DRESSING ROOMS: LOVE IT OR LEAVE IT!

To what extent does the setting of a dressing room influence consumer experiences?

Master thesis

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SUMMARY

It is commonly believed that dressing rooms are able to influence consumer experiences, as it represents that final moment where the consumer decides whether to purchase the apparel or not. Dressing rooms are able to influence the approach behavior of consumers, which generates the desire to stay in the store, fit several clothes, repeat dressing room visits and increase purchase intentions. For this reason, retailers need to understand how aspects of the physical environment affect consumers' emotional states and self-evaluations.

This study was conducted to examine the effect of lighting direction and mirrors on several dependent variables: emotional states (pleasure, arousal and dominance), perceived spaciousness, self-evaluation (facial and body appearance), overall dressing room experiences and consumer behavior. Besides, this study focused on gender differences in dressing rooms too. These aspects were measured using two studies. First, the hypotheses were examined by using a 2 (mirrors: with versus without) x 2 (lighting direction: frontal versus frontal and overhead) between subjects design. An online questionnaire with four randomly shown manipulated images of dressing room settings was used. A total of 207 participants between ages of 18 and 62 were randomly assigned to one of the four dressing room settings. The second study used interviews in a field experiment, to gather more information about dressing room environments and to compare the results of the online questionnaires to a real setting.

As assumed, this study found significant results for the influence of both mirrors and lighting direction. It could be concluded that the effects of mirrors in dressing rooms are more important than lighting direction, though both appear to be relevant. Retailers seem to be able to create positive dressing room experiences by using mirrors. Besides, there seems to be propensity in favor of frontal and overhead lighting, though participants mentioned that they liked both lighting directions. Additionally, when focusing on perceived spaciousness in dressing rooms, lighting direction only influenced perceived spaciousness of participants in dressing room with mirrors. No statistically significant differences were found for perceived spaciousness in dressing rooms without mirror. Besides, this study found that other aspects in dressing room appeared to be relevant too, such as privacy, cleanliness, hooks and a chair. These findings offer insight into the influence of lighting direction and mirrors in dressing rooms, which could help retailers to make decisions regarding their dressing room environments and to make their shopping experience more appealing.

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INTRODUCTION

"Imagine, you are in a dressing room with two shirts. You notice the dirt on the floor and you are thinking about standing on your shoes while you trying on the clothes. When you are taking of your clothes, you feel a bit uncomfortable, because you are not able to step back without touching the walls. Then, you see someone walk in front of the dressing room because of the sheer curtain. This makes you a bit embarrassed and you hope that the other shoppers are not able to see you. However, you force yourself to focus on yourself and apparel again. You look in the mirror, you think 'this lighting does not make me look my best' and you are considering leaving without trying the clothes. You are trying to move in the small dressing room to see if the lighting gets better. It is not working and you feel down and disappointed. Suddenly you remember that you do not need new clothes at all and you are leaving the store without buying anything."

This research focuses on the influence of lighting direction and mirrors on consumer experiences in dressing rooms. It is generally assumed that consumers consider to buy clothes, when visiting a fashion store and its dressing room. When being in a dressing room, privacy is very important, because consumers like to be in control when they try on apparel and they would like to create their own opinion without interruption of personnel.

Several researchers found that atmospherics in retail environments are able to positively influence consumers' emotions and in addition consumers' purchase intention. In 1986, Baker already found that atmospherics, such as lighting, music and scent, are able to improve consumers' mood and increase sales. However, less research is found focusing on the influence of atmospherics in dressing rooms. When consumers enter a dressing room, they evaluate the color, texture and design of the clothes. Another important aspect of consumer behavior in dressing rooms seems to be self-evaluation. Consumers create a feeling and impression of the clothes including its fit and appearance on the body.

The dressing room experience of consumers seems to be very important to create positive emotional reactions. Marketers seem to be able to create a pleasant shopping experience by using different atmospherics in the dressing room. The emotional states of consumers will eventually influence their behavior and positive emotional states of consumers could lead to an increase of sales.

In the next section the theoretical framework of the research will be further discussed, which includes the influence of lighting direction and mirrors on emotional states, perceived

spaciousness, self-evaluation, overall dressing room experience and consumer behavior. Besides, gender differences in dressing rooms will be discussed.

Lighting direction and mirrors seem to determine whether shoppers are trying on apparel and make purchases (All Dressed Up, 2006). Retailers could make shopping experiences more appealing by using appropriate lighting direction and mirrors (The Perfect Fit, 2007). The Stimulus – organism – response paradigm of Mehrabian and Russell (1974) was used to evaluate consumer emotional states and responses in dressing rooms. Lighting direction and use of mirrors seems to be able to influence emotions of consumers (Summers & Hebert, 2001) and Baumstarck (2008) found that frontal lighted dressing rooms were more stimulating than overhead lighted dressing rooms.

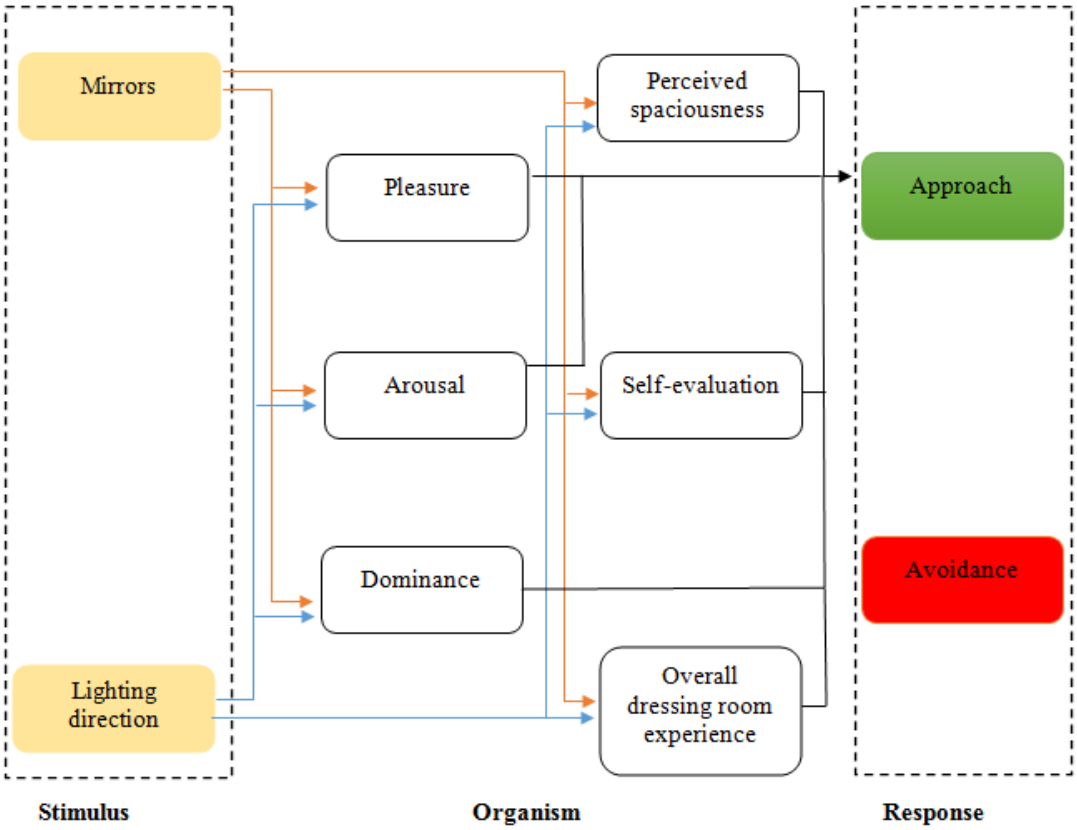
The influence of lighting direction and mirrors on perceived spaciousness appears to be relevant too. Lighter environments seem to be more spacious (Stamps, 2010) and dressing rooms with frontal lighting appeared to be more roomy (Baumstarck, 2008). Besides, it is generally assumed that mirrors create spaciousness in rooms too (Rea, 2000). Additionally, personal appearance could be influenced by lighting direction and mirrors (Baumstarck, 2008; Baumstarck & Park, 2010). Facial appearance of consumers was rated better in overhead lighted dressing rooms, while frontal lighting could be used to eliminate harsh shadows.

Furthermore, the overall dressing room experience was rated more positive when using frontal lighting instead of overhead lighting (Baumstarck & Park, 2010). This could lead to approach behavior of consumers, which generates the desire to stay in the dressing room, fit several clothes, repeat dressing room visits and increase the purchase intentions.

2. THEORETICAL FRAMEWORK

In this section an overview is given of the extent to which lighting direction and mirrors affect emotional states, perceived spaciousness, self-evaluation and the overall dressing room experience, which will lead to approach or avoidance behavior in dressing rooms as shown in figure 1.

Figure 1. Model of the research.



2.1 CONSUMER EXPERIENCE

Nowadays, the focus of retailers on experience-based consumption increased. Retailers are able to improve the consumer experience by meeting their needs and expectations (Seven Ways, 2013). Additionally, it is believed that retailers may be missing opportunities to attract consumers by not paying attention to dressing room environments (Baumstarck, 2008). There are several aspects which influence these environments, such as atmospherics. In 1973, Kotler defined atmospherics as "the conscious designing of space to create certain effects in buyers"(p.50). The main atmospherics are color, scent, music, temperature, density and light (Mari & Poggesi, 2013). Atmospherics are capable to influence the behavior and emotions of consumers in an effective way, even when unconsciously perceived by consumers (Bäckström

& Johansson, 2006; Dijksterhuis et al., 2005).

Research focused on the approach-avoidance effect of atmospherics claimed that shoppers' emotional states within the store predict actual purchase behavior, not just attitudes and intentions. Baker, Grewal and Parasuraman (2002) state that in-store elements, such as color, lighting and music may have more influence on the decision making of consumers than elements which are not present at point-of-purchase, such as advertisements.

2.2 LIGHTING DIRECTION

As mentioned above, lighting is one of the in-store elements. Several studies argued that lighting is one of the most important aspects of atmospherics in a store environment. These studies used the Mehrabian-Russell model as a lens through which to understand the effectiveness of retail lighting (Areni & Kim, 1994; Donovan et al., 1994).

Lighting factors are able to influence both store image and increase of sales (Baker, Grewal & Parasuraman, 2002). Lighting seems to be a key factor for retailers to create positive store atmospheres (Baumstarck, 2008). Bitner (1992) suggests that lighting is a complex aspect consisting of intensity, pattern and direction and it also seems to be an important part of the overall store environment. In case of dressing rooms, lighting is able to attract attention, provide visual focus, generate interest and make colors appealing but most of all it is able to create a comfortable atmosphere. In general, lighting is able to influence emotions of consumers (Summers & Hebert, 2001).

Many retailers underestimate the expectations and preferences consumers have when entering a dressing room. A dressing room could be seen as an overlooked opportunity in retail, because it is one of the critical moments for consumers in terms of their purchase intentions (All Dressed Up, 2006). According to Baumstarck (2008) retail lightings' goal is to attract consumers and facilitate the appraisal of self and product in dressing rooms.

Several aspects of lighting in dressing rooms are important. Baumstarck (2008) investigated the effects of lighting direction in dressing rooms on consumers' emotional states, lighting perceptions and preferences, self-evaluations, dressing room evaluations, and the consumer's overall dressing room experience. She used frontal versus overhead lighted dressing rooms in a field experiment, which took place in three dressing rooms at a local area boutique. Baumstarck (2008) found that there are several types of shoppers, such as environmental focused shoppers, who are mainly focused on the environment of the dressing room and self-oriented shoppers, who are mainly focused on their personal appearance. In the results of her study, Baumstarck (2008) also found that shadows in dressing rooms should be

minimized. Therefore, retailers could use either directional lighting in front of the face and frontal illumination from the mirror lights. Mirror lighting seems to be the best opportunity for illumination of the consumers' body, which is important when trying clothes (Rea & Freyssinier, 2010b).

Dressing room lighting has to meet the needs of different consumers. In 2010, Baumstarck and Park noticed that people prefer frontal lighting in dressing rooms, but retailers could use both frontal and overhead lighting to achieve the most universally accepted shopper experience. However, Baumstarck (2008), concludes that "consumers are far less aware of or affected by lighting direction than generally assumed" (p.89) and in 2010, Baumstarck and Park found that the effects of lighting direction were less critical than expected. Reasons for these conclusions might be that lighting is registered as a part of the entire experience rather than as an individual factor and lighting might be a part of the atmospheric background that is secondary to the main foci in the dressing room environment: the apparel and the individual itself.

Rea and Freyssinier (2010b) found that lighting in dressing room environments is an important aspect for consumers to evaluate their clothes and self-appearance. That is why lighting in dressing rooms should focus on the personal perceptions. Eventually, this will lead to a positive dressing room experience (Rea & Freyssinier, 2010a). Another important aspect of a dressing room experience is the visual clarity, because consumers are evaluating the products through fabrics and detail inspection (Rea & Freyssinier, 2010b).

In conclusion, lighting has already been proven to have a significant impact on the consumer's shopping experience, perception of space and preference (Baumstarck & Park, 2010; Custers, de Kort, IJsselsteijn, & de Kruijff, 2010) and designers have suggested that the dressing room is an even more important part of the decision to purchase (All Dressed Up, 2006).

2.3 USE OF MIRRORS

Another factor, which could influence consumer experiences in dressing rooms are mirrors. It is generally assumed that mirrors create spaciousness in rooms (Rea, 2000). The mirror placement seems to determine whether shoppers are trying on apparel and make purchases (All Dressed Up, 2006). Adding mirrors in dressing rooms would make a shopping experience more appealing (The Perfect Fit, 2007). However, less research has been found focusing on the influence of mirrors on consumer behavior in dressing rooms.

2.4 LIGHTING DIRECTION AND EMOTIONAL STATES

Arousal and pleasure are widely accepted measures to predict emotional states of consumers, affected by environmental cues, such as lighting (Summers & Hebert, 2001). Pleasure is the extent to which consumer feelings are positively, like happy and pleased (Mehrabian & Russell, 1974). Arousal could be defined as an affective aspect ranging from sleep to franctic excitement and dominance is the extent to which consumers feel important and in control over one's surroundings and others (Donovan, Rossiter, Marcoolyn & Nesdale, 1994). In addition, dominance in dressing rooms could be seen as the extent to which consumers are able to evaluate the clothes, concentrate, create their own opinion and feel comfortable.

Several studies found that lighting influences the main store environment. That is why it is assumed that lighting is influencing the emotional states of consumers in dressing rooms too. In the past, significant lighting effects on pleasure were found, although they mainly focused on the color and intensity of light (Baker et al., 1992; Summers & Hebert, 2001).

In 2008, Baumstarck found that persons in a dressing room with frontal lighting were not significantly more satisfied or happy, than people in a dressing room with overhead lighting, while frontal lighting was more stimulating than overhead lighting. However, too many atmospherics in a store environment can make the arousal levels of consumers too high, while store environments with few atmospherics make the arousal level of consumers too low, which both causes negative emotions (Berlyne, 1967).

In addition to the paradigm of Mehrabian and Russell (1974), Kaltcheva and Weitz (2006) showed that atmospherics affect consumer arousal and pleasantness and therefore affects consumer shopping behavior too. Pleasure and arousal seem to be significant mediators between atmospherics and consumer reactions, such as positive shopping experiences, purchase intentions and repeated visits to both the dressing room and the store (Baumstarck, 2008; Donovan & Rossiter, 1982; Baker, Grewal & Levy, 1992).

Studies focusing on dominance, found no significant evidence for the effects of lighting direction (Donovan, Rossiter, Marcoolyn & Nesdale, 1994). Additionally, Baumstarck (2008) found that there were no significant differences on dominance between consumers in a frontal lighted dressing room or an overhead lighted dressing room. However, no study was found focusing on the influence of both frontal and overhead lighting in dressing rooms. As consumers in dressing rooms have different preferences, it could be assumed that using both frontal and overhead lighting will have a positive influence on pleasure, arousal and dominance (Baumstarck, 2008).

In advance of the influence of in-store elements on consumer behavior, two significant

aspects of amounts of atmospherics are highlighted. Braun-LaTour, Puccinelli and Mast (2007) argue that retailers are advised to be aware of the fact that too many atmospherics could have a negative influence on consumer feelings. Consumers in a store environment with too many atmospherics are not able to effectively make quality decisions.

In conclusion, lighting direction and mirrors in dressing rooms are able to influence emotional states of consumers. In 2010, Baumstarck and Park recommended retailers to use frontal instead of overhead lighting in dressing rooms, but if they would like to create most universally accepted shopper experience, they could consider to use both frontal and overhead lighting. Based on the abovementioned, the following hypotheses are proposed:

Hypothesis 1a. Pleasure will be significantly higher (lower) when using frontal and overhead (frontal) lighting in dressing rooms.
*Hypothesis 1b.*Arousal is significantly lower (higher) when using frontal and overhead (frontal) lighting in dressing rooms.
Hypothesis 1c. Dominance will be significantly higher (lower) when using frontal and overhead (frontal) lighting in dressing rooms.

2.5 LIGHTING DIRECTION, MIRRORS AND PERCEIVED SPACIOUSNESS

In 2010, Stamps defined spaciousness as "the range of movement within a boundary" (p. 865). According to Stamps (2011) environments that do not provide enough space are possible stressors and therefore this should be avoided if possible, or if unavoidable, mitigated as much as possible. The typical size of a dressing room is 1 by 1,5 meters, which is barely room enough to move in the dressing room and study one's reflection (All Dressed Up, 2006). Consumers compensate reductions in spaciousness by creating more varied product choices, which increases their psychological freedom. An increase in room size seems to generate feelings of freedom and spaciousness and generates more perceived comfort (Okken, van Rompay & Pruyn, 2012).

The influence of lighting on perceived spaciousness appears to be relevant. Light seems to have a positive effect on perceived enclosure, as lighter environments seem to be more open (Stamps, 2010). In 2010, Baumstarck and Park used a field experiment in a local area boutique to examine the effects of frontal versus overhead lighting in dressing rooms. They found that there were significant effects of lighting direction on spaciousness. Dressing rooms with frontal lighting appeared to be more roomy than dressing rooms with overhead lighting. Therefore, retailers with limited space might consider to use frontal lighting directions because it could reduce the cramped feeling of consumers in the dressing rooms.

Several studies focused on the influence of lighting in turn of spaciousness, as the brightness of walls and floors in different environments (Oberfeld & Hecht, 2011; Stamps, 2010). Besides, it seems that brightness has the effect of increasing distance and spaciousness in environments (Lindh, 2012). In 2010, Oberfeld, Hecht and Gamer acknowledged that brighter objects tend to come nearer and also appear larger than dimmer objects. Additionally, Lindh (2012) found that consumers in a room with higher and more uniform levels of light experienced the room as larger than the other rooms.

In 1973, Flynn, Spencer, Martyniuk and Hendrick already found that spaciousness judgments differ significantly for rooms with different lighting direction conditions. Specifically, rooms with both frontal and overhead lighting induced greater feelings of spaciousness compared to rooms with overhead lighting (which merely lighted the center of the room). Finally, Manav (2007) investigated the extent to which lighting conditions influence the perceived spaciousness in an office setting. The results showed that brighter lighting conditions scored higher on comfort and spaciousness than dimmed conditions.

Most recent studies of lighting conditions and the influence on perceived spaciousness are focusing on the color temperature and light levels, and not on distribution of light (Lindh, 2012). Besides, other aspects such as mirrors, seem to be able to influence perceived spaciousness too. According to Rea (2000), it is generally assumed that mirrors create spaciousness in rooms. Based on results of several studies, it could be concluded that lighting and mirrors are able to influence impressions of the environment.

Hypothesis 2a. Perceived spaciousness of consumer will be significantly higher (lower) when using frontal (frontal and overhead) lighting in dressing rooms.
Hypothesis 2b . Perceived spaciousness of consumer will be significantly higher (lower) in dressing rooms with (withour) mirrors.

2.6 LIGHTING DIRECTION, MIRRORS AND SELF-EVALUATION

As lighting is able to influence the perceived spaciousness, it seems to be able to influence personal evaluations too. Personal appearance seems to be the most important focus of consumers in dressing rooms (Baumstarck, 2008; Baumstarck & Park, 2010). In contrast with previous research, Baumstarck (2008) found that the effects of lighting direction had no effect on the positive or negative evaluation of skin tone, as not all people may have the same evaluations or perceptions of lighting direction.

On the other hand, Veitch et al. (2006) conducted a study to see how several office lighting directions affected the facial appearance of consumers. They found that facial

appearance of consumers was rated better when using overhead lighting, more than frontal lighting. These results were contradicted to the assumptions of Rea (2000), on lighting preferences in dressing rooms, which found that overhead lighting can create harsh shadows on the face and body. Besides, Baumstarck (2008) actually found that the frontal lighting group experienced fewer harsh shadows than the overhead lighting group and Baumstarck and Park (2010) found that lighting direction is able to influence self-evaluation through shadowing, with a stronger preference of frontal lighting.

Next to the influence on facial appearance, Baumstarck (2008) found that "overhead lighting may cause users to waste time finding a suitable position or angle from which to evaluate the product and self. The focus on the clothes is lost and interrupts the experiential quality retailers are trying to attain in the dressing room" (p.74). In conclusion, facial and body appearance of consumers seem to be rated better when using overhead lighting, while frontal lighting eliminates facial and body shadowing (Baumstarck, 2008; Baumstarck & Park, 2010).Besides, using mirrors in a dressing room seems to influence consumers self-evaluation too, because consumers who are able to evaluate themselves in a mirror in the dressing room will be more aware of their appearance. Based on the abovementioned, the following hypothesis is stated:

Hypothesis 3. Facial and body appearance of consumers will be positively (negatively) influenced, when using frontal and overhead (frontal) lighting in dressing rooms.

2.7 OVERALL DRESSING ROOM EXPERIENCE

Perceptions of consumers on several aspects, such as products or people, could be influenced by overall environments (Gardner & Siomkos, 1985). In this study, the dressing room could be seen as the environment which will influence consumers' perception. In 2008, Baumstarck used the dressing room evaluation to see the extent to which the dressing room affects the evaluation of people or products. This evaluation included aspects such as: cleanliness, room size, convenience, privacy, quality, or maintenance. However, there were no significant effects of lighting direction on the dressing room evaluation (Baumstarck, 2008). In 2010, Baumstarck and Park found that the overall dressing rooms experience was rated more positive when using frontal lighting instead of overhead lighting. Besides, adding mirrors in dressing rooms would make shopping experiences more appealing too (The Perfect Fit, 2007).

Hypothesis 4a.The overall dressing room experience of consumers will be positively (negatively) influenced when using frontal and overhead (frontal) lighting in dressing rooms.
Hypothesis 4b. The overall dressing room experience of consumers will be positively (negatively) influenced when using dressing rooms with (without) mirrors.

2.8 CONSUMER BEHAVIOR

At last, it seems that organizations are given more attention to variables such as pricing and promotion, than to the physical setting as ways in which consumers can be attracted (Bitner, 1992), while bad store atmospherics can distract consumers and discourage them from staying in the store (Baker, Grewal & Parasuraman, 1994).

In a dressing room environment, approach behavior of consumers could be seen as a positive response to atmospherics in a dressing room, which generates the desire of consumers to stay in the dressing room, fit several clothes, repeat their dressing room visits and finally increase their purchase intention, while avoidance is the opposite. On basis of the above mentioned information it is stated that:

Hypothesis 5a. Approach behavior in dressing rooms will be significantly higher (lower) when using frontal and overhead (frontal) lighting.
Hypothesis 5b. Approach behavior in dressing rooms will be significantly higher (lower) when using dressing rooms with (without) mirror.

In addition to consumer behavior, Underhill (1999) found that men and women are affected differently by the retail environment. Women are more likely to enter a dressing room and try on clothes than men. Women prefer to view products in the actual setting before they decide to purchase (Underhill, 1999; Moye & Kincade, 2003), while men purchase the clothes they try on in 65% of the time. Women are less certain in their decision to purchase clothes when entering the dressing room. Women purchase the product only 25% of the time.

Hypothesis 6. Women will be significantly more affected by dressing room aspects than men in dressing rooms.

3. METHOD OF STUDY 1

In this section, the study 1 was described, which focused on the influence of lighting direction and mirrors in dressing rooms and a content analysis was used to further analyse these effects.

3.1 ONLINE QUESTIONNAIRES

The objective of this study was to understand the extent to which lighting direction and mirrors affect consumer experiences in dressing rooms. The key variables used in this study are emotional states, lighting evaluation and perception, perceived spaciousness, self-evaluation, overall dressing room experience and consumer behavior.

The study objective was accomplished by an online questionnaire with manipulated images of dressing rooms. The questionnaire, along with its analysis, can be found in Appendix A and B (written in Dutch). This section presents the research method by addressing the participants, the study procedure, the stimulus material, the dependent measures, and a pre-test.

Table 1. An overview of the four used dressing room settings.

	Lighting direction	
Mirrors	Frontal	Frontal and overhead
With mirrors	**A** Frontal lighting with mirrors	**C** Frontal and overhead lighting with mirrors
Without mirrors	**B** Frontal lighting without mirrors	**D** Frontal and overhead lighting without mirrors

3.2 STUDY DESIGN AND PARTICIPANTS

The hypotheses of the study were examined by using a 2 (mirrors: with versus without) x 2 (lighting direction: frontal lighting versus frontal and overhead lighting) between subjects design (Table 1). The four manipulations were randomly shown to the participants.

In total 207 participants completed the survey and were useful for analysis. Given the fact that men and women are affected differently by the retail environment (Underhill, 1999), this study focused on both men and women to see whether these differences appear in a dressing room environment too. The questionnaire included 175 females (84,5%) and 32

males (15,5%). The age of the respondents varied from 18 to 62 with a mean of 26 years (SD=8.38). All participant characteristics are summarized in table 2.

Table 2. Participant characteristics of the sample.

Participants (n=207)		**n (%)**	**M (SD)**
Gender	Male	32 (15,5%)	
	Female	175 (84,5%)	
Age			26 (8.38)
Education level	Basisonderwijs	1 (0,5%)	
	Middelbaar onderwijs	20 (9,7%)	
	LBO	1 (0,5%)	
	MBO	30 (14,5%)	
	HBO	87 (42,0%)	
	Universiteit	68 (32,9%)	
Condition	Frontal with mirror	53 (25,6%)	
	Frontal without mirror	51 (24,6%)	
	Frontal and overhead with mirror	58 (28,0%)	
	Frontal and overhead without mirror	45 (21,8%)	

3.3 PROCEDURE

First participants were asked to fill out questions about important aspects of dressing rooms. Then they were asked to read a scenario (figure 2) of being in a dressing room to fit some clothes. Besides, the image of the dressing room setting was shown. Then the participants were asked to fill out a questionnaire about the shown dressing room. Participants were able to see the dressing room setting during the whole questionnaire. At last, some demographical aspects were asked and they were able to leave a comment about the dressing room.

Figure 2. Scenario.

"You are shopping and you mentioned a store with apparel, you would really like to try. You would like to know whether the apparel fits and meets your expectations.

Try to imagines that you are the person in the dressing room of this image. Take your time to create an opinion about the dressing room. After this, you can continue with the questions. The questions focus on the experience in dressing rooms, that is why you should really focus on the image!"

3.4 STIMULUS MATERIALS

In order to manipulate the consumer experience of the participants, lighting direction and mirrors were varied. Four manipulated images were used for the construction of the four different dressing room settings. Lighting direction was manipulated by using *frontal* or *frontal and overhead* lighted dressing rooms. Dressing rooms *with mirror* and dressing rooms *without mirror* were used to manipulate the influence of mirrors (figure 3). Images were used to increase the feeling of actually being in a dressing room.

Figure 3. Manipulated images of study 1.

1. Frontal with mirror

2. Frontal without mirror

3. Frontal and overhead with mirror

4. Frontal and overhead without mirror

3.5 MEASURES

The data-collection instrument for this study was an online questionnaire, presented in two parts. Part one entailed several questions to ascertain the effects of lighting direction and mirrors on emotional states, lighting evaluation and perception, perceived spaciousness, self-evaluation, overall dressing room experience and consumer behavior. Responses to all scales were recorded on seven-point Likert scales. Part two was designed to obtain demographic and background information of each participant.

First, participants were asked to range important *dressing room aspects* in order to find out whether some aspects were more important than others. In total 15 aspects were added: seating, lighting, clean floor, mirror type, mirror size, dressing room size, hooks, privacy, comfort, safety, fresh air, temperature, music, proper, and service.

The *pleasure-arousal* scales of Mehrabian and Russell (1974) were used to measure the emotional states of the participants. Pleasure was measured using six items (e.g. happy – unhappy, satisfied – unsatisfied). Arousal was also measured using six items (e.g. Excited – calm, nervous – slow). *Dominance* was measured with six items in a dressing room environment (Koevoets, 2011), 'I am able to create an opinion about the clothes in this dressing room', 'I am able to move in this dressing room', 'I was distracted in this dressing room', 'I was able to concentrate in this dressing room', 'This dressing room is limits my possibilities' and 'This dressing room enables me to choose what I want'. Participants could rate their feelings on the basis of opposite adjectives (e.g. happy – unhappy).

The participants' *evaluations and perceptions of lighting* were measured using items adapted from various lighting studies (Babin et al., 2003; Baumstarck, 2008; Baumstarck & Park, 2010; Flynn, 1977). Lighting evaluations were measured with the two items: 'I like (dislike) the lighting in this dressing room' and 'The lighting in this dressing room is pleasant (unpleasant)'. Lighting perceptions were measured with four items: warm/cool, bright/dim, clear/hazy, and glaring/not glaring.

The *perceived spaciousness* of the participants was measured using the following five items: 'I would feel constricted in this room', 'I would feel confined in this room', 'I would have sufficient freedom of movement in this room', 'I would easily feel suffocated in this room' and 'It is easy to move in this dressing room' (Okken, van Rompay & Pruyn, 2012).

As lighting direction seems to affect *self-evaluation*, items focusing on the effects of lighting on skin (Veitch et al., 2002) and face perception (Veitch et al.,2006) were included in this study. In dressing room environments not only skin and face perception are important, but also body and overall appearance (Baumstarck, 2008; Baumstarck & Park, 2010). For this

reason, eight items were used to measure the effects of dressing room lighting on self-evaluation. A five-item scale for facial appearance included good/bad, young/old, healthy/unhealthy, harsh shadows/no shadows, and flattering skin tones/unflattering skin tones. And a three-item scale for overall body appearance included positive/negative, attractive/unattractive, and slender/heavy.

Dressing room evaluations were measured using eight bipolar adjective word pairs derived from Mehrabian and Russell (1974), Donovan and Rossiter (1982), Baumstarck (2008) and Baumstarck and Park (2010). The used word pairs were inconvenient/convenient, cramped/roomy, bad quality/good quality, lack of privacy/adequate privacy, small/large, unkempt/well kept, unimpressive/impressive, and bad/good.

Additionally, six items were added to specify the *consumer behavior* in dressing rooms: 'This dressing room meets my expectations of a good dressing room', 'I am satisfied about this dressing room', 'I would like to try on clothes in this dressing room', 'I would like to repeat my visits in this dressing room', 'I would leave this dressing room immediately' and 'This dressing room fits with my personality'. Table 3 shows the internal reliability of the constructs. As shown, a Cronbach's Alpha above .70 was found for all constructs.

The second part of the questionnaire included demographic questions, such as age, gender, and educational level. Besides, participants were able leave a comment about the dressing room.

Table 3. Internal reliability of the constructs.

Construct	**Cronbach's Alpha**	**Number of items**
Pleasure	0.91	6
Arousal	0.82	6
Dominance	0.77	6
Lighting evaluation	0.72	6
Perceived spaciousness	0.82	5
Facial appearance	0.83	5
Body appearance	0.86	3
Overall dressing room experience	0.82	8
Consumer behavior	0.94	6

3.6 CONTENT ANALYSIS

Additionally, a content analysis of the qualitative data in study 1 was used to determine the ratio of positive and negative phrases for the four dressing room settings (Baumstarck, 2008). Participants were able to leave a comment about the dressing room settings in the questionnaire. In order to understand the qualitative data and make it comparable to the quantitative results of the study, a content analysis was made.

Baumstarck (2008) analysed participant's comments in dressing rooms, using the coding method of Weaver and Carroll (1985). The comments in this study are considered to be thoughts or phrases, related to a specific topic (dressing room setting). These phrases could count as multiple phrases, when participants mentioned several arguments in their comments. For example, a participant said: 'I liked the dressing room, but I didn't like the lighting'. This counted as one positive and one negative comment. By using this method, participants with more detailed comments to a dressing room setting had more influence on the results.

4. RESULTS OF STUDY 1

This chapter presents the results of the questionnaires. The dependent variables are divided in several headings. Additionally, a content analysis of the qualitative data of study 1 was conducted.

4.1 IMPORTANT DRESSING ROOM ASPECTS

To assess whether important dressing room aspects would lead to unintended differences in dressing room experiences, a multivariate analysis of variance (MANOVA) was used. The results indicated that participants' dressing room experiences were not affected by important dressing room aspects.

There was no statistically significant main effect of lighting direction on important dressing room aspects ($F(15,189) = 0.83$, $p=0.63$). Additionally, no significant main effect was found for mirrors on important dressing room aspects ($F(15,189)=1.02$, $p=0.42$). There was no interaction effect between lighting direction and mirrors on important dressing room aspects ($F(1,203)=0.45$, $p=.50$).

However, a statistically significant main effect of mirrors on *seating* was found ($F(15,189)= 6.15$, $p<0.05$). Seating was significantly more important for participants in a dressing room with mirror (M=4.67, SD=1.66) than participants in a dressing room without mirror (M=4.08, SD=1.81). As seating is not an important aspect in this study, this item will not be corrected in the following results.

4.2 PLEASURE, AROUSAL AND DOMINANCE

A factorial between groups analysis of variance (ANOVA) was used to investigate the effects of lighting direction and mirrors on pleasure, arousal and dominance.

Pleasure. The ANOVA revealed a statistically significant main effect for mirror on pleasure $F(1,203)=11.56$, $p<.001$. Participants in a dressing room with mirror (M=3.70, SD=0.90) experienced a higher level of pleasure than participants in a dressing room without mirror (M=4.14, SD=0.99). No significant main effect was found for lighting direction on pleasure ($F(1,203)=0.75$, $p=.38$). There was no interaction effect between lighting direction and mirrors on pleasure ($F(1,203)=0.45$, $p=.50$).

Arousal. The ANOVA revealed a statistically significant main effect for lighting direction ($F(1,203)=5.90$, $p<.05$). Participants in a dressing room with frontal lighting (M=4.07, SD=0.83) experienced a higher level of arousal than participants in a dressing room with frontal and overhead lighting (M=4.33, SD=0.69). A marginal significant main effect for

mirror on arousal was also found ($F(1,203)=3.35$, $p=.06$). Participants in a dressing room without mirror (M=4.09, SD=0.84) experienced a higher level of arousal than participants in a dressing room with mirror (M=4.30, SD=0.70). There was no interaction effect between lighting direction and mirrors on arousal ($F(1,203)=.64$, $p=.42$).

Dominance. The ANOVA for dominance revealed a statically significant main effect for mirror ($F(1,203)=23.02$, $p<.001$). Participants in a dressing room with mirror (M=4.75, SD=0.91) felt significantly more dominant than participants in a dressing room without mirror (M=4.09, SD=1.09). No significant main effect was found for lighting direction on dominance ($F(1,203)=1.05$, $p=.30$). There was no interaction effect between lighting direction and mirrors on dominance ($F(1,203)=.47$, $p=.49$).

4.3 LIGHTING EVALUATION AND PERCEPTION

A factorial between groups analysis of variance (ANOVA) was used to investigate the effects of lighting direction and mirrors on lighting evaluation and lighting perception.

The ANOVA revealed a statistically significant main effect for mirror on lighting evaluation ($F(1,203)=7.51$, $p<0.01$). Participants in a dressing room with mirror (M=3.83, SD=1.37) liked the lighting more than participants in a dressing room without mirror (M=3.28, SD=1.44). No main effect for lighting direction on lighting evaluation was found ($F(1,203)=1.23$, $p=.26$). There was no interaction effect between lighting direction and mirrors on lighting evaluation ($F(1,203)=.11$, $p=.73$).

The ANOVA revealed a statistically significant main effect for mirror on lighting perception ($F(1,203)=4.24$, $p<.05$). The lighting perception of participants in a dressing room with mirror (M=3.95, SD=0.81) was more positive than the lighting perception of participants in a dressing room without mirror (M=3.70, SD=0.89). No main effect for lighting direction on lighting perception was found ($F(1,203)=.26$, $p=.61$). There was no interaction effect between lighting direction and mirrors on lighting perception ($F(1,203)=.10$, $p=.74$).

4.4 PERCEIVED SPACIOUSNESS

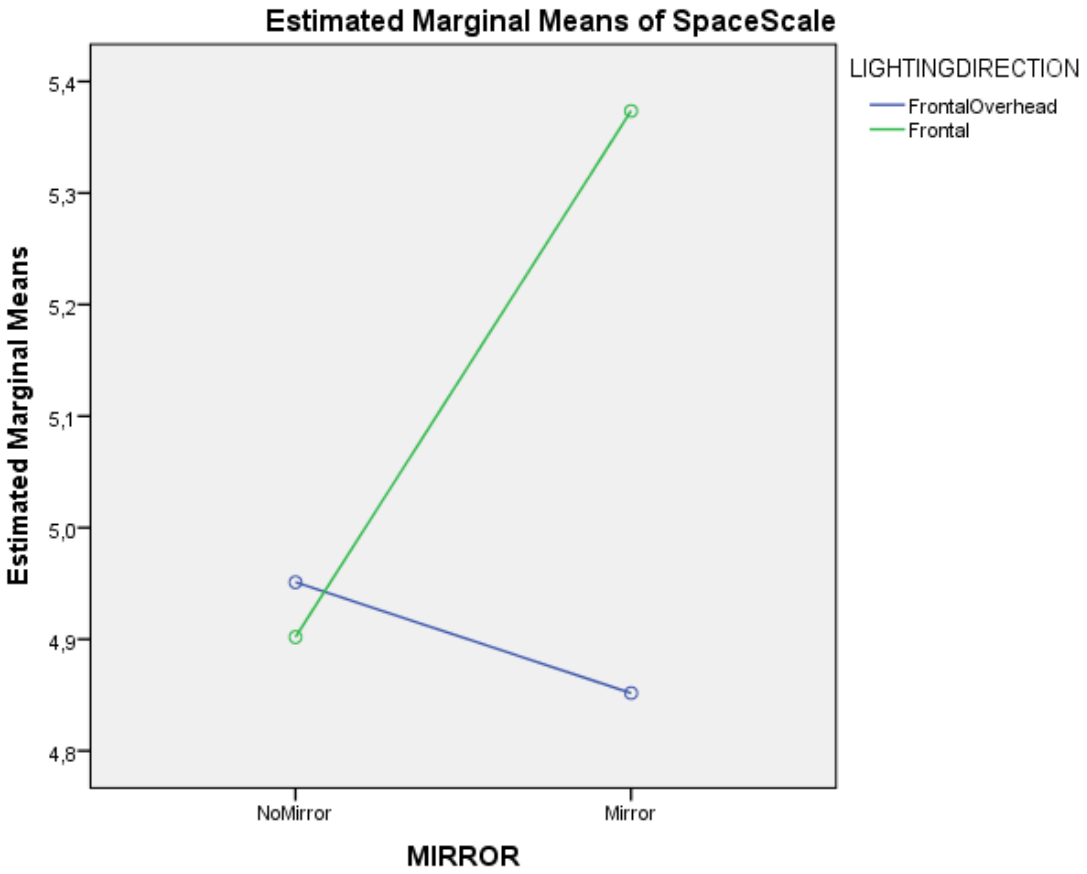
A factorial between groups analysis of variance (ANOVA) was used to investigate the effects of lighting direction and mirrors on perceived spaciousness.

The ANOVA revealed no statistically significant main effect for mirror on perceived spaciousness ($F(1,203)=1.53$, $p=.21$) and no statistically significant main effect for lighting direction on perceived spaciousness ($F(1,203)=2.46$, $p=.11$).

A statistically significant interaction indicated that the effects of lighting direction on

perceived spaciousness depend on mirrors (F(1,203)=3.60, p=.05). The nature of this interaction is illustrated in figure 4. Simple effects analyses were used to further examine the interaction between lighting direction and mirrors. These analyses showed that only under conditions when a mirror was used, lighting direction has an impact on perceived spaciousness (F(1,203)=6.49, p=.01). When there is no mirror, lighting direction does not have an impact on perceived spaciousness (F(1,203)=0.50, p=.82).

Figure 4. The interaction effect of lighting direction and mirror on perceived spaciousness.



4.5 SELF EVALUATION: FACIAL AND BODY APPEARANCE

The self-evaluation of the participants was divided in facial appearance and body appearance. A factorial between groups analysis of variance (ANOVA) was used to investigate the effects of lighting direction and mirrors on facial appearance and body appearance.

The ANOVA revealed a statistically significant main effect for mirror on facial appearance (F(1,203)=5.85, p<.05). The facial appearance of participants in a dressing room with mirror (M=4.14, SD=0.94) was more positive than the facial appearance of participants in a dressing room without mirror (M=4.48, SD=1.07). No main effect for lighting direction on facial appearance was found (F(1,203)=.39, p=.53). There was no interaction effect

between lighting direction and mirrors on facial appearance ($F(1,203)=1.39$, $p=.24$).

The ANOVA revealed a statistically marginal significant main effect for mirror on body appearance ($F(1,203)=3.35$, $p=.06$). The body appearance of participants in a dressing room with mirror (M=3.86, SD=1.03) was more positive than the body appearance of participants in a dressing room without mirror (M=4.16, SD=1.24). No main effect for lighting direction on body appearance was found ($F(1,203)=.04$, $p=.83$). There was no interaction effect between lighting direction and mirrors on body appearance ($F(1,203)=3.00$, $p=.08$).

4.6 OVERALL DRESSING ROOM EXPERIENCE

A factorial between groups analysis of variance (ANOVA) was used to investigate the effects of lighting direction and mirrors on the overall dressing room experience.

The ANOVA revealed a statistically significant main effect for mirror on overall dressing room experience ($F(1,203)=4.20$, $p<.05$). The overall dressing room experience of participants in a dressing room with mirror (M=3.58, SD=0.86) was more positive than the overall dressing room experience of participants in a dressing room without mirror (M=3.84, SD=1.01). No main effect for lighting direction on the overall dressing room experience was found ($F(1,203)=.56$, $p=.45$). There was no interaction effect between lighting direction and mirrors on the overall dressing room experience ($F(1,203)=.36$, $p=.54$).

4.7 CONSUMER BEHAVIOR

A factorial between groups analysis of variance (ANOVA) was used to investigate the effects of lighting direction and mirrors on consumer behavior.

The ANOVA revealed a statistically significant main effect for mirror on consumer behavior ($F(1,203)=24.23$, $p<.001$). The consumer behavior of participants in a dressing room with mirror (M=4.24, SD=1.20) was more positive than the consumer behavior of participants in a dressing room without mirror (M=3.33, SD=1.48). No main effect for lighting direction on consumer behavior was found ($F(1,203)=1.80$, $p=.18$). There was no interaction effect between lighting direction and mirrors on consumer behavior ($F(1,203)=.61$, $p=.43$).

4.8 GENDER DIFFERENCES

As described in chapter 2, there are differences between men and women when entering a dressing room. An Independent Samples T-test was conducted to compare the scores of men and women on important dressing room aspects (table 4). The results show that *seating*

(*t*(205)= -2.17, p<.05), *lighting* (*t*(205)= -3.09,p<.05), *mirror type* (*t*(205)= -3.07,p<.01), *mirror size* (*t*(205)= -2.15, p<.05), *privacy* (*t*(205)= -2.67, p<.01), *comfort* (*t*(205)= -1.96, p<.05) and *safety* (*t*(205)= -2.05, p<.05) are significantly more important aspects for women than men in dressing rooms.

Table 4. Independent Samples T-test for gender differences on important dressing room aspects.

	Men M (SD)	**Women M (SD)**	**df**	**t**
Seating	3.78 (1.87)	4.51 (1.71)	205	**-2.17***
Lighting	5.88 (1.00)	6.39 (0.83)	205	**-3.09***
Clean floor	5.91 (1.02)	6.36 (0.82)	205	-2.75
Mirror type	4.88 (1.33)	5.61 (1.21)	205	**-3.07****
Mirror size	5.72 (1.05)	6.11 (0.93)	205	**-2.15***
Dressing room size	5.94 (0.84)	5.92 (0.93)	205	0.09
Hooks	6.38 (0.79)	6.31 (0.92)	205	0.38
Privacy	5.94 (1.04)	6.46 (0.80)	205	**-2.67****
Comfort	4.84 (1.32)	5.33 (1.28)	205	**-1.96***
Safety	4.78 (1.51)	5.34 (1.40)	205	**-2.05***
Fresh air	5.50 (1.01)	5.49 (1.24)	205	0.06
Temperature	5.31 (1.23)	5.49 (1.26)	205	-0.71
Music	3.50 (1.74)	3.29 (1.64)	205	0.65
Proper	5.38 (0.87)	5.70 (1.05)	205	-1.63
Service	4.78 (1.47)	4.83 (1.42)	205	-1.85

***p<0.05, **p<0.01**

Table 4 shows that there are significant differences between men and women in dressing rooms, so it could be assumed that there will be gender differences for all used scales. However, 15,5% of the participants in this study were male, which is not enough to compare it to the female participants (84,5%).

4.9 CONTENT ANALYSIS

This part analyses the comment phrases of participants in the four dressing room settings. A total of 21 comments were made for the frontal lighted dressing room with mirrors. 10 (47%) of these were positive, while 11 (53%) were negative. A total of 26 comments were made for the frontal lighted dressing room without mirror. For this dressing room, 4 (16%) positive comments and 22 (84%) negative comments were made. A total of 29 comments were made

for the frontal and overhead lighted dressing room with mirrors. Of these, 20 (69%) comments were positive and 9 (31%) comments were negative. At last, 21 comments were given to the frontal and overhead lighted dressing room without mirror. Of these, 7 (33%) comments were positive while 14 (67%) comments were negative (table 5).

Table 5. Total of positive and negative comments for the different dressing room settings.

Dressing room setting	**Total comments**	**Positive comments**	**Negative comments**
Frontal with mirror	21	10 (47%)	11 (53%)
Frontal without mirror	26	4 (16%)	22 (84%)
Frontal and overhead with mirror	29	20 (69%)	9 (31%)
Frontal and overhead without mirror	21	7 (33%)	14 (67%)

The majority of comments made in the frontal lighted dressing room were negative (33 comments), while the majority of comments made in the frontal and overhead lighted dressing room were positive (27 comments).

In the dressing room with frontal lighting and mirror, 8 comments focused on the mirror. Most participants were satisfied with the mirror. Some participants noticed that a second mirror in the dressing room would be nicer whereas other participants mentioned that mirrors mounted on a wall would create more space. Additionally, 7 participants focused on lighting in the dressing room. Of these, 4 participants mentioned that frontal lighting was pleasant, while 3 participants were negative on its being too bright, bad positioned and they were not able to criticize themselves.

Most of the participants in the frontal lighted dressing room without mirror were focusing on the absence of the mirror (15 comments). They mentioned that it is very uncomfortable to be forced to leave the dressing room if you want to see anything, the dressing room did not met their expectations and they said ‘I am missing a mirror in this dressing room’. They also mentioned that the absence of a mirror made them feel uncomfortable because personnel in the store were able to interfere. Additionally, 4 participants focused on lighting (frontal). 3 of these comments were negative, they mentioned the lighting being too bright, hard and cool. One participant said: ‘The lighting was ok’.

In the frontal and overhead lighted dressing room with mirror most comments were positive (20 comments). Fourteen comments focused on lighting in the dressing room. 4 participants were negative about the lighting, they said ‘The light is unpleasant’ and one participant said ‘lighting above and in front of me is unpleasant’. 10 participants were positive

about the lighting. One participant said ‘It is pleasant to have light both in front of your face and above your head’. Of all comments, 6 comments were made about the mirror. One participant said: ‘A mirror in a dressing room is very important, but I would prefer two mirrors to see myself on both sides’. Additionally, some participants (6 comments) only focused on the overall dressing room experience. They all mentioned that they liked the dressing room and they were positive about the space.

Comments on the frontal and overhead lighting without mirror dressing room were mostly negative (14 comments). In total, 12 comments were made about the absence of the mirror. All these comments were negative and participants said they missed the mirror. One participant said: ‘I think that the absence of a mirror in dressing rooms is a big disadvantage’. 3 comments were made about lighting. These 3 comments were positive. One participant said ‘Lighting in front and above me makes me feel like I am in daylight, very nice’. In the dressing room with frontal and overhead lighting without mirror, two participants mentioned the absence of hooks. Participants who were not focusing on lighting conditions and mirrors in their dressing room setting mostly focused on the absence of hooks, cleanliness and spaciousness in the dressing rooms.

5. METHOD OF STUDY 2

A qualitative research method was used to find out whether consumer experiences in a real dressing room setting are equal to the results of study 1. This study used interviews to gather more information.

5.1 INTERVIEWS

Based on the results of the online questionnaire and content analysis, semi-structured interviews were developed to gain insights into important dressing room aspects in real settings. This method was used, because the interviewer is able to deeper explore the topics the participants raise during the interviews (Baxter & Babbie, 2004). By using this method, in-depth information was found about important dressing room aspects, which could be compared with the results found in study 1.

5.2 PARTICIPANTS

In total 10 participants were interviewed. The participants of the research were all females, who were found by the social network of the researcher. Prior to the interviews, the participants were asked to visit three dressing rooms in Utrecht (figure 5). When entering the dressing room, they were aware of the subject of the interview and they were able to create an opinion about the dressing rooms. First, they visited a dressing room in the Pull&Bear, then they visited the Hunkemöller and at last they visited Seven. Similar to the quantitative research, the dressing rooms used two lighting directions (frontal versus frontal and overhead). The dressing rooms of Pull&Bear and Hunkemöller had a mirror and the dressing room of Seven had no mirror.

Figure 5. Dressing rooms of study 2.

Hunkemöller

Pull&Bear

Seven

5.3 INTERVIEW MEASUREMENT

During the semi-structured interviews, an interview guide was used to deal with the measurement construct validity threats. Main questions were used to guide the interview, while sub-questions were composed during the interviews. First, the participants were asked to mention important dressing room aspects and they were asked to explain why these aspects are important to them. Next, questions focused on the influence of dressing rooms on the purchase intention of the participants, the extent to which they would like to try on apparel in the dressing rooms and the influence of dressing rooms on their future shopping experience in the specific stores. These questions were used to stimulate the participants to think about their dressing room experiences. During the interviews, three images of the visited dressing rooms were used, to assure that they remembered the dressing rooms.

6. RESULTS OF STUDY 2

This chapter focuses on the results of the interviews, to find out whether consumer experiences in a real dressing room setting are equal to the results of study 1.

6.1 INTERVIEWS

The interviews were written into a rough transcript. These transcripts were dived into two variables: important dressing room aspects and purchase intention. The report of the interviews can be found in Appendix C (written in Dutch). The results of the interviews are given below.

Important dressing room aspects

Participants base their dressing room experience mostly on the presence of mirrors, lighting, spaciousness, hooks, privacy and cleanliness. Besides, some participants mentioned that a chair to sit on in the dressing room would be nice. All participants were first focusing on mirrors. They mentioned that mirrors increase the possibility to try on apparel without someone bothering you. Two participants said that they felt very irritated when they were forced to leave the dressing room to see oneself, because personnel in the store will always interfere. Most of the participants were focusing on the influence of light in the dressing room too, but they all mentioned as it's being too bright or dim. No participant mentioned the effects of lighting direction. When explaining the importance of hooks, they said that most dressing rooms are not as clean as they should be. That is when the participants said that they really appreciated clean dressing rooms. Another important aspect in dressing rooms seems to be spaciousness. Participants focused on the possibility to move in a dressing room, which increased their feeling of being able to create a well considered opinion about their apparel. Participants also focused on the privacy of the dressing rooms, which they mostly explained with the way to close the dressing room. Doors in dressing rooms were more preferred than curtains.

Eight participants said that they liked the dressing room of Hunkemöller most, because of the mirror size, spaciousness, cleanliness and privacy. The dressing room of Pull&Bear was experienced as a small dressing room, with lighting that is equal to lighting in a pub, which is not a good comparison as they said. One participant said that dressing rooms should be simple, without too much colors and prints on the wall and floor, because it will distract consumers. This participant had chosen the dressing room without mirror, because the dressing room itself was very clean, spacious and had enough privacy. Besides, one

participant had chosen the dressing room of Pull&Bear, because it was cozy and she liked the mirror.

Purchase intention

Next to the important dressing room aspects, participants were asked to explain why they would or would not try on apparel, repeat their store visit and they were asked whether dressing rooms are able to influence their purchase intention. Participants said that dressing rooms without mirror influence their consideration to try on apparel and repeat their store visit. Besides, some of them mentioned that dressing rooms with a queue were also seen as a consideration to leave the store without try on apparel or purchase the clothes. At the end of the interviews, when the participants had well considered their behavior in clothes stores, they all said that the dressing room would have influence on their purchase attention. Nevertheless, they would definitely try on apparel, when they liked it a lot. Then, they mentioned that dressing rooms are able to influence their feeling, but this will not overwhelm their intention to buy the apparel. One participant mentioned that in clothes stores, the apparel is the reason to visit a clothes store, not the dressing room.

7. CONCLUSION AND DISCUSSION

This chapter provides a conclusion and discussion of the findings in this study. The hypotheses in chapter two, which are based on each key variable: emotional states (pleasure, arousal and dominance), perceived spaciousness, self-evaluation (facial and body appearance), overall dressing room experience and consumer behavior, will be discussed. Findings in this study will be related to previous theory. Later, limitations and suggestions for future research are presented, followed by marketing implications.

7.1 CONCLUSION

The goal of this study was to gain insights in the influence of lighting direction and mirrors on consumer experiences in dressing rooms. Based on the results of this study, it could be concluded that retailers should be aware of this influence. Significant results were found for both mirrors and lighting direction. It could be concluded that the effects of mirrors in dressing rooms are more important than lighting direction, though both appear to be relevant.

The results of this study indicate that there are several aspects in dressing rooms which influence dressing room experiences. First, the importance of mirrors in dressing rooms seems to be significant for almost every scale. That is why it could be concluded that mirrors are very important aspects for retailers to create positive dressing room experiences.

Second, the importance of lighting direction seems to be relevant too, though it is not as significant as mirrors. There seems to be a propensity in favor of frontal and overhead lighting though participants reported that they liked both lighting directions. Besides, when focusing on perceived spaciousness, lighting direction only influenced the perceived spaciousness of consumers in dressing rooms with mirrors. No effects were found in dressing rooms without mirror. Another goal of this study was to gain insights in the differences between men and women when criticizing a dressing room. There appeared to be differences for important dressing room aspects, but the number of men in this study was too low to attach conclusions to this.

At last, other aspects in dressing rooms appeared to be relevant. Most participants mentioned hooks, privacy, spaciousness, cleanliness and a chair as important aspects when visiting dressing rooms.

7.2 DISCUSSION

It is commonly believed that lighting direction can greatly affect the shopping experience of consumers (Baker, Grewal & Parasuraman, 2009; Bitner, 1992). That is why retailers might be missing opportunities to attract consumers by not paying attention to dressing room environments. Although, despite this strong belief of influencing the shopping experience, Baumstarck (2008) found that "there was little if any statistical relationship between lighting direction and the variables measured in dressing rooms" (p.89). Consumers might be far less aware of lighting direction than assumed in the past. That is why this study focused on lighting direction and another dressing room aspect: mirrors.

This study used frontal versus frontal and overhead lighted dressing rooms, to see whether there appeared significant differences. Furthermore, less research was found focusing on the influence of mirrors in dressing rooms, that is why mirrors were used as independent variable in this study too. The influence of both lighting direction and mirrors will be discussed by each key variable, as stated in chapter 2.

Emotional states

The model of Mehrabian and Russell (1974) is a widely accepted model to predict emotional states of consumers, affected by atmospherics such as lighting direction and mirrors. Due to this recognized but empirically untested importance of lighting direction in combination with mirrors in dressing rooms (Baumstarck, 2008; Rea, 2000), this study examined the influence of lighting direction and mirrors on emotional affect in dressing rooms.

The findings of this study suggest that mirrors have more impact on pleasure, arousal and dominance than lighting direction. However, this study assumed that lighting direction would have influence on emotional states in dressing rooms too. This assumption was reinforced by findings of other researchers, using the Mehrabian and Russell model (Baumstarck, 2008; Baumstarck & Park, 2010; Areni & Kim, 1994; Summers & Hebert, 2001). These studies focused on other aspects of lighting, such as lighting intensity, color, quality and other lighting directions such as frontal versus overhead.

Besides, it is important to notice that these studies used different methodologies compared to the current study. Baumstarck (2008) used a field experiment to investigate the influence of frontal and overhead lighting and in 2010, Baumstarck and Park used an experimental setting with a frontal and an overhead lighted dressing room to examine the effects of lighting direction on shoppers' experience in dressing rooms. Areni and Kim (1994) and Summers and Hebert (2001) used observations to measure the influence of lighting

intensity in retail stores, while the current study examined the influence using online questionnaires with manipulated images and a small field experiment. That is why it might be that these results could not be directly compared to previous research.

One of the independent variables in this study was a mirror in the dressing room. The influence of mirrors in dressing rooms on emotional states seems to be relevant. People in dressing rooms with mirror felt more *pleasant*, experienced less *arousal* and felt more *dominant* than people in dressing rooms without mirror. However, despite a lack of scientific evidence, it seems reasonable to believe that people in dressing rooms with mirror felt more pleasant because mirrors are able to make shopping experiences more appealing (The Perfect Fit, 2007). Besides, the level of arousal was higher for people in dressing rooms without mirror, which also seems reasonable, because people might feel more aroused and less comfortable because they are forced to leave their dressing room to see oneself in the mirror. At last, people felt more dominant in dressing rooms with mirror. Mirror placement seems to determine whether shoppers are trying on apparel and make purchases (All Dressed Up, 2006), that is why it seems to be reasonable that people in dressing rooms with mirror felt more in control, because they were more able to create their own opinion without interruptions of personnel and they experienced more privacy, because they were not forced to leave the dressing room. All these findings about the influence of mirrors on emotional states in dressing rooms were supported by the findings of the interviews. According to these results, mirrors are the most important aspects in dressing rooms. Without mirrors, people are even considering to leave the store and not try on apparel or make purchases.

Findings about the influence of lighting direction suggest that on the one hand, lighting direction has little impact on emotional states in dressing rooms. No significant differences were found for pleasure and dominance. However, though the differences are statistically weak, the means of the pleasure scale were consistently higher for frontal and overhead lighting which was assumed in chapter two. On the other hand, contrary to the assumptions, people felt consistently more dominant in frontal lighted dressing rooms, but these differences were statistically weak too (Appendix B).

Nevertheless, strong differences were found for the arousal scale. People in frontal lighted dressing rooms experienced a higher level of arousal than people in dressing rooms with frontal and overhead lighting as assumed. These findings were in line with the finding of Baumstarck (2008), who found that people in frontal lighted dressing rooms were not statistically significant more satisfied ore happy, while frontal lighting was more stimulating than overhead lighting. Additionally, Baumstarck (2008) did not find any significant

differences for lighting direction on dominance too. However, it should be noticed that Baumstarck (2008) focused on two other lighting directions than this current study did. In 2010, Baumstarck and Park mentioned that retailers could use both frontal and overhead lighting to create most universally accepted shopper experience. People may have different preferences in dressing rooms, that is why it was assumed that using both frontal and overhead lighting would have a positive influence on emotional states in dressing rooms.

Furthermore, there are other possible reasons for a lack of influence of lighting direction on emotional states in dressing rooms. The Mehrabian and Russell scales might be inapplicable in dressing rooms, people in dressing rooms might be unaware of the effect of lighting direction or the study method might have influenced the results. Each of these possible reasons will be further discussed.

In 2008, Baumstarck already noticed that people might be less aware of the influence of lighting direction in dressing rooms than expected. Lighting direction might not be a strong atmospheric that affects emotional states in dressing rooms. That is why the Mehrabian and Russell model seems to be inapplicable to measure the influence of lighting direction on emotional states. Besides, nobody in the interviews mentioned lighting direction as an important aspect in the dressing room too. People are aware of lighting in the dressing room, but they focus on the light intensity and quality. This might be an explanation for the lack of influence of lighting direction. People are mainly focused on the apparel and the individual itself (All Dressed Up, 2006) which was supported by the results of the interviews, where people mentioned that the apparel itself is most important. However, the Mehrabian and Russell model has shown significant differences in previous studies which were focusing on light intensity (Areni & Kim, 1994; Summers & Hebert, 2001). Besides, there are other atmospherics which are able to influence consumer experiences in dressing rooms too, for example color, used materials, music and scent.

Perceived spaciousness

Studies focusing on perceived spaciousness of consumers found that an increase in room size seems to generate feelings of freedom and spaciousness, which lead to more perceived comfort (Okken, van Rompay & Pruyn, 2012; Stamps, 2010).

In contrast to previous studies, this study also focused on the influence of lighting direction and mirrors on perceived spaciousness in dressing rooms, because the influence of lighting and mirrors on perceived spaciousness appears to be relevant (Baumstarck & Park, 2010; Rea, 2000). Environments that do not provide enough space are possible stressors,

which should be avoided if possible or at least mitigated (Stamps, 2011). In 2010, Baumstarck and Park found that consumers in dressing rooms are aware of spaciousness, but they used it as an aspect of the overall dressing room experience. In their study, frontal lighted dressing rooms appeared to be more roomy than overhead lighted dressing rooms.

Despite the fact that this study did not find significant main effects for lighting direction and mirrors on perceived spaciousness, an interaction effect appeared. Lighting direction only influenced the perceived spaciousness of consumers in dressing rooms with mirrors, while no interaction effects were found in dressing rooms without mirror. That is why it could be assumed, that retailers are able to influence perceived spaciousness by using an appropriate combination of mirrors and lighting direction. Although it could be mentioned that other aspects are able to influence perceived spaciousness in dressing room too, for example color and height.

Previous research found that lighter environments seem to be more open (Stamps, 2010). Besides, Flynn, Spencer, Martyniuk and Hendrick (1973) found that spaciousness judgments differ significantly for different lighting directions. Rooms with frontal and overhead lighting induced greater feelings of spaciousness compared to rooms with overhead lighting. Contrary to the assumptions, this study found that people perceived more space with frontal lighting instead of frontal and overhead lighting.

Reasons for this contrast could be that in this study, participants did not significantly rate frontal and overhead lighting as lighter than frontal lighting. Besides, these assumptions have never been tested before and are impressions of retailers, who might be considered as non-screeners, because of their knowledge about dressing rooms (Mehrabian, 1977).

Additionally, previous research focused on other lighting directions than this study. That is why it could be assumed that frontal versus frontal and overhead lighting create less differences in perceived spaciousness, than frontal versus overhead or frontal and overhead versus overhead lighted rooms. Next to this, the study of Flynn, Spencer, Martyniuk and Hendrick (1973) did not focus on dressing rooms, while dressing rooms are a very separate part of the shopping experience, which can have different emotional reactions (Baumstarck, 2008).

Self-evaluation

Personal appearance seems to be the most important focus of consumers in dressing rooms (Baumstarck, 2008; Baumstarck & Park, 2010). Several studies focused on the influence of lighting direction on self-evaluation (Baumstarck, 2008; Baumstarck & Park, 2010; Rea,

2000; Veitch et al., 2006). These studies found that overhead lighting can create harsh shadows on both face and body (Baumstarck, 2008; Rea, 2000), while overhead lighting in office settings is superior for facial appearance (Veitch et al., 2006). When focusing on dressing rooms settings, the IESNA recommends to use frontal and overhead lighting, as overhead lighting was rated better by the participants, while frontal lighting could be used to eliminate harsh shadows (Baumstarck, 2008; Baumstarck & Park, 2010; Rea, 2000).

Despite a strong assumption that lighting direction would affect self-evaluation, there was no statistical difference for both facial and body appearance in this study. This study's findings also conflict with the recommendations of IESNA, that frontal lighting reduced the amount of shadows. Despite the low level of significant differences observed between lighting direction and self-evaluation in the quantitative data, the qualitative data revealed that consumers in dressing rooms are aware of the effects of lighting on their appearance. These comments reflect a propensity in favor of frontal lighting for self-evaluation. However, it should be noted that these comments were all focusing on light quality and not on lighting direction. Differences between this study findings and previous study findings might be due to variations in study setting and the methodology.

Additionally, when focusing on the influence of mirrors on self-evaluation in dressing rooms, it could assumed that people in dressing rooms with mirror are more aware of themselves, which was reinforced by the findings of this study. Both facial and body appearance proved to be more positive when people are in dressing rooms with mirror. As participants are not able to evaluate themselves in the dressing room without mirror, these findings seems reasonable.

Consumer behavior in dressing rooms

Despite the lack of empirical research, some articles address the relationship between store atmospherics and consumer behavior (Donovan et al., 1994). These studies found that positive store atmospherics are able to influence the approach behavior. However, these studies did not focus on dressing room environments.

Participants in this study mentioned presence of mirrors, cleanliness and hooks as most important dressing room aspects. It seems that the importance of mirrors was ignored or excluded by other researchers in the past. In 2008, Baumstarck already mentioned that "instead of there being on large sweeping effect of the entire experience each variable may have very focused effects on different dimensions of the experience. Lighting may change spaciousness but other variables like chairs and hooks may affect how convenient it is and

how consumers feel about themselves and clothes may affect personal evaluations" (p.80).

This study found that dressing rooms have to meet consumers' expectations, because if not, it will lead to avoidance behavior, while dressing room environments should create the desire to stay. fit apparel, and positively influence the need of consumers to repeat their dressing room visit and increase their purchase intention. In the interviews some participants mentioned that they would avoid dressing rooms without mirror. This supports the findings of Baker, Grewal and Parasuraman (2002) who found that bad store atmospherics can distract consumers and discourage them from staying in the store .

Gender differences

Previous research already found that men and women are affected differently by retail environments, because women are more likely to enter dressing rooms and try on apparel than men (Underhill, 1999).

As assumed, this study found gender differences in dressing room environments. Several aspects, such as seating, lighting, mirror type, mirror size, privacy, comfort and safety were more important for women than for men. This supports the findings of Underhill (1999) and Moye and Kincade (2011) who already found that women prefer to view products in the actual setting before purchasing, while men purchase their apparel in 65% of the time. It could be assumed that women are more affected by a dressing room environment than men, because women are less certain of their decision to purchase (Underhill, 1999).

It could be advised for retailers to be aware of the differences between men and women in dressing rooms, but because of the shortcoming number of men in this study, further exploratory research is needed to understand these differences.

7.3 LIMITATIONS AND FUTURE RESEARCH

The results of this study are interesting and useful, but there are some limitations. First, this study used online questionnaires with manipulated images of dressing rooms to investigate the extent to which lighting direction and mirrors influence consumer experience. This could have influenced the ecological validity, as participants might have experienced these manipulated images as dressing room settings that could not be compared to actual settings. However, other researchers also used virtual shopping environments to investigate effects on consumer experiences (Bateson and Hui, 1992; Massara and Pelloso, 2006; Massara et al., 2010). That is why this method was used in this study too. Besides, a small field study was included to provide a glimpse into actual behavior and achieve a stronger external validity.

Secondly, the influence of mirrors in dressing rooms had never been investigated

before, so further exploratory research is needed focusing on these effects. Besides, the combination of frontal versus frontal and overhead lighting differences in dressing rooms had never been investigated too. The results presented require further investigation in field studies in which the effects of these two lighting direction and mirrors are not just imagined by participants (as in the current study) but actually experienced. Future research could focus on the comparison of frontal versus frontal and overhead lighting by using two dressing rooms for which participants to compare both lighting conditions rather than being asked to rate only one dressing room. As already mentioned in the previous paragraph, future research could also focus on other important dressing room aspects, for example privacy, cleanliness, service personnel, hooks, and safety to see by which aspects participants are most affected.

Third, studies may also wish to examine the effects of lighting direction and mirrors for other demographic groups. In this study, only impressions of men and women were examined and different results may be observed for other demographic groups. Besides, future research focusing on the differences between men and women in dressing rooms should use a larger sample, with more men to gain more insights in gender differences.

At last, the participants' own emotional states, self-confidence, self-esteem and other important personal variables could have influenced the results. For example, participants who are very confident might feel less uncomfortable in dressing rooms without mirrors. These different emotional states of participants may not result in the same level of response based on how the participants felt when starting with the questionnaires. Future studies may want to consider the effects of personal variables on consumer experiences in dressing rooms.

7.4 MARKETING IMPLICATIONS

Retail and design industries are well aware of the influence of lighting on emotional states (Areni & Kim, 1994; Babin et al, 2003; Bitner, 1992; Summers & Hebert, 2001). Nevertheless, these effects are still investigated by researchers. In dressing rooms it is commonly assumed that lighting and mirrors influence consumer experiences too (All Dressed up, 2006; Baumstarck, 2008; Baumstarck & Park, 2010).

Previous studies found that using frontal lighting is superior in dressing rooms, although Rea (2000) advised retailers to combine frontal and overhead lighting. This study's quantitative and qualitative results indicate that there was little if any statistical relationship between lighting direction and consumer experience in dressing rooms. If future research still finds no statistical evidence for this, it might be that consumers are far less aware of the effects of lighting direction than assumed (Baumstarck, 2008).

Nevertheless, this study's findings found statistical evidence that retailers should use mirrors in dressing rooms. Shoppers appear to be very sensitive for this variable in dressing rooms, so retailers seem to be able to influence their purchase intention by using mirrors. Besides, quantitative data revealed a much stronger preference for frontal lighting, when being in dressing rooms with mirror as they perceived the dressing rooms to be more spacious. That is why retailers should use mirrors in dressing rooms and frontal lighting to eliminate harsh shadows and create space. However, if they want to create most universally accepted shopper experience, they could combine frontal and overhead lighting (Baumstarck & Park, 2010) with mirrors.

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APPENDICES

APPENDIX A. ONLINE QUESTIONNIARE

Beste deelnemer,

In het kader van de masteropleiding Marketing Communicatie aan de Universiteit Twente voer ik een onderzoek uit om de beleving van consumenten in een paskamer te optimaliseren. Uw mening zal bijdragen aan de verbetering van paskamers in kledingwinkels, zodat u nog beter in staat zult zijn om uw gepaste kleding te beoordelen.

De vragenlijst zal slechts 10 minuten van uw tijd in beslag nemen. Uiteraard wordt alles wat u invult volledig anoniem verwerkt. Mocht u echter kans willen maken op een van de**drie tijdschriftabonnementen**, dan kunt u aan het einde van de enquête vrijblijvend uw e-mailadres achterlaten. Uw e-mailadres zal nooit voor andere doeleinden gebruikt worden.

Alvast hartelijk dank voor uw medewerking!

Jennifer Hengevelt

Q1. Stel u voor dat u kleding heeft gevonden die u wilt passen in een paskamer. Geef aan welk van de onderstaande aspecten volgens u belangrijk zijn in een paskamer (1 = helemaal niet belangrijk, 7 = heel erg belangrijk).

	1	2	3	4	5	6	7
Zitplaats	○	○	○	○	○	○	○
Licht	○	○	○	○	○	○	○
Schone vloer	○	○	○	○	○	○	○
Spiegeltype	○	○	○	○	○	○	○
Spiegelgrootte	○	○	○	○	○	○	○
Grootte van het pashokje	○	○	○	○	○	○	○
Haakjes om kleding aan op te hangen	○	○	○	○	○	○	○
Privacy	○	○	○	○	○	○	○
Comfort	○	○	○	○	○	○	○
Veiligheid	○	○	○	○	○	○	○
Frisse lucht	○	○	○	○	○	○	○
Temperatuur	○	○	○	○	○	○	○
Muziek	○	○	○	○	○	○	○
Netjes	○	○	○	○	○	○	○
Klantenservice	○	○	○	○	○	○	○

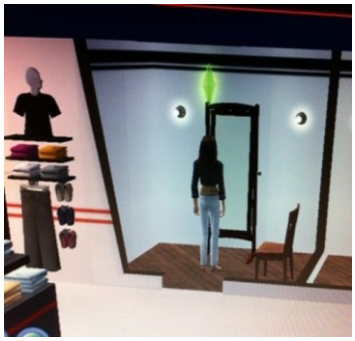
Q2a. Stelt u zich eens voor dat u zich in de situatie van de onderstaande afbeelding bevindt.

U bent aan het winkelen en u heeft in deze winkel leuke kleding gevonden, die u graag even wilt passen omdat u wilt zien of de kleding goed past en aan uw verwachtingen voldoet.

U bent de persoon in de paskamer. Probeer u zo goed mogelijk in te leven, totdat u een mening heeft gevormd over deze paskamer. Vervolgens kunt u doorgaan naar de vragenlijst. Deze vragen zullen allemaal betrekking hebben op uw beleving in deze paskamer, dus onthoud de afbeelding goed!

LET OP: als u op de afbeelding klikt zal de afbeelding automatisch openen in een nieuw venster. Dit

geeft u de mogelijkheid om de afbeelding tijdens de enquête nogmaals zorgvuldig te bekijken. Het wordt aangeraden om dit te doen, zodat u zeker bent van uw antwoorden.FRONTAL**MET SPIEGEL**



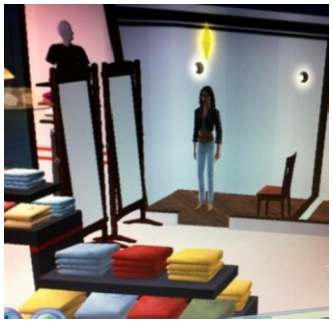
Ik heb de afbeelding goed bekeken

Q2b. Stelt u zich eens voor dat u zich in de situatie van de onderstaande afbeelding bevindt.

U bent aan het winkelen en u heeft in deze winkel leuke kleding gevonden, die u graag even wilt passen omdat u wilt zien of de kleding goed past en aan uw verwachtingen voldoet.

U bent de persoon in de paskamer. Probeer u zo goed mogelijk in te leven, totdat u een mening heeft gevormd over deze paskamer. Vervolgens kunt u doorgaan naar de vragenlijst. Deze vragen zullen allemaal betrekking hebben op uw beleving in deze paskamer, dus onthoud de afbeelding goed!

LET OP: als u op de afbeelding klikt zal de afbeelding automatisch openen in een nieuw venster. Dit geeft u de mogelijkheid om de afbeelding tijdens de enquête nogmaals zorgvuldig te bekijken. Het wordt aangeraden om dit te doen, zodat u zeker bent van uw antwoorden.FRONTAL **ZONDELS**



Ik heb de afbeelding goed bekeken

Q2c. Stelt u zich eens voor dat u zich in de situatie van de onderstaande afbeelding bevindt.

U bent aan het winkelen en u heeft in deze winkel leuke kleding gevonden, die u graag even wilt passen omdat u wilt zien of de kleding goed past en aan uw verwachtingen voldoet.

U bent de persoon in de paskamer. Probeer u zo goed mogelijk in te leven, totdat u een mening heeft gevormd over deze paskamer. Vervolgens kunt u doorgaan naar de vragenlijst. Deze vragen zullen allemaal betrekking hebben op uw beleving in deze paskamer, dus onthoud de afbeelding goed!

LET OP: als u op de afbeelding klikt zal de afbeelding automatisch openen in een nieuw venster. Dit

geeft u de mogelijkheid om de afbeelding tijdens de enquête nogmaals zorgvuldig te bekijken. Het wordt aangeraden om dit te doen, zodat u zeker bent van uw antwoorden. BEIDE MET SPIEGEL

Ik heb de afbeelding goed bekeken

Q2d. Stelt u zich eens voor dat u zich in de situatie van de onderstaande afbeelding bevindt.

U bent aan het winkelen en u heeft in deze winkel leuke kleding gevonden, die u graag even wilt passen omdat u wilt zien of de kleding goed past en aan uw verwachtingen voldoet.

U bent de persoon in de paskamer. Probeer u zo goed mogelijk in te leven, totdat u een mening heeft gevormd over deze paskamer. Vervolgens kunt u doorgaan naar de vragenlijst. Deze vragen zullen allemaal betrekking hebben op uw beleving in deze paskamer, dus onthoud de afbeelding goed!

LET OP: als u op de afbeelding klikt zal de afbeelding automatisch openen in een nieuw venster. Dit geeft u de mogelijkheid om de afbeelding tijdens de enquête nogmaals zorgvuldig te bekijken. Het wordt aangeraden om dit te doen, zodat u zeker bent van uw antwoorden.BEIDE ZONDER SPIEGEL

Ik heb de afbeelding goed bekeken

Q3. Bij het zien van deze afbeelding voel ik mij:

	1	2	3	4	5	6	7	
Gelukkig	○	○	○	○	○	○	○	Ongelukkig
Vrolijk	○	○	○	○	○	○	○	Boos
Tevreden	○	○	○	○	○	○	○	Ontevreden
Voldaan	○	○	○	○	○	○	○	Zwaarmoedig
Hoopvol	○	○	○	○	○	○	○	Wanhopig
Ontspannen	○	○	○	○	○	○	○	Verveeld

Q4. Bij het zien van deze afbeelding voel ik mij:

	1	2	3	4	5	6	7	
Gestimuleerd	○	○	○	○	○	○	○	Ontspannen
Opgewonden	○	○	○	○	○	○	○	Kalm
Uitzinnig	○	○	○	○	○	○	○	Loom
Onrustig	○	○	○	○	○	○	○	Sloom
Helemaal wakker	○	○	○	○	○	○	○	Slaperig
Opgewonden	○	○	○	○	○	○	○	Rustig

Q5. Geef bij de onderstaande uitspraken aan in hoeverre u het met de uitspraak eens of oneens bent (1 = helemaal mee oneens, 7 = helemaal mee eens).

	1	2	3	4	5	6	7
In deze paskamer kan ik een goede mening vormen over de kleding	○	○	○	○	○	○	○
In de paskamer kan ik mij vrij bewegen	○	○	○	○	○	○	○
In deze paskamer ben ik snel afgeleid	○	○	○	○	○	○	○
In deze paskamer kan ik mij goed concentreren	○	○	○	○	○	○	○
Deze paskamer beperkt mij in mijn mogelijkheden	○	○	○	○	○	○	○
In deze paskamer heb ik niet de mogelijkheid om te kiezen wat ik wil	○	○	○	○	○	○	○

Q6. Het licht in deze paskamer vind ik:

	1	2	3	4	5	6	7	
Koud	○	○	○	○	○	○	○	Warm
Onhelder	○	○	○	○	○	○	○	Helder
Onduidelijk	○	○	○	○	○	○	○	Duidelijk
Fel	○	○	○	○	○	○	○	Gedimd
Slecht	○	○	○	○	○	○	○	Goed
Onprettig	○	○	○	○	○	○	○	Prettig

Q7. Geef bij de onderstaande uitspraken aan in hoeverre u het met de uitspraak eens of oneens bent (1 = helemaal mee oneens, 7 = helemaal mee eens)

	1	2	3	4	5	6	7
Ik voel mij opgesloten in deze paskamer	○	○	○	○	○	○	○
Ik voel mij beperkt in deze paskamer	○	○	○	○	○	○	○
Ik heb genoeg ruimte om mij te bewegen in deze paskamer	○	○	○	○	○	○	○
Ik voel me verstikt in deze paskamer	○	○	○	○	○	○	○
Ik kan mij makkelijk bewegen in deze paskamer	○	○	○	○	○	○	○

Bij de volgende vragen is het belangrijk dat u nogmaals goed naar de afbeelding van de paskamer kijkt. Stelt u zich voor dat u de personage in de afbeelding bent en dat u daadwerkelijk kleding gaat passen in deze paskamer. Beantwoord nu aan de hand van de afbeelding de volgende vragen over uw gezicht en lichaam.

Q8. Als ik mij in de paskamer van deze afbeelding zou bevinden dan zou mijn gezicht er als volgt uitzien:

	1	2	3	4	5	6	7	
Slecht	○	○	○	○	○	○	○	Goed
Jong	○	○	○	○	○	○	○	Oud
Gezond	○	○	○	○	○	○	○	Ongezond
Veel schaduwen	○	○	○	○	○	○	○	Weinig schaduwen
Aangename huidskleur	○	○	○	○	○	○	○	Onaangename huidskleur

Q9. Als ik mij in de paskamer van deze afbeelding zou bevinden dan zou mijn lichaam er als volgt uitzien:

	1	2	3	4	5	6	7	
Positief	○	○	○	○	○	○	○	Negatief
Onaantrekkelijk	○	○	○	○	○	○	○	Aantrekkelijk
Slank	○	○	○	○	○	○	○	Dik

Q10. De paskamer op de afbeelding ziet er als volgt uit:

	1	2	3	4	5	6	7	
Oncomfortabel	○	○	○	○	○	○	○	Comfortabel
Ruimtelijk	○	○	○	○	○	○	○	Krap
Slechte kwaliteit	○	○	○	○	○	○	○	Goede kwaliteit
Voldoende privacy	○	○	○	○	○	○	○	Te weinig privacy
Klein	○	○	○	○	○	○	○	Groot
Goed onderhouden	○	○	○	○	○	○	○	Slecht onderhouden
Indrukwekkend	○	○	○	○	○	○	○	Eenvoudig
Lelijk	○	○	○	○	○	○	○	Mooi

Q11. Geef bij de onderstaande uitspraken aan in hoeverre u het met de uitspraak eens of oneens bent (1 = helemaal mee oneens, 7 = helemaal mee eens).

	1	2	3	4	5	6	7
De paskamer voldoet aan mijn verwachtingen	○	○	○	○	○	○	○
Ik ben tevreden over deze paskamer	○	○	○	○	○	○	○
Deze paskamer nodigt mij uit om kleren te gaan passen	○	○	○	○	○	○	○
Ik zou graag in deze paskamer terugkomen	○	○	○	○	○	○	○
Ik zou hier meteen weggaan	○	○	○	○	○	○	○
De paskamer past goed bij mij en mijn persoonlijkheid	○	○	○	○	○	○	○

Q12. Geslacht

Man ○ Vrouw ○

Q13. Leeftijd

Q14. Mijn hoogst genoten opleiding is (afgerond of huidig):

Basisonderwijs	o
Middelbaar onderwijs	o
LBO	o
MBO	o
HBO	o
Universiteit	o

Q15. Als u kans wilt maken op een van de drie tijdschriftabonnementen dan kunt u hieronder uw e-mailadres achterlaten.

Q16. Wilt u nog iets kwijt? Hieronder kunt u eventuele opmerkingen of suggesties over dit onderzoek en een paskamer setting kwijt.

APPENDIX B. STATISTICS

Table 1. MANOVA-analysis of lighting direction and using mirrors on dressing room aspects.

MANOVA-analysis		**Type III sum of squares**	**df**	**Mean Square**	***F***
Lighting direction	Zitplaats	5.94	1	5.94	1.98
	Licht	.94	1	.94	1.20
	Schone vloer	.10	1	.10	.14
	Spiegeltype	.08	1	.08	.05
	Spiegelgrootte	.40	1	.40	.43
	Grootte van het pashokje	2.70	1	2.7	3.1
	Haakjes voor spullen	.70	1	.70	.87
	Privacy	.38	1	.38	.52
	Comfort	.22	1	.22	.13
	Veiligheid	1.07	1	1.07	.51
	Frisse lucht	1.68	1	1.68	1.15
	Temperatuur	1.93	1	1.93	1.23
	Muziek	6.16	1	6.16	2.26
	Netjes	.44	1	.44	.41
	Service	2.97	1	2.97	1.44
Mirror	Zitplaats	18.45	1	18.45	**6.15***
	Licht	.07	1	.07	.90
	Schone vloer	.69	1	.69	.90
	Spiegeltype	.27	1	.27	.17
	Spiegelgrootte	.02	1	.02	.02
	Grootte van het pashokje	.44	1	.44	.52
	Haakjes voor spullen	.69	1	.69	.86
	Privacy	.00	1	.00	.01
	Comfort	.16	1	.16	.09
	Veiligheid	1.95	1	1.95	.94
	Frisse lucht	.84	1	.84	.57
	Temperatuur	.53	1	.53	.34
	Muziek	3.34	1	3.34	1.22
	Netjes	.82	1	.82	.77
	Service	.00	1	.00	.00

***p<.05**

Table 2. MANOVA-analysis for important dressing room aspects.

MANOVA-ANALYSIS	**N**	***F***	***df***	**Error**	**Sig.**
Lighting direction	207	.83	15	189	.63
Mirror	207	1.02	15	189	.42
Lighting direction * mirror	207	.60	15	189	.87

Table 3. Descriptive statistics for all scales of study 1.

		M	SD
Pleasure	Frontal with mirror	3.59	.84
	Frontal without mirror	4.13	1.03
	Frontal and overhead with mirror	3.80	.95
	Frontal and overhead without mirror	4.16	.95
Arousal	Frontal with mirror	4.21	.74
	Frontal without mirror	3.93	.91
	Frontal and overhead with mirror	4.38	.66
	Frontal and overhead without mirror	4.27	.73
Dominance	Frontal with mirror	4.88	.83
	Frontal without mirror	4.11	1.28
	Frontal and overhead with mirror	4.64	.97
	Frontal and overhead without mirror	4.06	.85
Lighting evaluation	Frontal with mirror	3.75	1.27
	Frontal without mirror	3.15	1.46
	Frontal and overhead with mirror	3.91	1.47
	Frontal and overhead without mirror	3.43	1.42
Lighting perception	Frontal with mirror	3.96	.88
	Frontal without mirror	3.75	.98
	Frontal and overhead with mirror	3.94	.75
	Frontal and overhead without mirror	3.65	.78
Perceived spaciousness	Frontal with mirror	5.37	1.02
	Frontal without mirror	4.90	1.09
	Frontal and overhead with mirror	4.85	1.18
	Frontal and overhead without mirror	4.95	.97
Facial appearance	Frontal with mirror	4.01	.89
	Frontal without mirror	4.52	1.05
	Frontal and overhead with mirror	4.27	.98
	Frontal and overhead without mirror	4.44	1.11
Body appearance	Frontal with mirror	3.75	1.05
	Frontal without mirror	4.30	1.16
	Frontal and overhead with mirror	3.98	1.01
	Frontal and overhead without mirror	3.99	1.32
Overall dressing room experience	Frontal with mirror	3.49	.78
	Frontal without mirror	3.83	1.10
	Frontal and overhead with mirror	3.66	.91
	Frontal and overhead without mirror	3.85	.91
Consumer behavior	Frontal with mirror	4.45	1.05
	Frontal without mirror	3.38	1.46
	Frontal and overhead with mirror	4.05	1.30
	Frontal and overhead without mirror	3.27	1.52

Table 4. ANOVA-analysis for all scales of study 1.

ANOVA-ANALYSIS						
		Type III sum of squares	***df***	**Mean square**	***F***	**Sig.**
Pleasure	Lighting direction	.678	203	.67	11.56	.00
	Mirror	10.416	203	10.41	.75	.38
	Lighting direction * mirror	.409	203	.40	.45	.50
Arousal	Lighting direction	3.476	203	3.47	5.90	.01
	Mirror	1.978	203	1.97	3.35	.06
	Lighting direction * mirror	.381	203	.38	.64	.42
Dominance	Lighting direction	1.062	203	1.06	1.05	.30
	Mirror	23.255	203	23.25	23.02	.00
	Lighting direction * mirror	.474	203	.47	.47	.49
Lighting evaluation	Lighting direction	2.447	203	2.44	1.23	.26
	Mirror	14.952	203	14.95	7.51	.00
	Lighting direction * mirror	.237	203	.23	.11	.73
Lighting perception	Lighting direction	.192	203	.19	.26	.61
	Mirror	3.117	203	3.11	4.24	.04
	Lighting direction * mirror	.078	203	.07	.10	.74
Perceived spaciousness	Lighting direction	2.867	203	2.86	2.46	.11
	Mirror	1.778	203	1.77	1.53	.21
	Lighting direction * mirror	4.183	203	4.18	3.60	.05
Facial appearance	Lighting direction	.400	203	.40	.39	.53
	Mirror	5.947	203	5.94	5.85	.01
	Lighting direction * mirror	1.413	203	1.41	1.39	.24
Body appearance	Lighting direction	.057	203	.05	.04	.83
	Mirror	4.322	203	4.32	3.35	.06
	Lighting direction * mirror	3.870	203	3.87	3.00	.08
Overall dressing room experience	Lighting direction	.500	203	.50	.56	.45
	Mirror	3.693	2.03	3.69	4.20	.04
	Lighting direction * mirror	.322	203	.32	.36	.54
Consumer behavior	Lighting direction	3.242	203	3.24	1.80	.18
	Mirror	43.544	203	43.54	24.23	.00
	Lighting direction * mirror	1.099	203	1.09	.61	.43

APPENDIX C. INTERVIEW GUIDE

Naam:

Leeftijd:

1. Wat is volgens jou zeer belangrijk in een paskamer?

1a. Waarom zijn die aspecten volgens jou zo belangrijk aan een paskamer?

2. Heeft een paskamer grote invloed op jouw aankoopgedrag?

2a. Waarom is dat zo?

3. Welke paskamer heeft je voorkeur?

3a. Waarom heeft die paskamer jouw voorkeur?

4. Waar heb je op gelet toen je de paskamers aan het bekijken was?

5. Zou je kleding willen passen in deze paskamers?

5a. Waarom zou je wel/niet kleding willen passen in deze paskamers?

6. Hebben paskamers invloed op de keuze of jij een winkel nog vaker bezoekt?