 0.50 euro (23.5%); and 1.00 – 1.50 euro (47.1%) for a bottle during a special day out, followed by less than 0.50 euro (23.5%) (Figure 9.6).

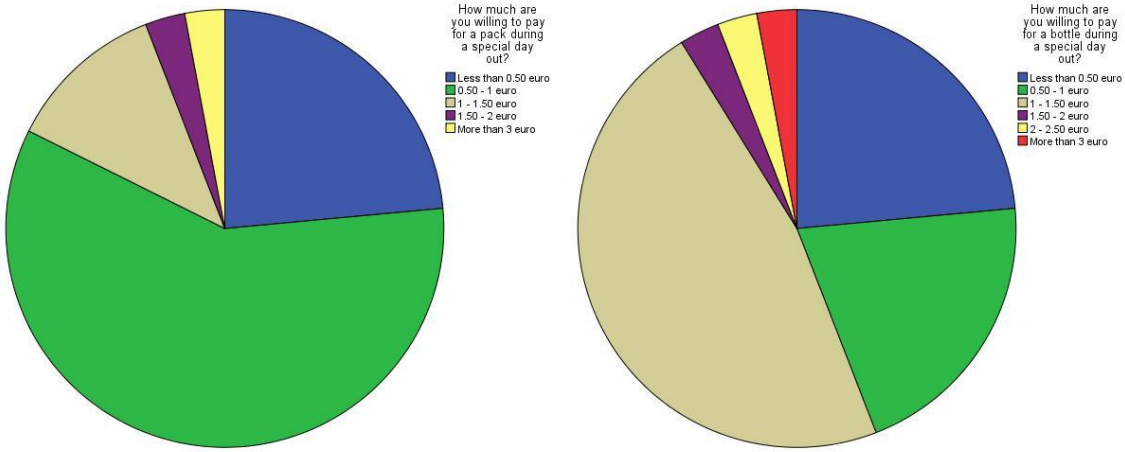


Figure 9.6: Price special day out pack and bottle

Consumption occasions and price

A non parametric test (Kruskall Wallis) was conducted to investigate the effects of the three scenarios on the children drink price. The main effect of the three scenarios on the children drink price is significant (K(2)=17.350, p=.000) (Figure 9.7).

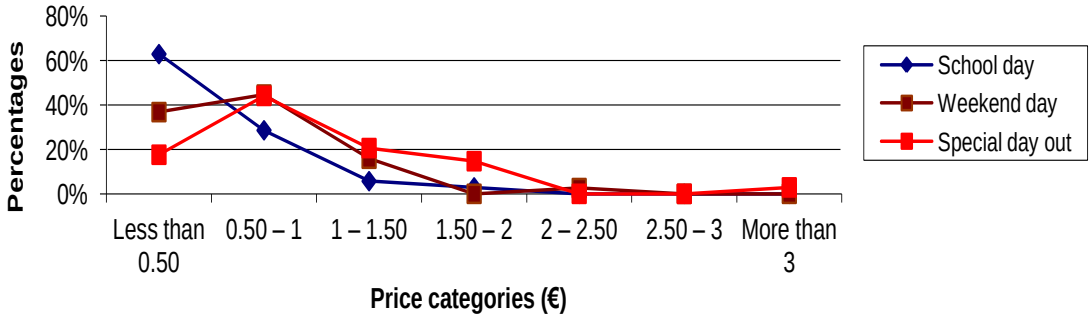


Figure 9.7: Price children drink all scenarios

A non parametric test (Kruskall Wallis) was conducted to investigate the effects of the three scenarios on the pack price. The main effect of the three scenarios on the pack price is significant (K(2)=13.582, p=.001) (Figure 9.8).

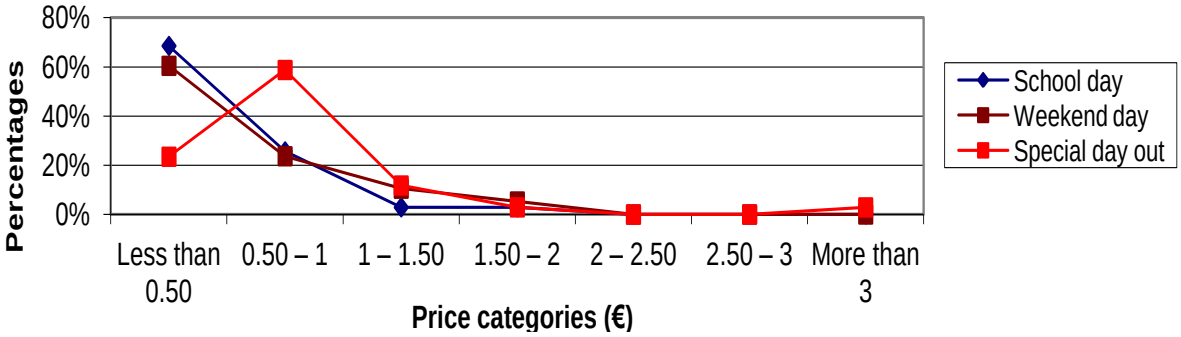


Figure 9.8: Price pack all scenarios

A non parametric test (Kruskall Wallis) was conducted to investigate the effects of the three scenarios on the bottle price. The main effect of the three scenarios on the bottle price is significant (K(2)=14.872, p=.001) (Figure 9.9).

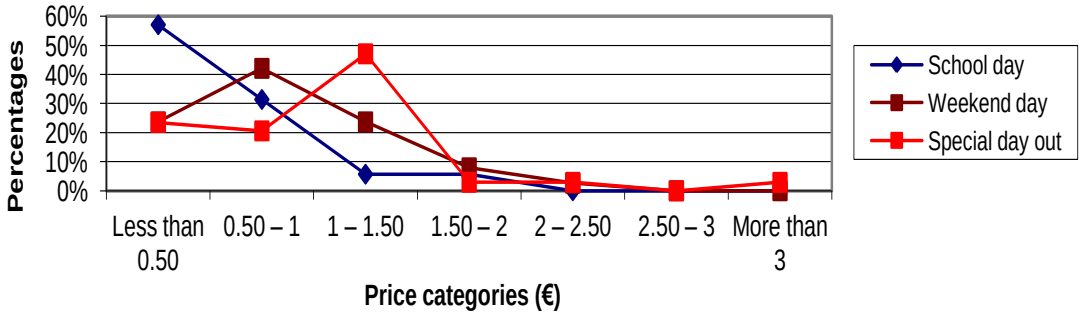


Figure 9.9: Price bottle all scenarios

So, it can be seen that the price of a children drink, pack and bottle differs per consumption occasion.

Special Item

A non parametric test (Chi Square) was conducted to investigate the effects of the three scenarios on price for a special item in a normal school day, normal weekend day and special day out situation. The main effect of the three scenarios on special item price is marginal significant (X(10)=17.996, p=.055). So, the price willing to pay for a special item differs per consumption occasion. The majority of the parents (57.9%) is willing to pay less than 0.20 euro more for a special item, followed by 0.20 – 0.50 euro (18.7%). The majority of the parents (80%) is willing to

pay less than 0.20 euro more for a special item during a normal school day, followed by 0.20 – 0.50 euro (14.3%). The majority of the parents (44.7%) is willing to pay less than 0.20 euro more for a special item during a normal weekend day, followed by 0.20 – 0.50 euro (21.1%) and the majority of the parents (50%) is willing to pay less than 0.20 euro more for a special item during a special day out, followed by 0.20 – 0.50 euro (20.6%).

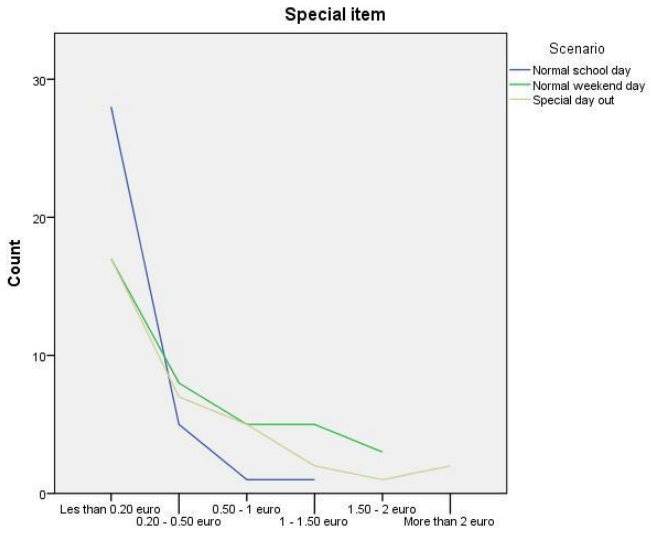


Figure 9.10: Price special item

Special Action

A non parametric test (Chi Square) was conducted to investigate the effects of the three scenarios on price for a special action in a normal school day, normal weekend day and special day out situation. No main or interaction effects were found (X(10)=15.052, p=.130, *ns*). The majority of the parents (46.7%) is willing to pay less than 0.20 euro more for a special action, followed by 0.20 – 0.50 euro (26.2%). The majority of the parents (60%) is willing to pay less than 0.20 euro more for a special action during a normal school day, followed by 0.20 – 0.50 euro (31.4%). The majority of the parents (36.8%) is willing to pay less than 0.20 euro more for a special action during a normal weekend day, followed by 0.20 – 0.50 euro (26.3%). Finally, the majority of the parents (44.1%) is willing to pay less than 0.20 euro more for a special action during a special day out, followed by 0.20 – 0.50 euro and 0.50 – 1.00 euro (both 20.6%).

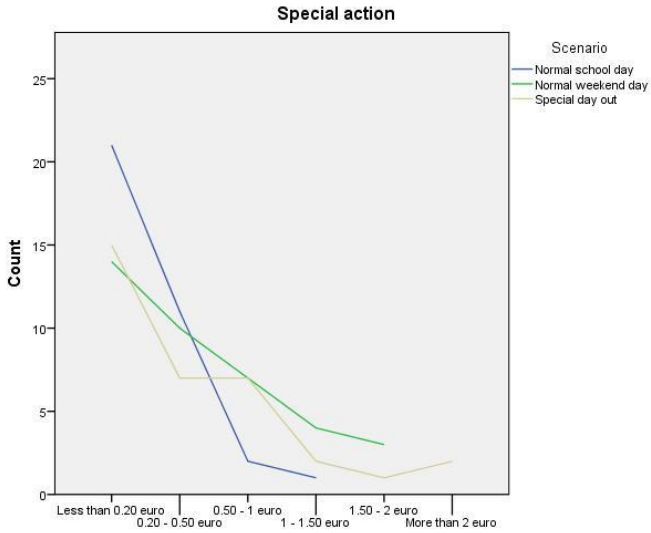


Figure 9.11: Price special action

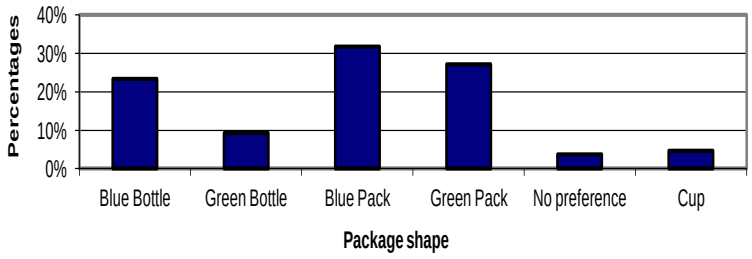
Special item and special action
A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the special item and special action on price. The main effect of a special item/ action on price is significant (F(1,104)=4.095, p=.046). People are willing to pay more for a special action than for a special item.

Volume
The majority of the parents (80.6%) is prefering 200 ml for a children drink during a normal school day, followed by 500 ml (11.1%). The main reasons why people would like to buy 200 ml children drinks during a normal school day are 200 ml is enough for one drinking moment for children (50%), children do not drink more than 200 ml at ones (22.2%) and if children drink more than 200 ml they have to go to the toilet a lot (11.1%). A few participants would like to see children drinks in 500 ml portions. The reason is that with 500 ml children can have something to drink for two situations (50%, e.g. morning and afternoon break). Three participants had other volumes they preferred during a normal school day, for example 150 ml and 250 ml.

The majority of the parents (94.6%) is prefering 200 ml for a children drink during a normal weekend day, followed by 500 ml (5.4%). The main reasons why people would like to buy 200 ml children drinks during a normal weekend day are if children drink packages are bigger than 200 ml children will not drink it all (27.6%) and 200 ml is enough (20.7%). Two participants would like to see children drinks in 500 ml portions. The reasons are that with 500 ml children can decide themselves when they would like to drink something and drinking enough is important.

The majority of the parents (81.8%) is prefering 200 ml for a children drink during a special day out, followed by 500 ml (15.2%). The reasons why people would like to buy 200 ml children drinks during a special day out are children do not drink more than 200 ml at ones (40.9%), 200 ml is enough (18.2%) and if children drink more than 200 ml they have to go to the toilet a lot (13.6%). A few participants would like to see children drinks in 500 ml portions, because it is empty quickly, can do longer with it and otherwise too much. One other volume was mentioned by a participant; this was 100 ml, because it is enough for one drinking moment.

General preference Normal School Day
A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of normal school day on general preferences for the package designs. The main effect of normal school day on general preferences is significant (F(4,103)=16,061 p=.000). Pairwise comparisons show that a green bottle and a blue pack (p=.002) and a green bottle and green pack (p=.020) differ sigificantly. It can be seen that the blue pack and green pack are preferred more than the green bottle. A blue pack and cup (p=.000), green pack and cup (p=.000) and blue bottle and cup (p=.002) differ significantly. The blue pack, green pack and blue bottle are preferred more than a cup.



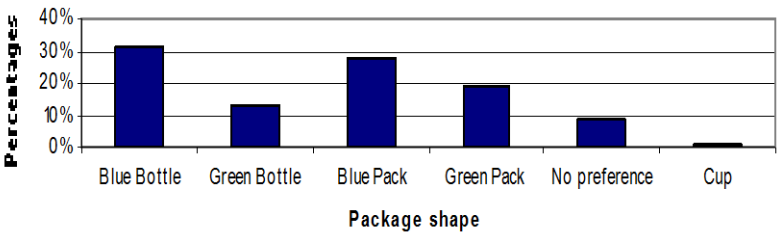
	SD
Blue Bottle	0.425
Green Bottle	0.292
Blue Pack	0.468
Green Pack	0.447
Cup	0.212

Figure 9.12: Overall preference normal school day

The majority of the parents (31.8%) does prefer the blue pack during a normal school day, followed by the green pack (27.1%). The main reasons why people would like to use the blue pack as a children drink during a normal school day are that children drink the pack empty in one time/ is enough (28.6%), can be thrown away/ less (plastic) garbage (14.3%) and the color blue is preferred (14.3%). The main reasons why people would like to use the green pack as a children drink during a normal school day are garbage/ environment (25.8%), the color green is preferred (19.4%) and children drink the pack empty in one time/ pack volume is enough (9.7%). Especially, about garbage/ environment is mentioned a lot with the green pack. According to the participants the green pack could be thrown away immediatelly, is small, is made of paper materials/ no plastic, is environmental friendly and produces less garbage.

General preference Normal Weekend Day

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of normal weekend day on general preferences for the package designs. The main effect of normal weekend day on general preferences is significant (F(4,103)=62,913 p=.000). Pairwise comparisons show that a blue bottle and cup (p=.000), green bottle and cup (p=.006), blue pack and cup (p=.000) and the green pack and cup (p=.000) differ significantly. It can be seen that the blue bottle, green bottle, blue pack and green pack are preferred more than the cup. A blue bottle and green bottle (p=.051) differ marginal significantly. It can be seen that the blue bottle is preferred more than the green bottle.



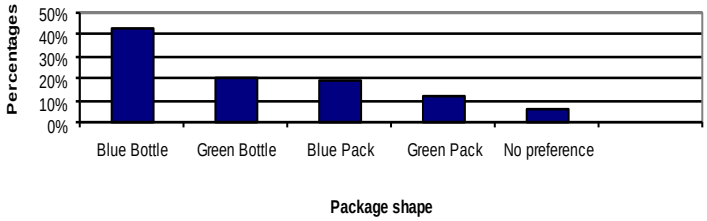
	SD
Blue Bottle	0.464
Green Bottle	0.339
Blue Pack	0.447
Green Pack	0.392
Cup	0.097

Figure 9.13: Overall preference normal weekend day

The majority of the parents (31.1%) does prefer the blue bottle during a normal weekend day, followed by the blue pack (27.4%). The main reasons why people would like to use the blue bottle as a children drink during a normal weekend day are that the bottle is closable (29%), the color blue and/or shape bottle are/is preferred (16.1%), refilable (12.9%) and the bottle is easier/handy (12.9%). The main reasons why people would like to use the blue pack as a children drink during a normal weekend day are the color blue is preferred (29.2%), the blue pack is easy (20.8%), drink the pack empty in one time/ is enough (12.5%) and price (8.3%; respondents think this package design is cheaper than the bottle).

General preference Special Day Out

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of special day out on general preferences for the package designs. The main effect of special day out on general preferences is significant (F(3,104)=7,239 p=.000). Pairwise comparisons show that a blue bottle and blue pack (p=.012), blue bottle and green bottle (p=.007) and blue bottle and green pack (p=.000) differ significantly. It can be seen that the blue bottle is preferred more than the other three package designs.



	SD
Blue Bottle	0.497
Green Bottle	0.399
Blue Pack	0.392
Green Pack	0.328

Figure 9.14: Overall preference special day out

The majority of the parents (43.4%) does prefer the blue bottle during a special day out, followed by the green bottle (19.8%). The main reason why people would like to use the blue bottle as a children drink during a special day out is the fact that the bottle is closable (46.8%). Other reasons are that the color blue or shape bottle is preferred (10.6%), the bottle is easier/ handy (10.6%) and that the bottle is refilable (6.4%). The main reasons why people would like to use the green bottle as a children drink during a special day out are the bottle is closable (33.3%), the bottle is easier/handy/no leaking (27.8%) and the color green is preferred (16.7%),

The four package designs (blue bottle, green bottle, blue pack and green pack) did not differ significantly at the pleasure, arousal, package level in the three consumption scenarios, normal school day, normal weekend day and special day out.

10. Discussions Study 1

During normal school days parents see the blue pack as more appealing than the blue bottle. The pack is the traditional standard package for children drinks at school. This is also mentioned by the participants, some said the pack is common or standard. Besides, a bottle is not especially needed during a normal school day, new innovative packages like bottles can become too much attention grabbing and destracting from the daily (school) activities. In addition, when children get something 'special', like a bottle, at school it is difficult to give them something 'really special' when a special occasion occurs, like a special day out. Moreover, according to parents the bottle shape will be more appealing to children during a special day out than the packs. Maybe the bottle is seen as special and parents can pamper their children with this innovative package during a special day out. In addition, the results show that people are willing to pay more for a bottle than a pack in general, perhaps this can be connected with the consumption occasion type.

The price people are willing to pay for a children drink differs per consumption occasion. The majority of the parents is willing to pay 0 – 0.50 euro for a children drink, a pack and a bottle during a normal school day. This is a normal price for a children drink in the Netherlands. During a normal weekend day and during a special day out the majority of the parents is willing to pay more for a children drink. A special day out is only ones or twice a year, a day to pamper the children and to do and give something extra. Usually on these days more money is spend on food and beverages. So, also the children drinks can be a little nicer, luxer and more expensive. However, the majority of the parents is not willing to pay more for a special item or action connected to the children drink; while the society becomes more and more an experience economy (Pine & Gilmore, 1999). Premiums can be used to create an experience; these elements make the product more appealing for children. However, parents are more prepared to pay extra for a special action than for a special item. Maybe when introducing a new children drink including a toy (in stead of adding it and making it more expensive) will be accepted by

parents. People are willing to pay more for children drinks during special days out. Maybe a children drink with a special item or action is suitable in this situation. So, according to this research if children drinks companies would like to add something to their children drinks, they have to develop and add a special action to their children drink packages and not a special item.

In all consumption occasions included in this study the great majority of the parents prefer 200 ml for a children drink. The main reasons why people would like to buy 200 ml are this volume is enough for one drinking moment, children do not drink more than 200 ml at ones and if children drink more than 200 ml they have to go to the toilet a lot. A few parents prefer the 500 ml. The reasons are that the child has two times something to drink and that the children have to drink enough; however, with two times a portion of 200 ml this can also be done.

The most preferred color in all consumption occasions is blue. The preferred shape during a school day is a pack; however, during a normal weekend day and special day out the preferred shape is a bottle. So, maybe companies should make the children drink package design blue and look at the preferred consumption occasion to decide on the shape. Shape and color do have an influence on the participant's product evaluation. Remarkable, are the reasons why people would like to use the green pack. Especially, about garbage/ environment is mentioned a lot with the green pack. According to the participants the green pack could be thrown away immediatelly, is small, is made of paper materials/ no plastic, is environmental friendly and produces less garbage. Maybe the color green and the standard package materials from a pack (carton) make the participants think the green pack is more environmental friendly. So, perhaps when companies would like to look environmental friendly they need the color green and the material choice should be carton. In addition, the blue and green bottle are both preferred because they are closable. However, only the blue bottle is chosen because it is refilable, while the green bottle has the same shape and is refilable as well. Maybe blue is connected with transparent, so when it is refilled the liquid can be seen. With a green coverage people cannot see what is inside the bottle. Besides, color can be used for the recognition of a brand. Color codes are important; that is why for example milk chocolate is covered in a blue package and pure chocolate in a red package (Vos, 2009), so people will recognise it. People can relate water and the color blue, so maybe blue is connected with refilling with water.

11. Conclusions Study 1

The most preferred color in all consumption situations is blue. The preferred shape is a pack in a normal school day situation; however, during consumption occasions outside school (normal weekend day and special day out) the preferred shape is a bottle. According to parents the bottle shape will be more appealing to children during a special day out situation than the packs. Moreover, the participants are willing to pay more for children drinks during special days and normal weekend days than during school days; the most should be spend on a bottle in all consumption occasions. According to (the parents in) this research the children drink package industry should develop a blue pack for normal school days and a blue bottle for special days out and normal weekend days. Besides, respondents evaluate two package designs typically; the green pack is seen as environmental friendly and the blue bottle as refilable. Moreover, respondents are not willing to pay more for a special item or action; however, they are willing to pay more for a special action than for a special item. Besides, in all consumption occasions 200 ml is with a great majority the preferred consumption volume for children drinks. So, the standard volume of 200 ml in the children drink package industry could be kept. Shape, color and price preferences combined with consumption occasions are not investigated widely in previous research before. The results in this research are valuable and interesting for the children drink industry.

12. Study 2

The second study will be a quantitative study with children in the age category 6-12 years old. In this study the researcher would like to know how children think about shape, color and package designs of children drinks in various consumption occasions.

12.1 Population

The participants in Study 2 will be children between 6-12 years old living in the Netherlands. Around 90 completed questionnaires are needed for this study. The children will be contacted personally by the researcher and asked questions. The children will be found at primary schools and early childhood centres.

The parents of the children will be notified before the study starts about the research. The parents will have time to refuse and when the parents refuse their child(ren) will not take part in the research. The research will not use marketing techniques or try to sell the children items, it is pure a scientific experiment. The participants will not receive the drinks or consume them; they only have to answer research related closed questions.

12.2 Research instrument

The research will focus on the preferred children drink package designs during three different consumption occasions. A short questionnaire will be developed which contains of two demographic questions (gender and age) and five research questions. The researcher will ask the questions personally to the children and write the answers down at the questionnaire sheet.

Before hand the children will be asked to participate in the short questionnaire. The researcher will ask the questions (of the questionnaire) to the children individually. The five research questions will be asked to the participants, while at the same time a sheet with images will be shown. The first question is 'Which color do you prefer?' The image shows a black, red, blue and green pack (same images as in the pre study). The children can point at their preferred color. The second question is 'Which shape do you prefer?' The picture shows the images of a bottle, container, pack and pouch all in the color black (same images as in the pre study). The children can point at their preferred shape. The third, fourth and fifth question are based on the scenarios of Study 1. The three questions are 'Which package design do you prefer during a day at the children's farm or playground?' (normal weekend day); 'Which package design do you prefer during a day in an amusement park? (special day out); and 'Which package design do you prefer during a normal school day?' The images shown together with these three questions are the blue bottle, green bottle, blue pack and green pack (same images as in Study 1). The children can point at the image with the package design they prefer most during a normal school day, normal weekend day and special day out.

13. Results Study 2

13.1 Data Analysis

The data are analysed by using the program PAWS Statistics 20, before called SPSS. Repeated Measures, Chi Square and various tables are used to analyse the data. Hunderd and eightteen questionnaires where collected; all collected questionnaires were suitable for the research.

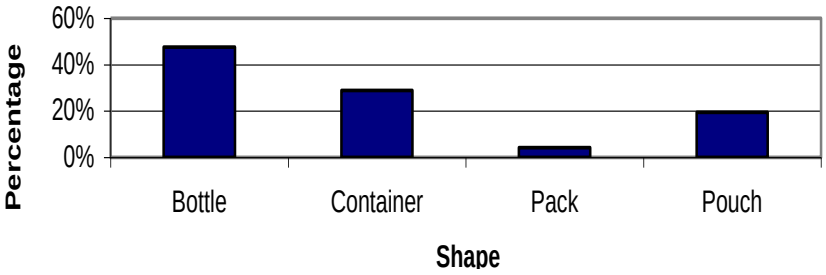
13.2 Participants

In this research 78 girls and 40 boys were participating in the age 6 till 12 years old educated at primary schools in the East of the Netherlands.

13.3 Results

Shape

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the shapes bottle, container, pack and pouch on liking. The main effect of shape on liking is significant (F(3,115)=43,863, p=.000). Pairwise comparisons show that the bottle and pack (p=.000) and bottle and pouch (p=.001) differ significantly. It can be seen that a bottle is liked more than a pack and a pouch. Pack and container (p=.000) and pack and pouch (p=.003) differ significantly, it can be seen that the pouch and container are liked more than the pack.



	SD
Bottle	0.501
Container	0.202
Pack	0.454
Pouch	0.398

Figure 13.1: Preferences shape

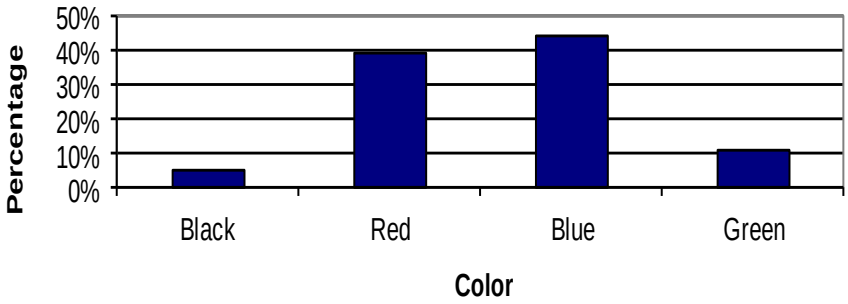
In figure 13.1 can be seen which shape is most preferred by the participants. The majority of the children prefer the bottle (47.5%), followed by the container (28.8%).

A non parametric test (Chi Square) was conducted to investigate the effects of gender on shape. The main effect of gender on shape is significant (X(3)=18.511, p=.000). Boys like the pouch (40%) more than girls (9%), in addition, girls like the bottle (55.1%) more than boys (32.5%).

A non parametric test (Chi Square) was conducted to investigate the effects of age on shape. The main effect of age on shape is significant (X(18)=40.265, p=.002). Ten (76.5%) and eleven (70.8%) year olds like the bottle more than the other ages. Six, seven and eight years old like the container more than nine, ten and eleven year olds. Nine year olds like the pouch (28%) more than the other children and the pack is not popular in one of the age categories.

Color

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of the colors black, red, blue and green on liking. The main effect of color on liking is significant (F(3,115)=41,983, p=.000). Pairwise comparisons show that black and red (p=.000) and black and blue (p=.000) differ significantly. It can be seen that red and blue are liked more as a color than black. Red and green (p=.000) and blue and green (p=.000) differ significantly, it can be seen that red and blue are liked more than green.



	SD
Black	0.221
Red	0.492
Blue	0.499
Green	0.314

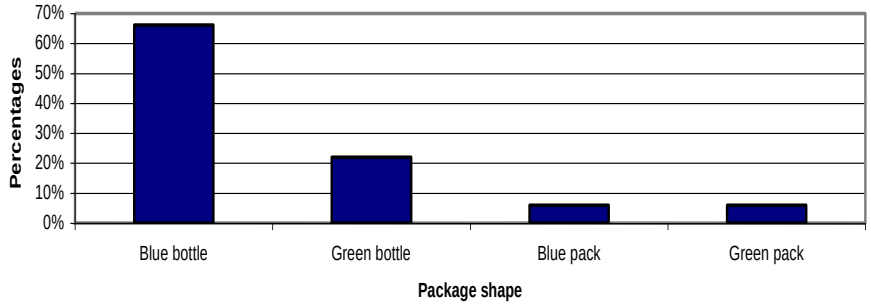
Figure 13.2: Preferences color

In figure 13.2 can be seen which color is most preferred by the participants. The majority of the children prefer the color blue (44.1%), followed by the color red (39.8%).

A non parametric test (Chi Square) was conducted to investigate the effects of gender on color. The main effect of gender on color is significant (X(3)=20.817, p=.000). Boys like the colors black (25%) and green (25%) more than girls (1.3% and 3.8%); in addition, girls like the colors blue and red more (51.3% and 43.6%) than boys (30% and 32.5%). Furthermore, a non parametric test (Chi Square) was conducted to investigate the effects of age on color. No main or interaction effects were found (X(18)=23.576, p=.169, *ns*).

Normal Weekend Day

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of normal weekend day on the package designs blue bottle, green bottle, blue pack and green pack. The main effect of normal weekend day on package design is significant (F(3,115)=56.938, p=.000). Pairwise comparisons show that the blue bottle and green bottle (p=.000), the blue bottle and blue pack (p=.000) and the blue bottle and green pack (p=.000) differ significantly. It can be seen that the blue bottle is liked more during a normal weekend day than the other three package designs. The green bottle and blue pack (p=.005) and the green bottle and green pack (p=.005) differ significantly, it can be seen that the green bottle is liked more during a normal weekend day than the blue pack and green pack.



	SD
Blue Bottle	0.475
Green Bottle	0.416
Blue Pack	0.237
Green Pack	0.237

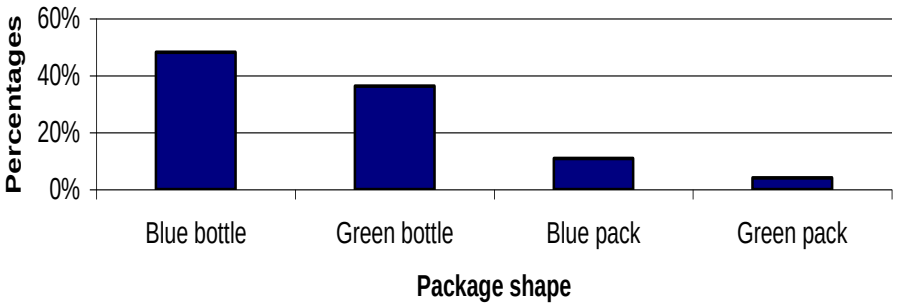
Figure 13.3: Preferences normal weekend day

In figure 13.3 can be seen which package design is most preferred by the participants in a normal weekend day situation. The majority of the children prefer the blue bottle (66.1%), followed by the green bottle (22%) during a normal weekend day.

A non parametric test (Chi Square) was conducted to investigate the effects of gender on package design during a normal weekend day. No main or interaction effects were found (X(3)=,700 p=.873, *ns*). Besides, a non parametric test (Chi Square) was conducted to investigate the effects of age on package design during a normal weekend day. No main or interaction effects were found (X(18)=7.283, p=.988, *ns*).

Special Day Out

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of special day out on the package designs blue bottle, green bottle, blue pack and green pack. The main effect of special day out on package design is significant (F(3,115)=51.490, p=.000). Pairwise comparisons show that the blue bottle and blue pack (p=.000) and the blue bottle and green pack (p=.000) differ significantly. It can be seen that the blue bottle is liked more during a special day out than the packs. The green bottle and blue pack (p=.000) and the green bottle and green pack (p=.000) differ significantly, it can be seen that the green bottle is liked more during a special day out than the blue pack and green pack.



	SD
Blue Bottle	0.502
Green Bottle	0.483
Blue Pack	0.314
Green Pack	0.202

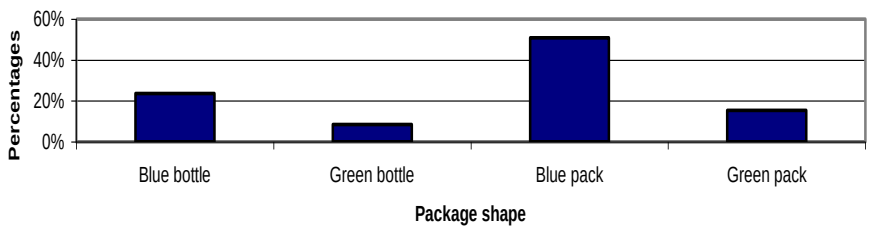
Figure 13.4: Preferences special day out

In figure 13.4 can be seen which package design is most preferred by the participants in a special day out situation. The majority of the children prefer the blue bottle (48.3%), followed by the green bottle (36.4%) during a special day out.

A non parametric test (Chi Square) was conducted to investigate the effects of gender on package design during a special day out. No main or interaction effects were found (X(3)=,487 p=.922, *ns*). Besides, a non parametric test (Chi Square) was conducted to investigate the effects of age on package design during a special day out. No main or interaction effects were found (X(18)=23.818, p=.161, *ns*).

Normal School Day

A multivariate analyse of variance (Repeated Measures) was conducted to investigate the effects of normal school day on the package designs blue bottle, green bottle, blue pack and green pack. The main effect of normal school day on package design is significant (F(3,115)=18.963, p=.000). Pairwise comparisons show that the blue bottle and green bottle (p=.019) and the blue bottle and blue pack (p=.003) differ significantly. It can be seen that the blue bottle is liked more during a normal school day than the green bottle. However, a blue pack is liked more than a blue bottle during a normal school day. The green bottle and blue pack (p=.000) differ significantly, it can be seen that the blue pack is liked more than the green bottle during a normal school day. The blue pack and green pack (p=.000) differ significantly, it can be seen that the blue pack is liked more than the green pack during a normal school day.



	SD
Blue Bottle	0.427
Green Bottle	0.280
Blue Pack	0.502
Green Pack	0.361

Figure 13.5: Preferences normal school day

In figure 13.5 can be seen which package design is most preferred by the participants in a normal school day situation. The majority of the children prefer the blue pack (50.8%), followed by the blue bottle (23.7%) during a normal school day.

A non parametric test (Chi Square) was conducted to investigate the effects of gender on package design during a normal school day. The main effect of gender on package design during a normal school day is significant (X(4)=10.864, p=.028). Girls like the blue pack (59%) more than the boys (35%) and boys like the green bottle (15%) and the green pack (25%) more than girls (5.1% and 10.3%).

A non parametric test (Chi Square) was conducted to investigate the effects of age on package design during a normal school day. The main effect of age on package design during a normal school day is significant (X(24)=42.343, p=.012). It can be seen that six (38.5%) and ten (35.3%) year olds like the blue bottle more than the other children. Eight and ten year olds do not like the green bottle (0%); however, they do like the blue pack (54.5%) even as the other age categories in the normal school day situation.

Study 1 and 2 – parents and children
A non parametric test (Chi Square) was conducted to investigate the effects of parent and child on package design (blue bottle, green bottle, blue pack, green pack) during a normal school day, normal weekend day and special day out. No main or interaction effects were found (X(20)=13.868 p=.837, *ns*; (X(15)=7.848 p=.930, *ns*; X(12)=6.860 p=.867, *ns*).

14. Discussions Study 2

The majority of the children prefer the bottle shape. Possibly, the children see the bottle as a special and innovative package design. Children prefer the bottle shape over the pack and pouch; however, the pouch and container are preferred above the pack. Most children will get the pack shape to school and prefer other exciting new package designs if they can choose. The children indicate this themselves in the study; the pack is the most preferred package design during normal school days and during normal weekend days and special days out the bottle is most preferred. Remarkable, the pack is not popular in one of the age categories; but, when asking the children which package design they prefer during a normal school day, the blue pack is preferred most in all age categories. A pack is the traditional standard package for children drinks at school. The children know this package design, because their parents (children's role models) buy the pack for them and ask them to take it with them during school days. So, because the children get this shape from their parents and take it to school every day the children prefer this package design during a normal school day. Probably because of this, the bottle is exciting, innovative and special in the children's minds. So, especially suitable for special days out, like going to an amusement park. Besides, days that are not school days (e.g. normal weekend days) are also a little special for the children, so a special shape (e.g. bottle) can be preferred in this consumption situation as well. In addition, girls and boys differ in their shape preference, it can be seen that boys like the pouch more than girls and girls like the bottle more than boys. Also age differences are found, older children (ten and eleven years old) like the bottle more than the other age categories. The younger children (six, seven and eight years old) like the container more than the older children. The differences between boys and girls in preferences can perhaps be explained by not inborn but learned features. Children learn from their surrounding which colors (or shapes) are especially for girls and which colors (or shapes) are especially for boys (Jadva, Hines & Golombok, 2010).

The majority of the children prefer the color blue and red and not green and black. These preferences are also mentioned in previous studies. In the research of Meerum Terwogt and Hoeksma (1995) this preferences was also seen; “blue, yellow, red, white, black, green” (Crozier, 1996, p. 67). The most preferred color by all participants in all ages was blue. Red was liked consistently and preference for the color green comes by age (Crozier, 1996). In addition, the most preferred color in all consumption situations is blue. Gender differences are found; boys like black and green more than girls and girls like the color blue and red more than boys. Besides, boys mostly like the green bottle/pack and girls the blue pack. Remarkable, because when asking which package design the children would like during a normal weekend day and special day out, the blue bottle is liked most by boys and girls. Also the green bottle is preferred more than the packs during these days. However, during normal school days the blue pack is preferred above the other three package designs. The differences between boys and girls in preferences can perhaps be explained by not inborn but learned features. As mentioned before, children learn from their surrounding which colors are especially for girls and which colors (or shapes) are especially for boys (Jadva et. al., 2010); this can be of influence on the package design preferences of children.

15. Conclusions Study 2

The children prefer the color blue most, the bottle shape is preferred during normal weekend days and special days out, but during school days the pack is preferred. So, if the children drink industry would like to focus on packages appealing to children, it can look at the consumption situation and adapt the children drink package designs to it; a bottle during special days out and normal weekend days and a pack during normal school days. The color preferences were seen in previous research; however, the shape preferences linked to various consumption situations are valuable and interesting for the children drink industry.

16. Overall discussion

In the pre study and Study 2 the participants had to indicate which color they preferred most black, red, blue or green. In Study 1 the parents liked the colors blue and green and in Study 2 the children liked the colors blue and red. Also in previous research the color blue is seen as most preferred (e.g. Crozier, 1996). Besides, the color blue is seen as suitable by parents during a normal weekend day, special day out and birthday. Moreover, in the pre study parents indicate that blue is appealing to parents as well as to their children. Research shows that blue is the most preferred color worldwide; besides, blue is a cold color suitable for functional products, (Doyle & Bottomley, 2006), like children drinks. Meerum Terwogt and Hoeksma (1995) also compared color preferences of adults and children. Both parents and children rank blue at place one and children rank green as least preferred. Also in the research of Choungourian (1969) the color green becomes popular after the age of 15. In the pre study parents see the color green as appealing for their children; while, in Study 2 children do not prefer the color green. Remarkable, is that boys prefer black and green more than girls, this is also mentioned in a research of Kilinc (2011); girls like among others the colors magenta and red and boys like among others the colors black and blue. The differences between boys and girls can perhaps be explained by learned features. Children learn from their surrounding which colors are especially for girls and which colors (or shapes) are especially for boys (Jadva et. al., 2010); this can be of influence on the package design preferences of children.

In Study 1 the parents give various reasons why they prefer one of the four package designs (blue bottle, green bottle, blue pack, green pack). The green pack is seen as environmental friendlier than the other package designs. Probably the color green is seen as environmental friendly by consumers. Worldwide, the color green is connected with environmental friendliness (Naeyart, 2009). Various environmental friendly terms are linked to the color green and environmental friendly, like ‘green marketing’, ‘going green’, ‘green products’ and ‘green energy’. Besides, the color green is related with the power of life, spring, woods and nature (Crozier, 1996). Products in the color green can be a signal for consumers to think it is environmental friendlier than other products. Maybe the participants assume the pack is made of carton; usually the material choice for a children drink pack. The participants can assume that the carton package design can be recycled and in this manner is environmental friendlier than the bottle. So, a combination of a pack shape and green color; is seen as environmental friendly and influences the product evaluation. Besides, in Study 1 the participants mention a main difference between the blue bottle and the green bottle. The blue bottle and green bottle are both preferred because they are closable. However, only the blue bottle is chosen because it is refilable, while the green bottle has the same shape and is refilable as well. Maybe the participants connect blue with transparent, so when the bottle is refilled the liquid can be seen. With a green coverage people cannot seen what is inside the bottle. Besides, color can be used for the recognition of a brand. Color codes are important; that is why for example milk chocolate is covered in a blue package and pure chocolate in a red package (Vos, 2009), so people will recognise it. Blue is associated with cold, air, water and ice (Mahnke & Mahnke, 1987), so maybe people will refill the blue bottle with cold water. So, hypothesis 1 ‘Color does have an influence on the evaluation of the product’ is confirmed. The green pack is seen as more environmental friendly than the other package designs and the blue bottle is seen as refilable and the green bottle not.

In the pre study the participants had to indicate which shape they preferred most a bottle, pack, container or pouch. In the pre study the parents prefer the bottle and the pack. In Study 2 the same question was asked, the children prefer the bottle, followed by the container. So, parents and children both like the bottle shape most. However, when asking parents and children in

Study 1 and Study 2 which shape they prefer in various consumption occasions, the shape preferences differ per consumption occasion, but the parents and children do agree with each other. Parents and children prefer the angular pack shape in normal school days and the round bottle shape during normal weekend days and special days out. The pack is the traditional standard package for children drinks at school. This is also mentioned by the participants in Study 1; the pack is common or standard, probably the package has to fit the situation. Besides, a bottle is not especially needed during a normal school day, new innovative packages like bottles can become too much attention grabbing and destracting from the daily (school) activities. In addition, when children get something 'special' like a bottle to school, it is difficult to give them something 'really special' when a special occasion occurs, like a special day out. According to the parents in Study 1 the bottle shape will be more appealing to children during a special day out, the children agree with this in Study 2. Maybe the bottle is seen as special and it could be that parents would like to pamper their children with this innovative package design during a special day out. Probably the reason why children prefer the pack during school days is because the pack is the traditional standard package for children drinks at school. Plausible children know this package design because their parents (role models) buy the pack for them and ask them to take it with them during school days. Probably because of this the bottle is exciting, innovative and special in the children's minds. So, especially suitable for special days out, like going to an amusement park; a special design for a special consumption occasion. Besides, days that are not school days (e.g. normal weekend days) are also a little special for the children, so a special shape (e.g. bottle) can be preferred in this consumption situation as well. To conclude, hypothesis 2 'Shape does have an influence on the evaluation of the product' is confirmed. The angular pack is seen as suitable for a school day and the round bottle during normal weekend days and special days out.

In Study 1 the participants had to indicate how much they were willing to pay for a children drink, pack and bottle during one of the three consumption occasions. The majority of the parents is willing to pay 0 – 0.50 euro for a children drink, a pack and a bottle during a normal school day. This is a normal price for a children drink in the Netherlands. During a normal weekend day and during a special day out the majority of the parents is willing to pay more, namely 0.50 – 1.00 euro for a children drink and a pack in these consumption occasions. During a normal weekend day the majority of the parents is willing to pay 0.50 – 1.00 euro for a bottle and during a special day out the majority of the parents is willing to pay 1.00 – 1.50 euro for a bottle. In all cases the majority of the parents is willing to pay more for a children drink during a special day out. Wakefield and Inman (2003) mentioned that price sensitivity is different in various situations. These researchers suggest that "consumers are less price sensitive when making hedonic purchase or in a social context" (Wakefield & Inman, 2003, p. 207). A special day out is only ones or twice a year, a day to pamper the children and to do and give something extra. Usually on these days more money is spend on food and beverages. So, also the children drinks can be a little nicer, luxer and more expensive. Hypothesis 4 'The consumption occasion does have an influence on the product price' is confirmed. Participants are willing to pay more for a children drink during normal weekend days and special days out than during normal school days.

In Study 1 the participants had to indicate how much they are willing to pay more for a special item or action. The parents are willing to pay less than 0.20 euro more for a special item and special action during a normal school day, normal weekend day and special day out. So, hypothesis 3 'Consumers are willing to pay more for a package including a special item or coupon' is not confirmed. However, respondents are willing to pay more for a special action than for a special item. Maybe a special item is seen as 'more stuff to take' (clutter) and dangerous for

the children (small parts). Perhaps a special action is seen by the parents as more excited and a reason to spend time with their children and for example organize a special day out to the zoo with a discount. It is possible when introducing a new children drink including a toy (in stead of adding it and making it more expensive) will be accepted by parents. For example the Kinder Surprise is introduced as a chocolate egg with a toy inside. As seen in Study 1 people are willing to pay more for children drinks during special days out. Maybe a children drink with a special item or action is suitable in this consumption situation. The drink can be more expensive with the toy and not because of the toy, like the McDonalds happy meals.

The results in Study 1 and Study 2 indicate that parents and children do agree on package design preferences in the three consumption occasions. During a normal school day the majority of the parents and children prefer the blue pack. During a normal weekend day and special day out the majority of the parents and children prefer the blue bottle. A reason for this similarity can be that parents function as role models for their children. Children are influenced by the food and beverages parents consume; what the parents buy, use and give to their children is familiar for the children and will be copied (Jansen et. al., 2010). In addition, when asking parents and children plain to shape and color preferences, the majority answers bottle and blue. So, hypothesis 5 'Parents and children will differ in color and shape preference' is not confirmed. Parents and children are similar in their (first choice) color and shape preference in various consumption occasions.

This research has a couple of limitations. The main limitation is the stimulus materials used, namely images instead of real life products. Second, the brand name 'Ejoo' was a fictive brand name; so, brand image or personality was not included and could not be measured. Third, most participants are arranged in the East of the Netherlands. It is possible that inhabitants in other parts of the Netherlands have other opinions about the shapes and colors of children drink package designs. Besides, all participants are living in the Netherlands. Maybe in other countries the preferences are different. Fourth, the majority of the participants in the pre study and Study 1 are women (mothers). It is possible that the fathers have different opinions about the children drinks than the mothers. However, most shopping decisions are made by mothers. Besides, the majority of participants in Study 2 are girls, maybe boys have other preferences. Fifth, the shapes bottle, pack, container and pouch are not the only shapes that can be used for children drinks. Maybe other shapes are more preferred by parents and/or children. Finally, blue, green, red and black are only four colors. It is possible that people prefer other colors more for children drinks than these four. In addition, there are more consumption occasions than the three included in this research. However, this research is a good start in connecting package design preferences and consumption occasions. Future research can include real life packages as stimuli materials in stead of images of package designs, perhaps that real life packages are more visual and clear to the participants. Besides, future research can include other or more colors and/or shapes and/or consumption occasions. Perhaps parents and/or children prefer other colors and shapes in different consumption occasions. Also children drink marketing communication instruments focussing on consumption occasions can be included in future research. Finally, it is possible that when doing the same research with other children's food and beverages the same results will appear. The results of this study can for example be generalised to other functional (low involvement) products, like children's cookies. However, it is possible that these products are low involvement products for parents, but high involvement products for children. This can also be an interesting element to include in future research.

17. Overall conclusion

Parents and children prefer the same color (blue) and shape (bottle) in this research. However, parents and children differ in their opinion about the color green. Parents like the color green and children not. So, children drink companies should take in consideration if they would like to attract the parents or the children with their package designs.

Remarkable, in Study 1 the green pack, with its green color and pack shape, is seen by participants as environmental friendlier than the other package designs. In addition, the participants in Study 1 see a main difference between the blue bottle and the green bottle. Only the blue bottle is chosen because it is refilable, while the green bottle has the same shape and is refilable as well. So, children drink companies could communicate a message via the children drink package, for example environmental friendlier (green pack) or refilable (blue bottle).

To conclude, the shape preferences differ per consumption occasion, but the parents and children do agree with each other. The recommendation to the children drink package industry is to create the following package designs during the following consumption occasions; during a normal school day the preferred package design is a blue pack of 200 ml in the price caterogy 0 – 0.50 euro. During a normal weekend day the preferred package design is a blue bottle of 200 ml in the price category 0.50 – 1.00 euro and during a special day out the preferred package design is a blue bottle of 200 ml in the price category 1.00 – 1.50 euro. The combination of color and shape preferences linked to various consumption occasions is an interesting and valuable adding to scientific research and can be explored further in the future.

References

- Adams, F.M. & Osgood, C.E. (1973). A cross-cultural study of the affective meanings of color. *Journal of Cross-Cultural psychology*, 4, 135-156
- Ares, G. & Deliza, R. (2010). Studying the influence of package shape and colour on consumer expectations of milk desserts using word association and conjoint analysis. *Food Quality and Preference*, 21, 930-937
- Becker, L., Van Rompay, T.J.L., Schifferstein, H.N.J. & Galetzka, M. (2011). Tough package, strong taste: the influence of package design on taste impressions and product evaluations. *Food Quality and Preference*, 22, 17-23.
- Berlyne, D.E. (1976). Psychological aesthetics. *International Journal of Psychology,* 11, 43-55
- Blackwell, R.D., Miniard, P.W. & Engel, J.F. (2006). *Consumer Behaviour*. Thomson South-Western, 10th edition
- Bottomley, P.A. & Doyle, J.R. (2006). The interactive effects of colors and products on perceptions of brand logo appropriateness. *Marketing Theory,* 6(1), 63-83, DOI: 10.1177/1470593106061263
- Chapman, K., Nicholas, P., Banovic, D. & Supramaniam, R. (2006). The extent and nature of food promotion directed to Children in Australian Supermarkets. *Health Promot. Int.,* 21(4), 331-339
- Choungourian, A. (1969). Color preferences: a cross-cultural and cross-sectional study. *Perceptual and Motor Skills*, 28, 801-802
- Crozier, W.R. (1996). The psychology of colour preferences. *Rev. Prog. Coloration,* 26, 63-72
- Dennison, B.A., Rockwell, H.L. & Baker, S.L. (1998). Fruit and vegatable intake in young children. *Journal Am. Coll. Nutr.*, 17(4), 371-378
- Elliot, A. & Maier, M.A. (2007). Color and psychological functioning. *Current directions in Psychological Science*, 16, 250-254
- Elliot, A., Maier, M.A., Binser, M.J., Friedman, R. & Pekrun, R. (2009). The effect of red on avoidance behavior in achievement contexts. *Personality and Social Psychology Bulletin*, 35, 365-375
- Eysenck, H.J. (1941). A critical and experimental study of color preferences. *American Journal of Psychology,* 54, 385-394
- Floor, K. & van Raaij, F. (2010). *Marketingcommunicatiestrategie*. Noordhoff Uitgevers, 6th edition
- Genschow, O., Reutner, L. & Wänke, M. (2012). The color red reduces snack food and soft drink intake. *Appetite*, 58, 699-702. DOI: 10.1016/j.appet.2011.12.023
- Guilford, J.P. (1934). Affective value of color as a function of hue, tint, and chroma. *Journal of Experimental Psychology,* 17, 342-370
- Guilford, J.P. & Smith, P.C. (1959). A system of color preferences. *American Journal of Psychology,* 72, 487-502
- Hogg, J. (1969). *Psychology and the visual arts*. New York: Penguin Books. Gen. Psychol., 80, 29
- Jansen, E., Mulkens, S. & Jansen, A. (2010). How to promote fruit consumption in children. Visual appeal versus restriction. *Appetite,* 54(3), 599-602
- Jadva, V., Hines, M. & Golombok, S. (2010). Infants' preferences for toys, colors, and shapes: Sex differences and similarities. *Arch Sex Behav,* 39, 1261-1273, DOI 10.1007/s10508-010-9618-z
- Kilinc, N. (2011). Clothing color preferences of boys and girls aged between six and nine. *Social behavior and personality,* 39(10), 1359-1366
- Mahnke, F.H. & Mahnke, R.H. (1987). Colour and light in man-made environments.

- Meerum Terwogt, M. & Hoeksma, J.B. (1995). Colors and emotions: Preferences and combinations. *The Journal of General Psychology*, 122(1), 5-17
- Mehta, R. & Zhu, R. (2009). Blue or red? Exploring the effect of color on cognitive task performances. *Science*, 323, 1226-1229
- Mehta, K., Phillips, C., Banytis, F., Ward, P., Coveney, J., & Handsley, E. (2010). *Report on Marketing Food and Beverages to Children, via Product Package in Supermarkets. Children and Food Marketing Project Report to SA Health.* Adelaide Australia: Flinders University
- Naeyaert, M. (2009). *'Green marketing": een experimenteel onderzoek naar de impact van groene cues in reclame.* Master Thesis Communication Science, Universiteit Gent, 1-177
- Norman, D.A. (2003). *Attractive Things work better.* Chapter 1 of Emotional Design: Why We Love (or Hate) Everyday Things. New York: Basic Books
- Ou, L.C., Ronnier Luo, M., Woodcock, A. & Wright, A. (2004). A study of colour emotion and colour preference. Part I: Colour emotions for single colours. *Color research and application*, 29(3), 232-240
- Pine, B.J. & Gilmore, J.H. (1999). *The Experience Economy*. *Work in theatre and every business a stage.* United States: Library of Congress Cateloging-in-Publication Data
- Schifferstein, H.H.J. (2009). The drinking experience: Cup or content? *Food Quality and Preference*, 20, 268-276
- Singer, N.C., McCuUey, W.L., Chamblisss, L.N., Charles, C.A., Smith, A.A., Waddell, W.M. & Winfield, E.B. (1988). *Perceptual and Motor Skills*, 66, 295
- Rodiers, L. (2006). *De meerwaarde van verpakkingsinnovatie voor de consument.* Hasselt University
- Russell, J.A. & Mehrabian, A. (1974). Distinguishing anger and anxiety in terms of emotional response factors. *Journal of Consulting and Clinical Psychology,* 42, 79-83
- Valdez, P. & Mehrabian, A. (1994). Effects of color on emotions. *Journal of Experimental Psychology,* 123(4), 394-409
- Van Rompay, T.J.L. (2011). *Lecture 4 Design and Affective Experience*. Enschede: University Twente
- Van Rompay, T.J.L. & Pruyn, A.T.H. (2011). When visual product features speak the same language: Effects of shape-typeface congruence on brand perception and price expectations. *Journal Prod. Innov manag*., 28, 599-610
- Vos, K. (2009). *What you see is what you get… How can product package contribute to perceptions of luxury?* Master Thesis Twente University, 1-45
- Wicky (2012). Retrieved on 18 May 2012, from www.wicky.nl
- Wakefield, K.L. & Inman, J.J. (2003). Situational price sensitivity: the role of consumption occasion, social context and income. *Journal of Retailing,* 79, 199-212
- Wheeler, A. (2003). Designing brand identity: A complete guide to creating, building and maintaining strong brands. Hoboken, NJ: John Wiley & Sons, Inc.
- Wexner, L.B. (1954). The degree to which colors (hues) and associated with mood-tones. *Journal of Applied Psychology,* 38, 432-435
- Zhang, Y., Feick, L. & Price, L.J. (2006). The impact of self-construal on aesthetic preference for angular versus rounded shapes. *PSPB*, 32(6), 794-805, DOI 10.1177/0146167206286626

Appendix

- Questionnaire Pre Study
- Questionnaire Study 1
- Questionnaire Study 2

- Results tables Pre Study
- Results tables Study 1
- Results tables Study 2

Questionnaire Pre Study

Thank you for making time to fill out this questionnaire. You are participating in a research about package designs for children drinks. This is the topic of my Master Thesis for the Master Communication Studies at the University Twente.

1. Please indicate your gender
□ Female
□ Male

2. Please indicate your educational level
□ Primary school
□ College
□ MBO
□ HBO
□ WO
□ Other, namely ….

3. Please indicate your year of birth
19..

4. How many children do you have?
…. Girls
…. Boys

5. How old are your children?
....

6. Where are you going or which activity are you doing at normal weekend days with your children? (more answers possible)
□ Walking in the area
□ Cycling in the area
□ Birthday
□ Zoo
□ Children's farm
□ Playground
□ Amusement park
□ Other, namely ….

8. Where are you going or which activity are you doing at a special day out with your children? (more answers possible)
□ Walking in the area
□ Cycling in the area
□ Birthday
□ Zoo
□ Children's farm
□ Playground
□ Amusement park
□ Other, namely ….

Shape & color
A package design can communicate specific feelings. You are going to see four different shapes and four different colors, please answer for all eight images the questions described underneath. Please indicate your preferences by putting a cross in the 5 –point scales (totally agree – totally disagree).

	Totally agree	*Agree*	*Neutral*	*Disagree*	*Totally disagree*
Scale	□	□	□	□	□

A. The package design in the image gives me a feeling (of):

Happiness	☐	☐	☐	☐	☐	Unhappiness
Happy	☐	☐	☐	☐	☐	Irritation
Satisfied	☐	☐	☐	☐	☐	Unsatisfied
Fulfilled	☐	☐	☐	☐	☐	Unfulfilled
Promising	☐	☐	☐	☐	☐	Desperate

B. I will use the package design in the image during an occasion or in a situation were I feel:

Aroused	☐	☐	☐	☐	☐	Relaxed
Excited	☐	☐	☐	☐	☐	Calm
Worked up	☐	☐	☐	☐	☐	Drained
Alert	☐	☐	☐	☐	☐	Lazy
Awake	☐	☐	☐	☐	☐	Drowsy

C. I think this package design will be:

Useless	☐	☐	☐	☐	☐	Usefull
Valuable	☐	☐	☐	☐	☐	Valueless
Unpleasant	☐	☐	☐	☐	☐	Pleasant
Sensible	☐	☐	☐	☐	☐	Senseless
Comfortable	☐	☐	☐	☐	☐	Uncomfortable

I would like to buy this product design for a normal weekend day

Totally agree	☐	☐	☐	☐	☐	Totally disagree

I would like to buy this product design for a special day out

Totally agree	☐	☐	☐	☐	☐	Totally disagree

The package is appealing to me

Totally agree	☐	☐	☐	☐	☐	Totally disagree

The package will be appealing to my children

Totally agree	☐	☐	☐	☐	☐	Totally disagree

The package is suitable for a birthday

Totally agree	☐	☐	☐	☐	☐	Totally disagree

The package is suitable for a school day

Totally agree	☐	☐	☐	☐	☐	Totally disagree

Thank you very much for filling out this questionnaire & have a nice day!
(Note from the researcher: the questions on this page were asked for all eight images. The eight images were illustrated on separated pages)

Questionnaire Study 1

Thank you for making time to fill out this questionnaire! You are participating in a research about package designs for children drinks. This is the topic of my Master Thesis for the Master Communication Studies, Marketing Communication.

1. I am a ….

□ Female
□ Male

2. Please indicate your educational level

□ Primary school
□ College
□ MBO
□ HBO
□ WO
□ Other, namely ….

3. Please indicate your year of birth

19….

4. How many children do you have?

…. Girl(s)
…. Boy(s)

5. How old are your children?

Girl(s): …. …. ….
Boy(s): …. …. ….

6. Are your children diabetic or have other reasons they cannot consume children drinks?

□ Yes
□ No

Imagine …. You and your family are going on a cycling trip to the nearest children´s farm with playground on a normal weekend day. The children are enjoying the various animals and play at the playground as they do many weekends. After a while they get thirsty and ask you for a drink. You brought some 0.2L children drinks for them and see them enjoy the drinks.

You are at a children´s farm with playground together with your children, imagine you brought the below shown package design(s). How would you feel about this package design in this specific situation? Please indicate your feelings about the package design(s) in the picture(s) by filling in the 5-point scales (totally agree – totally disagree). Just follow your first feeling.

1. Blue bottle with sports cap 0.2L

	Totally agree	*Agree*	*Neutral*	*Disagree*	*Totally disagree*
Scale	□	□	□	□	□

A. The package showed in the picture gives me a feeling (of):

Happiness	□	□	□	□	□	Unhappiness
Happy	□	□	□	□	□	Irritation
Satisfied	□	□	□	□	□	Unsatisfied
Fulfilled	□	□	□	□	□	Unfulfilled
Promising	□	□	□	□	□	Desperate

B. During a normal weekend day I think this package type will be:

Useless	□	□	□	□	□	Usefull
Valuable	□	□	□	□	□	Valueless
Unpleasant	□	□	□	□	□	Pleasant
Sensible	□	□	□	□	□	Senseless
Comfortable	□	□	□	□	□	Uncomfortable

C. I will use the package in the picture during an occasion or in a situation were I feel:

Aroused	□	□	□	□	□	Relaxed
Excited	□	□	□	□	□	Calm
Worked up	□	□	□	□	□	Drained
Alert	□	□	□	□	□	Lazy
Awake	□	□	□	□	□	Drowsy

The package is appealing to me

Totally agree	□	□	□	□	□	Totally disagree

This package will be appealing to my children

Totally agree	□	□	□	□	□	Totally disagree

2. Green bottle with sports cap 0,2L

You are at a children´s farm with playground together with your children, imagine you brought the below shown package design. How would you feel about this package design in this specific situation?

	Totally agree	*Agree*	*Neutral*	*Disagree*	*Totally disagree*
Scale	□	□	□	□	□

A. The package showed in the picture gives me a feeling (of):

Happiness	□	□	□	□	□	Unhappiness
Happy	□	□	□	□	□	Irritation
Satisfied	□	□	□	□	□	Unsatisfied
Fulfilled	□	□	□	□	□	Unfulfilled
Promising	□	□	□	□	□	Desperate

B. During a normal weekend day I think this package type will be:

Useless	□	□	□	□	□	Usefull
Valuable	□	□	□	□	□	Valueless
Unpleasant	□	□	□	□	□	Pleasant
Sensible	□	□	□	□	□	Senseless
Comfortable	□	□	□	□	□	Uncomfortable

C. I will use the package in the picture during an occasion or in a situation were I feel:

Aroused	□	□	□	□	□	Relaxed
Excited	□	□	□	□	□	Calm
Worked up	□	□	□	□	□	Drained
Alert	□	□	□	□	□	Lazy
Awake	□	□	□	□	□	Drowsy

The package is appealing to me

Totally agree	□	□	□	□	□	Totally disagree

This package will be appealing to my children

Totally agree	□	□	□	□	□	Totally disagree

3. Blue pack 0,2L

You are at a children´s farm with playground together with your children, imagine you brought the below shown package design. How would you feel about this package design in this specific situation?

	Totally agree	*Agree*	*Neutral*	*Disagree*	*Totally disagree*
Scale	□	□	□	□	□

A. The package showed in the picture gives me a feeling (of):

Happiness	□ □ □ □ □	Unhappiness
Happy	□ □ □ □ □	Irritation
Satisfied	□ □ □ □ □	Unsatisfied
Fulfilled	□ □ □ □ □	Unfulfilled
Promising	□ □ □ □ □	Desperate

B. During a normal weekend day I think this package type will be:

Useless	□ □ □ □ □	Usefull
Valuable	□ □ □ □ □	Valueless
Unpleasant	□ □ □ □ □	Pleasant
Sensible	□ □ □ □ □	Senseless
Comfortable	□ □ □ □ □	Uncomfortable

C. I will use the package in the picture during an occasion or in a situation were I feel:

Aroused	□ □ □ □ □	Relaxed
Excited	□ □ □ □ □	Calm
Worked up	□ □ □ □ □	Drained
Alert	□ □ □ □ □	Lazy
Awake	□ □ □ □ □	Drowsy

The package is appealing to me

Totally agree □ □ □ □ □ Totally disagree

This package will be appealing to my children

Totally agree □ □ □ □ □ Totally disagree

4. Green pack 0,2L

You are at a children´s farm with playground together with your children, imagine you brought the below shown package design. How would you feel about this package design in this specific situation?

	Totally agree	*Agree*	*Neutral*	*Disagree*	*Totally disagree*
Scale	□	□	□	□	□

A. The package showed in the picture gives me a feeling (of):

Happiness	□	□	□	□	□	Unhappiness
Happy	□	□	□	□	□	Irritation
Satisfied	□	□	□	□	□	Unsatisfied
Fulfilled	□	□	□	□	□	Unfulfilled
Promising	□	□	□	□	□	Desperate

B. During a normal weekend day I think this package type will be:

Useless	□	□	□	□	□	Usefull
Valuable	□	□	□	□	□	Valueless
Unpleasant	□	□	□	□	□	Pleasant
Sensible	□	□	□	□	□	Senseless
Comfortable	□	□	□	□	□	Uncomfortable

C. I will use the package in the picture during an occasion or in a situation were I feel:

Aroused	□	□	□	□	□	Relaxed
Excited	□	□	□	□	□	Calm
Worked up	□	□	□	□	□	Drained
Alert	□	□	□	□	□	Lazy
Awake	□	□	□	□	□	Drowsy

The package is appealing to me

Totally agree	□	□	□	□	□	Totally disagree

This package will be appealing to my children

Totally agree	□	□	□	□	□	Totally disagree

Price

1. How much are you willing to pay for a children drink during a normal weekend day?

□ Less than 0.50 euro
□ 0.50 – 1 euro
□ 1 – 1.50 euro
□ 1.50 – 2 euro
□ 2 – 2.50 euro
□ 2.50 – 3 euro
□ More than 3 euro

1. How much are you willing to pay for a pack during a normal weekend day?

□ Less than 0.50 euro
□ 0.50 – 1 euro
□ 1 – 1.50 euro
□ 1.50 – 2 euro
□ 2 – 2.50 euro
□ 2.50 – 3 euro
□ More than 3 euro

1. How much are you willing to pay for a bottle during a normal weekend day?

□ Less than 0.50 euro
□ 0.50 – 1 euro
□ 1 – 1.50 euro
□ 1.50 – 2 euro
□ 2 – 2.50 euro
□ 2.50 – 3 euro
□ More than 3 euro

2. How much are you willing to pay <u>more</u> for a children drink with a special item (e.g. toy)?
□ Less than 0.20 euro
□ 0.20 – 0.50 euro
□ 0.50 – 1 euro
□ 1 – 1.50 euro
□ 1.50 – 2 euro
□ More than 2 euro

3. How much are you willing to pay <u>more</u> for a children drink with a special action (e.g. coupons for a(n) zoo/ amusement park)?
□ Less than 0.20 euro
□ 0.20 – 0.50 euro
□ 0.50 – 1 euro
□ 1 – 1.50 euro
□ 1.50 – 2 euro
□ More than 2 euro

3. Which volume is most suitable for your children to drink during a normal weekend day?
□ 200 ml (0,2L)
□ 500 ml (0.5L)
□ 750 ml (0.75L)
□ 1000 ml (1L)
□ Other, namely ….

4. Why is this volume most suitable for your children during a normal weekend day?
……
……

<u>Overall preference</u>

Blue bottle

Green bottle

Blue pack

Green pack

1. Which package design would you prefer most during a normal weekend day?
□ Blue bottle
□ Green bottle
□ Blue pack
□ Green pack

Why do you prefer this package design most during a normal weekend day?
……
……

2. Which package design would you prefer most during a normal school day?
□ Blue bottle
□ Green bottle
□ Blue pack

□ Green pack

Why do you prefer this package design most during a normal school day?

.....
.....

3. Which package design would you prefer most during a special day out?

□ Blue bottle
□ Green bottle
□ Blue pack
□ Green pack

Why do you prefer this package design most during a special day out?

.....
.....

Thank you very much for filling out this questionnaire & have a nice day!

Questionnaire Study 2

1. I am a ….

□ Girl
□ Boy

2. How old are you?

….

3. Which shape has your preference?

□ Bottle
□ Container
□ Pack
□ Pouch

4. Which color has your preference?

□ Black
□ Red
□ Blue
□ Green

5. Which package design do you prefer during a day at a children's farm or playground?

□ Blue bottle
□ Green bottle
□ Blue pack
□ Green pack

6. Which package design do you prefer during a day in an amusement park?

□ Blue bottle
□ Green bottle
□ Blue pack
□ Green pack

7. Which package design do you prefer during a normal school day?

□ Blue bottle
□ Green bottle
□ Blue pack
□ Green pack

(Note from the researcher: the images were illustrated on separated pages)

PRE STUDY results tables

Cornbach's Alphas		5 items	4 items	Item deleted
Bottle	Pleasure	0.951		
	Arousal	0.782		
	Package	0.792		
Pack	Pleasure	0.920		
	Arousal	0.138	0.715	Worked up – Drained
	Package	0.932		
Container	Pleasure	0.925		
	Arousal	0.821		
	Package	0.084	0.878	Pleasant – Unpleasant
Pouch	Pleasure	0.863		
	Arousal	0.745		
	Package	0.848		
Black	Pleasure	0.913		
	Arousal	0.187	0.890	Awake - Drowsy
	Package	0.916		
Red	Pleasure	0.905		
	Arousal	0.404	0.787	Worked up – Drained
	Package	0.851		
Blue	Pleasure	0.962		
	Arousal	0.718		
	Package	0.806		
Green	Pleasure	0.954		
	Arousal	0.737		
	Package	0.398	0.804	Pleasant - Unpleasant

Table 1: Cornbach's alphas pre study

Item	Colors
Pleasure	Green and Blue
Arousal	Blue and Green
Package	Red and Blue
Normal weekend day	Green and Blue
Special day out	Green and Blue
Appealing parents	Green and Blue
Appealing children	Blue and Green
Birthday	Blue and Green
School day	Red and Green

Table 2: Conclusion items and colors

Items	Shapes
Arousal	Bottle and Pouch
Package	Bottle and Pouch
Special day out	Bottle and Pack
Appealing parents	Bottle and Container
Appealing children	Bottle and Pack
Birthday	Bottle and Pack
School day	Bottle and Pack

Table 3: Conclusion items and shapes

Activity	Yes	No
Walking	53.6%	46.4%
Cycling	75%	25%
Birthday	60.7%	39.3%
Zoo	7.1%	92.9%
Children's farm	32.1%	67.9%
Playground	25%	75%
Amusement park	10.7%	89.3%

Table 4: Activity overview normal weekend day (N=28)

Activity	Yes	No
Walking	10.7%	89.3%
Cycling	10.7%	89.3%

Birthday	3.6%	96.4%
Zoo	67.9%	32.1%
Children's farm	21.4%	78.6%
Playground	28.6%	71.4%
Amusement park	78.6%	21.4%

Table 5: Activity overview special day out (N=28)

STUDY 1 results tables

Cornbach's Alphas		**5 items**	**3 items**	**Item deleted/ Comments**
Blue Bottle	Pleasure	0.911		
	Package	0.795		
	Arousal	0.726		
Green Bottle	Pleasure	0.903		
	Package	0.711		
	Arousal	0.502	0.715	Aroused – Relaxed Excited – Calm
Blue Pack	Pleasure	0.889		
	Package	0.721		
	Arousal	0.574		Highest possible
Green Pack	Pleasure	0.930		
	Package	0.715		
	Arousal	0.528	0.622	Alert – Lazy Awake – Drowsy Highest possible

Table 1: Cornbach's Alphas Study 1

How much are you willing to pay for a children drink during a normal school day?	Percentage
Less than 0.50 euro	62.9%
0.50 – 1 euro	28.6%
1 – 1.50 euro	5.7%
1.50 – 2 euro	2.9%
2 – 2.50 euro	0%
2.50 – 3 euro	0%
More than 3 euro	0%
Total	100%

Table 2: Price children drink normal school day (N=35)

How much are you willing to pay for a pack during a normal school day?	Percentage
Less than 0.50 euro	68.6%
0.50 – 1 euro	25.7%
1 – 1.50 euro	2.9%
1.50 – 2 euro	2.9%
2 – 2.50 euro	0%
2.50 – 3 euro	0%
More than 3 euro	0%
Total	100%

Table 3: Price pack normal school day (N=35)

How much are you willing to pay for a bottle during a normal school day?	Percentage
Less than 0.50 euro	57.1%
0.50 – 1 euro	31.4%
1 – 1.50 euro	5.7%
1.50 – 2 euro	5.7%
2 – 2.50 euro	0%
2.50 – 3 euro	0%
More than 3 euro	0%
Total	100%

Table 4: Price bottle normal school day (N=35)

How much are you willing to pay for a children drink during a normal weekend day?	Percentage
Less than 0.50 euro	36.8%
0.50 – 1 euro	44.7%
1 – 1.50 euro	15.8%
1.50 – 2 euro	0%
2 – 2.50 euro	2.6%
2.50 – 3 euro	0%
More than 3 euro	0%
Total	100%

Table 5: Price children drink normal weekend day (N=38)

How much are you willing to pay for a pack during a normal weekend day?	Percentage
Less than 0.50 euro	60.5%
0.50 – 1 euro	23.7%
1 – 1.50 euro	10.5%
1.50 – 2 euro	5.3%
2 – 2.50 euro	0%
2.50 – 3 euro	0%
More than 3 euro	0%
Total	100%

Table 6: Price pack normal weekend day (N=38)

How much are you willing to pay for a bottle during a normal weekend day?	Percentage
Less than 0.50 euro	23.7%
0.50 – 1 euro	42.1%
1 – 1.50 euro	23.7%
1.50 – 2 euro	7.9%
2 – 2.50 euro	2.6%
2.50 – 3 euro	0%
More than 3 euro	0%
Total	100%

Table 7: Price bottle normal weekend day (N=38)

How much are you willing to pay for a children drink during a special day out?	Percentage
Less than 0.50 euro	17.6%
0.50 – 1 euro	44.1%
1 – 1.50 euro	20.6%
1.50 – 2 euro	14.7%
2 – 2.50 euro	0%
2.50 – 3 euro	0%
More than 3 euro	2.9%
Total	100%

Table 8: Price children drink special day out (N=34)

How much are you willing to pay for a pack during a special day out?	Percentage
Less than 0.50 euro	23.5%
0.50 – 1 euro	58.8%
1 – 1.50 euro	11.8%
1.50 – 2 euro	2.9%
2 – 2.50 euro	0%
2.50 – 3 euro	0%
More than 3 euro	2.9%
Total	100%

Table 9: Price pack special day out (N=34)

How much are you willing to pay for a bottle during a special day out?	Percentage
Less than 0.50 euro	23.5%
0.50 – 1 euro	20.6%
1 – 1.50 euro	47.1%
1.50 – 2 euro	2.9%
2 – 2.50 euro	2.9%
2.50 – 3 euro	0%
More than 3 euro	2.9%
Total	100%

Table 10: Price bottle special day out (N=34)

How much are you willing to pay more for a special item?	Percentage
Less than 0.20 euro	57.9%
0.20 – 0.50 euro	18.7%
0.50 – 1 euro	10.3%
1 – 1.50 euro	7.5%
1.50 – 2 euro	3.7%
More than 2 euro	1.9%
Total	100%

Table 11: Special item total (N=107)

How much are you willing to pay more for a special item? (normal school day)	Percentage
Less than 0.20 euro	80%
0.20 – 0.50 euro	14.3%
0.50 – 1 euro	2.9%
1 – 1.50 euro	2.9%
1.50 – 2 euro	0%
More than 2 euro	0%
Total	100%

Table 12: Special item normal school day (N=35)

How much are you willing to pay more for a special item? (normal weekend day)	Percentage
Less than 0.20 euro	44.7%
0.20 – 0.50 euro	21.1%
0.50 – 1 euro	13.2%
1 – 1.50 euro	13.2%
1.50 – 2 euro	7.9%
More than 2 euro	0%
Total	100%

Table 13: Special item normal weekend day (N=38)

How much are you willing to pay more for a special item? (special day out)	Percentage
Less than 0.20 euro	50%
0.20 – 0.50 euro	20.6%
0.50 – 1 euro	14.7%
1 – 1.50 euro	5.9%
1.50 – 2 euro	2.9%
More than 2 euro	5.9%
Total	100%

Table 14: Special item special day out (N=34)

How much are you willing to pay more for a special action?	Percentage
Less than 0.20 euro	46.7%
0.20 – 0.50 euro	26.2%
0.50 – 1 euro	15%

1 – 1.50 euro	6.5%
1.50 – 2 euro	3.7%
More than 2 euro	1.9%
Total	100%

Table 15: Special action total (N=107)

How much are you willing to pay more for a special action? (normal school day)	Percentage
Less than 0.20 euro	60.0%
0.20 – 0.50 euro	31.4%
0.50 – 1 euro	5.7%
1 – 1.50 euro	2.9%
1.50 – 2 euro	0%
More than 2 euro	0%
Total	100%

Table 16: Special action normal school day (N=35)

How much are you willing to pay more for a special action? (normal weekend day)	Percentage
Less than 0.20 euro	36.8%
0.20 – 0.50 euro	26.3%
0.50 – 1 euro	18.4%
1 – 1.50 euro	10.5%
1.50 – 2 euro	7.9%
More than 2 euro	0%
Total	100%

Table 17: Special action normal weekend day (N=38)

How much are you willing to pay more for a special action? (special day out)	Percentage
Less than 0.20 euro	44.1%
0.20 – 0.50 euro	20.6%
0.50 – 1 euro	20.6%
1 – 1.50 euro	5.9%
1.50 – 2 euro	2.9%
More than 2 euro	5.9%
Total	100%

Table 18: Special action special day out (N=34)

Which volume is most suitable for your children during a normal school day?	Percentage
200 ml (0.2L)	80.6%
500 ml (0.5L)	11.1%
750 ml (0.75L)	0%
1000 ml (1L)	0%
Other, namely	8.3%
Total	100%

Table 19: Volume normal school day (N=36)

Why do you prefer this volume during a normal school day?	Percentage
200 ml is enough	50.0%
Children do not drink more than 200 ml	22.2%
A lot of toilet visits by too much volume	11.1%
500 ml for a bottle	5.6%
Other reasons	11.1%
Total	100%

Table 20: Volume 200 ml normal school day (N=18)

Why do you prefer this volume during a normal school day?	Percentage
Two times something to drink	50%
Enough drinking is important	25%
Other reasons	25%
Total	100%

Table 21: Volume 500 ml normal school day (N=4)

Why do you prefer this volume during a normal school day?	Percentage
150 ml	33.33%
250 ml	33.33%
Cup	33.33%
Total	100%

Table 22: Volume other normal school day (N=3)

Which volume is most suitable for your children during a normal weekend day?	Percentage
200 ml (0.2L)	94.6%
500 ml (0.5L)	5.4%
750 ml (0.75L)	0%
1000 ml (1L)	0%
Other, namely	0%
Total	100%

Table 23: Volume normal weekend day (N=37)

Why do you prefer this volume during a normal weekend day?	Percentage
Bigger than 200 ml, children don't drink it all	27.6%
200 ml is enough	20.7%
Offer different drinking moments	6.9%
500 ml is too much	6.9%
A lot of toilet visits by too much volume	3.4%
Garbage	3.4%
Other reasons	27.6%
Total	100%

Table 24: Volume 200 ml normal weekend day (N=28)

Why do you prefer this volume during a normal weekend day?	Percentage
Children can decide themselves when they would like to drink	50%
Enough drinking is important	50%
Total	100%

Table 25: Volume 500 ml normal weekend day (N=2)

Which volume is most suitable for your children during a special day out?	Percentage
200 ml (0.2L)	81.8%
500 ml (0.5L)	15.2%
750 ml (0.75L)	0%
1000 ml (1L)	0%

Other, namely	3.0%
Total	100%

Table 9.26: Volume special day out (N=33)

Why do you prefer this volume during a special day out?	Percentage
Children do not drink more than 200 ml at ones	40.9%
200 ml is enough	18.2%
A lot of toilet visits by too much volume	13.6%
Cold drink each time	9.1%
Other reasons	18.2%
Total	100%

Table 27: Volume 200 ml special day out (N=22)

Why do you prefer this volume during a special day out?	Percentage
Is empty quickly	25%
Can do longer with it	25%
Otherwise too much	25%
Other reasons	25%
Total	100%

Table 28: Volume 500 ml special day out (N=4)

Which package design do you prefer during a normal school day?	Percentage
Blue Bottle	23.4%
Green Bottle	9.3%
Blue Pack	31.8%
Green Pack	27.1%
Cup	4.7%
No preference	3.7%
Total	100%

Table 29: General preferences normal school day (N=107)

Blue bottle	Percentage
Refilable	25%
Closable	21.4%
Color preference	14.3%
Easier/ handy	10.7%
Bigger than pack	3.6%
Garbage/ environment	3.6%
Other reasons	21.4%
Total	100%

Table 30: General preferences blue bottle normal school day (N=28)

Green bottle	Percentage
Closable	20%
Color preference	20%
Easier/ no leaking	20%
Other reasons	40%
Total	100%

Table 31: General preferences green bottle normal school day (N=5)

Blue pack	Percentage
Drink in one time/ enough	28.6%
Garbage/ environment	14.3%
Color preference	14.3%
Easy	7.1%
Volume is important (not color)	7.1%
Price	3.6%

Cup	3.6%
Other reasons	21.4%
Total	100%

Table 32: General preferences blue pack normal school day (N=28)

Green pack	Percentage
Garbage/ environment	25.8%
Color preference	19.4%
Drink in one time/ enough	9.7%
Price	6.5%
Easy	3.2%
Cup	3.2%
Other reasons	32.3%
Total	100%

Table 33: General preferences green pack normal school day (N=31)

Which package design do you prefer during a normal weekend day?	Percentage
Blue Bottle	31.1%
Green Bottle	13.2%
Blue Pack	27.4%
Green Pack	18.9%
No preference	8.5%
Cup	0.9%
Total	100%

Table 34: General preferences normal weekend day (N=106)

Blue bottle	Percentage
Closable	29%
Color and/or shape preference	16.1%
Refilable	12.9%
Easier/ handy	12.9%
Bigger than pack	6.5%
Other reasons	22.6%
Total	100%

Table 35: General preferences blue bottle normal weekend day (N=31)

Green bottle	Percentage
Closable	27.3%
Easier/ handy/ no leaking	27.3%
Color preference	9.1%
Other reasons	36.4%
Total	100%

Table 36: General preferences green bottle normal weekend day (N=11)

Blue pack	Percentage
Color preference	29.2%
Easy	20.8%
Drink in one time/ enough	12.5%
Price	8.3%
Garbage/ environment	4.2%
Other reasons	25%
Total	100%

Table 37: General preferences blue pack normal weekend day (N=24)

Green pack	Percentage
Color preference	31.3%
Easy	12.5%
Garbage/ environment	12.5%
Drink in one time/ enough	6.3%

Price	6.3%
Other reasons	31.3%
Total	100%

Table 38: General preferences green pack normal weekend day (N=16)

Which package design do you prefer during a special day out?	Percentage
Blue Bottle	43.4%
Green Bottle	19.8%
Blue Pack	18.9%
Green Pack	12.3%
No preference	5.7%
Cup	0%
Total	100%

Table 39: General preferences special day out (N=106)

Blue bottle	Percentage
Closable	46.8%
Color and/or shape preference	10.6%
Easier/ handy	10.6%
Refilable	6.4%
More volume	4.3%
Garbage/ environment	2.1%
Other reasons	19.1%
Total	100%

Table 40: General preferences blue bottle special day out (N=47)

Green bottle	Percentage
Closable	33.3%
Easier/ handy/ no leaking	27.8%
Color preference	16.7%
More volume	5.6%
Garbage/ environment	5.6%
Other reasons	11.1%
Total	100%

Table 41: General preferences green bottle special day out (N=18)

Blue pack	Percentage
Color preference	21.4%
Drink in one time/ enough	14.3%
Easy	14.3%
Garbage/ enviroment	14.3%
Other reasons	35.7%
Total	100%

Table 42: General preferences blue pack special day out (N=14)

Green pack	Percentage
Color preference	38.5%
Smearing/ leaking	15.4%
Garbage/ environment	15.4%
Other reasons	30.8%
Total	100%

Table 43: General preferences green pack special day out (N=13)

STUDY 2 results tables

	Percentage
Bottle	47,5%
Container	28,8%
Pack	4,2%
Pouch	19,5%
Total	100%

Table 1: Shape preferences (N=118)

	Girls	Boys
Bottle	55.1%	32.5%
Container	29.5%	27.5%
Pack	6.4%	0.0%
Pouch	9.0%	40.0%
Total	100%	100%

Table 2: Shape preferences girls and boys (N=118)

	6	7	8	9	10	11
Bottle	26.9%	50%	45.5%	32%	76.5%	70.8%
Container	46.2%	41.7%	45.5%	36%	11.8%	4.2%
Pack	7.7%	8.3%	0%	4%	0%	4.2%
Pouch	19.2%	0%	9.1%	28%	11.8%	20.8%
Total	100%	100%	100%	100%	100%	100%

Table 3: Shape preferences age categories (N=118)

	Percentage
Black	5,1%
Red	39,8%
Blue	44,1%
Green	11,0%
Total	100%

Table 4: Color preferences (N=118)

	Girls	Boys
Black	1.3%	12.5%
Red	43.6%	32.5%
Blue	51.3%	30.0%
Green	3.8%	25.0%
Total	100%	100%

Table 5: Color preferences girls and boys (N=118)

	Percentage
Blue bottle	66.1%
Green bottle	22.0%
Blue pack	5.9%
Green pack	5.9%
Total	100%

Table 7: Package design preferences normal weekend day (N=118)

	Percentage
Blue bottle	48.3%
Green bottle	36.4%
Blue pack	11.0%
Green pack	4.2%
Total	100%

Table 8: Package design preferences special day out (N=118)

	Percentage
Blue bottle	23.7%
Green bottle	8.5%
Blue pack	50.8%
Green pack	15.3%
Cup	1.7%
Total	100%

Table 9: Package design preferences normal school day (N=118)

	Girls	Boys
Blue Bottle	23.1%	25.0%
Green Bottle	5.1%	15.0%
Blue Pack	59.0%	35.0%
Green Pack	10.3%	25.0%
Cup	2.6%	0.0%
Total	100%	100%

Table 10: Package design preferences normal school day girls and boys (N=118)

	6	7	8	9	10	11
Blue Bottle	38.5%	16.7%	18.2%	16%	35.3%	16.7%
Green Bottle	11.5%	25%	0%	8%	0%	8.3%
Blue Pack	30.8%	33.3%	54.5%	72%	52.9%	50%
Green Pack	19.2%	8.3%	27.3%	4%	11.8%	25%
Cup	0%	16.7%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%

Table 11: Package design preferences normal school day age categories (N=118)