

The danger of watching sexualized advertising

The effect of the self-objectification process on cognitive skills and mood of Muslim and non-Muslim women

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Abstract

Nowadays, our society can be described as a society in which a proliferation of sexual texts is part of our lives on a daily basis. Of these sexual texts, this thesis will discuss the advertisement sector. For some time, there has been a debate about what kind of impact sexualized advertisements have on young women. As is shown in previous studies, the sexualization and objectification of women can lead to many negative effects such as disordered eating and body shame. As a result, the focus of this thesis will be on the effects that these sexualized advertisements can have on women. More specifically, cognitive skills and mood. Furthermore, religion can serve as a defensive factor against the images that are portrayed in sexualized advertisements. Therefore, this thesis will focus on Dutch Muslim and non-Muslim women. An experimental design that was used in this study has shown that sexualized advertisements have an effect on the cognition of women. Thus, the sexualization of advertising does entail negative consequences.

Keywords

Self-objectification theory, Islam, Muslim, women, social comparison theory, cognition, advertisements, sexualization, mood.

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1. Introduction

Imagine a beach. On that beach lies a skinny and beautiful woman who only wears a tiny bikini. Then suddenly, she puts her teeth into a massive teriyaki burger of Carl's Junior and says "I have to be a little bad."

This scene is a description of one of the many televised commercials of Carl's Junior, a North-American hamburger chain that is known for its sexually suggestive commercials. The hamburger chain truly believes that sex sells and so do many other companies. For example, not only Carl's Junior uses this technique in its advertisements but other companies as well such as Victoria's Secret and Axe. The advertising industry has a long history of using sex in its commercials and these have become more and more apparent in our society over the years.

It is therefore possible to say that nowadays sexualized media texts are a huge part of Western society. Attwood (2006) believes that the culture in our society has been sexualized in which the proliferation of sexual texts has now become a part of our daily lives. Sex is depicted everywhere. Think about women's magazines such as *Cosmopolitan* in which sex seems to be one of the main topics in every issue. Moreover, research that has been done on the cover of Rolling Stone magazine has shown that not only the sexualized images have increased but that women are more sexually portrayed than men (Hatton et al., 2011). Thus, the media texts of our Western society portray more women than men as sexualized.

This has an effect on women and girls. The report of the American Psychological Association (APA) of 2007 states that these sexualized images of girls and women have a negative effect on them. According to Dr. Zurbriggen, who is the chair of the APA, these sexualized images have negative effects in domains such as "cognitive functioning, physical and mental health, and healthy sexual development" (HT Media, 2007). So although our society does have a lot of these advertisements, research has shown that many negative effects will arise from these advertisements. This thesis will therefore focus on the sexualization of advertisements in the Western world and the effect that this has on women, specifically on a cognitive level.

Following the line of reasoning of Dr. Zurbriggen, previous research has demonstrated that the sexualization of advertisements in which objectified women play a big role can have a negative effect on women. The socio-cultural norms of thinness that these advertisements are displaying present an ideal in which an overweight body is ugly and weak, while a thin body is connotated with power and sexual confidence (Brumberg, 2000 as cited in Kim, 2006). As

a result, many commercials sexually objectify women which can lead to self-objectification in women. According to Fredrickson and Roberts (1997) self-objectification can be defined as the process in which women will see themselves as a thing and value themselves for their appearance instead of what they are capable of. Furthermore, self-objectification will cause a woman to look at herself in a third person. Additionally, self-objectification can lead to a number of negative effects in a woman's life. For example, it can have a negative impact on a woman's body image by means of body dissatisfaction (Halliwell et al., 2011). This in turn can lead to body shame, disordered eating, low self-esteem, mental health issues and a decrease in motor performance (Noll & Fredrickson, 1998; Fredrickson & Harrison, 2005; Fredrickson, Roberts, Noll, Quinn & Twenge, 1998). Furthermore, previous research has demonstrated that the sexual objectification of women in media texts reduces cognitive skills (Quinn, Kallen, Twenge & Fredrickson, 2006; Reichert, Latour, Lambiase & Adkins, 2007). Cognitive skills is defined as the ability to perform a certain task. Especially the latter can have several implications for our society in which women are continuously sexually objectified. In my thesis, I am therefore interested in the reduced cognitive skills that seem to appear after confronting women with sexually objectified women in sexualized and non-sexualized advertisements.

However, some women might be less susceptible to sexually objectifying images of women partly due to religion or due to the effectiveness of social comparison theory. Consequently, the focus of this thesis will be on comparing Muslim and non-Muslim women and the effects of self-objectification. Religion can be an important factor in protecting women against self-objectification. Religious women are more satisfied and more realistic in terms of their bodies (Abell & Richards, 1996). One reason for this could be that the virtues present in religion, such as love of one fellow's men and sanctification, contribute to this process of body satisfaction. For example, the Islamic faith accredits value to other things than the socio-cultural beauty ideals presented in Western society. Moreover, "Islam isn't a belief system known for its liberal stance on sexuality" (Moore, 2013). In addition, the Islamic faith is a religion in which women can make the decision whether she will incorporate the Islamic clothing style such as a hijab (head veil), jilbab (garment that covers the whole body except for hands, face and head), salwar-kameez (baggy pants and long shirt that falls just beneath the knee) or a niqab (veil that covers the whole body except for the eyes). Clothing style can be considered as a specific within-group variable. By wearing non-Western clothing women could be less susceptible for self-objectification (Holman, 2012; Mussap, 2009). Social comparison theory incorporates the similarity principle in which one

will compare themselves to others who inherit similar attributes (Steg, Buunk, Abraham & Rothengatter, 2008). Since wearing Islamic clothing will result into less comparison, because there is too little to compare to, Muslim women are less susceptible to the sexual objectifying images that are portrayed in Western media. Thus, there might be a connection between religion and its dressing rules, the level of self-objectification and the effect of self-objectification. Moreover, since Muslim women are a big part of our Dutch society and are known for their strength in faith and dressing style, the comparison between Dutch Muslim and non-Muslim women is chosen for this thesis.

Accordingly, by conducting an experiment this thesis will critically look at the self-objectification process after women have watched sexualized advertisements. Moreover, the thesis will focus on the effects that advertisements can have on a woman's cognitive skills, one of the negative effects of self-objectification, in which cognitive skills is defined as the ability to perform a certain task. Moreover, I am hoping to find out in this thesis if there are any differences between Dutch Muslim and non-Muslim women regarding cognitive skills, self-objectification, mood and self-esteem. Consequently, the research question is

RQ: To what extent does the sexualization of advertising have an effect on the cognitive skills of Dutch Muslim and Dutch non-Muslim women?

1.1. Societal and scientific relevance

The topic is worth researching since there is a gap in scientific literature. Research has mostly been done on non-Muslim women regarding the effect of self-objectification on women's cognitive skills (Quinn, Kallen, Twenge & Fredrickson, 2006; Tiggemann & Boundy, 2008; Reichert, LaTour, Lambiase & Adkins, 2013). Therefore, the research question is relevant for society since it deals with different cultures and the effects that televised advertisements can have on women. Additionally, televised advertisements can be seen as a big part of our daily lives since many people watch television every day. Moreover, it is interesting to see if religion can overcome the effects of self-objectification and therefore the effect that self-objectification can have on cognitive skills. As a result, this research would enrich the effects of advertising on cognitive skills and enrich the field of diversity.

The social relevance of this research can be found in that it deals with the effects on women. Advertising is a big part of our lives, but so are many other media texts in which many images of sexualized and objectified women are being shown. Living in a world like

this, many women will be confronted with these images on an everyday basis. Not only via the televised advertisements, but also via advertisements in magazines, on the street, television programmes, movies and many more. If there is indeed an effect on the cognitive skills of women, what would this mean if women are confronted with these images a lot? Would their abilities to perform a difficult task become less? A study on media effects regarding the effect that sexualized content can have on a woman's cognitive skills is therefore of social relevance.

The next section will provide an overview of the literature that discusses previous research that has been done on self-objectification and the effects thereof, social comparison theory, religion and being a Muslim women. Hereafter, the hypotheses and the sub-questions are introduced. Additionally, the method section will provide details on how the research will be carried out. Following up the methodology are the results that stem from the research. After this, a discussion of the results and possible linking of self-objectification to religion and cognitive skills along with the limitations of the study is provided. Correspondingly, the last section will deal with a conclusion that will provide directions for future research.

2. Theoretical Framework

The first section will deal with the sexualization of advertisements. After this, social comparison theory is discussed as an explanation of why self-objectification can take place. Hereafter, the theory of self-objectification and its relation to cognitive skills will be discussed. Thereupon, self-objectification is explained in relation to mood, self-esteem and religion. Lastly, there will be a discussion of why Muslim women would be less susceptible to self-objectification than non-Muslim women.

2.1. Sexualization of advertisements

Nowadays, sex is depicted all around us and this is done especially in media texts such as television, advertising and magazines. In these media texts, images of half-naked women and men are shown. In our present day society it is hard to not see the sexualized media texts. For example, read a magazine such as *Cosmopolitan* and one will see many images of sexualized and objectified women. An explanation for this according to Attwood (2006) is that the culture in our society has been sexualized in which a proliferation of sexual texts has now become a part of our daily lives. Also, The New York Times noted in 1999 that there is a “continuing push towards more explicit sexuality in advertisements, movies and on network television” (McNair, 2002, p. 61). This demonstrates that sexualization is now already a part of our society for many years.

Moreover, it is possible to say that “sex is increasingly linked to youth and consumer culture” (Plummer 1995 as cited in Attwood, 2006, p. 80). Advertising agencies consider sex as a powerful promotional tool to sell their commodities in which the mantra seems to be that sex sells (McNair, 2002). But what is meant with sex in advertising? Sex in advertising can be defined as “sexuality in the form of nudity, sexual imagery, innuendo, and double entendre [...] employed as an advertising tool for a wide variety of products” (Courtney & Whipple, 1983 as cited in Reichert & Lambiase, 2006, p. 103). Furthermore, five major types of sexual content are defined by Reichert (2003b) and these are nudity, sexual behavior, physical attractiveness, sexual referents, and sexual embeds (as cited in Reichert & Lambiase, 2006, p. 161). These tools are used within a marketing culture in which the main point in advertising is that the advertisements catch the viewer’s attention.

As mentioned before, sex is thus fastly pacing its way through our society in order to become more apparent. Another definition that is applicable to this phenomenon is McNair’s (2002) ‘porno chic’ in which porno chic is explained as “the representation of porn in non-pornographic art and culture; [...] the postmodern transformation of porn into a mainstream

cultural artefact for a variety of purposes including [...] advertising, art, comedy and education” (p. 61). As a result, porno chic has become the main representation within the advertising industry in many Western countries (Gill, 2009). Moreover, these sexual representations have increased dramatically over the last decade. Consequently, the representations of sex have now become mainstream and this makes it accessible to a wider group of consumers and thus many women (Attwood, 2006).

As a result, women are increasingly addressed as sexual objects but also as consumers (Attwood, 2006, p. 86). In addition, advertisements centralize the female body which is done much more nowadays than in the earlier days (Gill, 2009). Previous research has shown that women have become more sexually objectified over time and that men have not become more sexually objectified over time (Hatton et al., 2011). Sexual objectification is when a body has come to be seen as a sexual thing that can be evaluated and looked at (APA, 2007; Noll & Fredrickson, 1998). Moreover, it is possible to say that many advertisements display women that fit the Western beauty ideal in which the female body is displayed through revealing clothing (Reichert & Lambiase, 2006). Thus, women are persistently sexually objectified in our culture (Noll & Fredrickson, 1998). Some have argued that the shift empowers women in their sexuality in which women see sex as power (Paglia, 1992). However, more and more research has shown that the display of sexualized women in media texts can have a negative impact on a woman’s body image (Halliwell et al., 2011). Previous research has shown that sexualized and objectified images lead to social comparison and self-objectification which have a negative effect on a woman’s body image (Halliwell & Dittmar, 2005; Halliwell et al., 2011).

This is in accordance with that sexualized media are showing idealized images of women’s bodies in which the culture of thinness is prevalent. Therefore, mass media can be seen as powerful transmitters of socio-cultural beauty ideals (Tiggemann & McGill, 2004). In addition, the ideal media image becomes thinner (Katzmarzyk & Davis, 2001). Moreover, research by Knauss, Paxton and Alsaker (2008) has found out that men and boys are less susceptible to idealized media images than women and girls, because the latter internalizes these ideals which leads to a higher pressure from media. This has an effect on the way women perceive their bodies and this is called media effects. Media effects concern the effects that the mass media can have on people. This theory believes that mass media will lead to certain consequences. However, it must be noted that these effects are relatively small in relation to the amount of money that is often invested in certain media such as the advertising industry (Perse, 2008). The current study will supplement to the media effects literature. This

research aims to investigate whether sexualized commercials that expose women to societal images of thinness and attractiveness via the medium of television have an effect on the cognitive skills, self-objectification, self-esteem and mood of young women.

2.2. Social comparison theory

As previously mentioned, sexualized media images portray an idealized thin beauty ideal. Repeating these images makes people think that these images are the standard of attractiveness. Therefore, these images have an effect on how women perceive their bodies. Social comparison theory explains why this is the case. The theory of social comparison was formulated for the first time by the researcher Festinger in 1954. Social comparison is “the process of thinking about information about one or more other people in relation to the self” (Wood, 1996, p. 520-521). Thus, the theory refers to the way people make cognitive judgements about themselves in relation to others. Moreover, according to Steg et al. (2008) individuals compare themselves to other individuals when there is no objective reality. As a result, individuals will rely on a certain social reality in which they will compare themselves to other individuals (Steg et al., 2008).

Many studies have investigated the relation between social comparison, body image and media images (Tiggemann & McGill, 2004; Jones, 2002; Posavac, Posavac & Weigel, 2001; Cattarin, Thompson, Thomas & Williams, 2000; Faith, Leone & Allison, 1997; Heinberg & Thompson, 1995). Furthermore, researchers have suggested that women “engage in a social comparison process with media images when viewing models in magazines, or watching them on television” (Schlundt & Johnson as cited in Posavac et al., 2001, p. 326). According to Tiggemann and Williams (2004) social comparison appears when women are confronted with thin ideal images which are always-already present in our media-saturated society. Other studies have confirmed this line of reasoning as well. For example, Jones (2002) reported that girls will compare themselves to images that are presented in the media and that social comparison is the central contributor to a positive or a negative body image. Moreover, other research findings show that social comparison leads to negative outcomes with respect to body image.

Tiggemann and Williams (2004) suggest that “social comparison provides the mechanism by which acute exposure to media images induces negative effects” (p. 26). In their research the degree of comparison mediated the exposure of media images in relation to mood and body dissatisfaction. Furthermore, according to research that has been done by

Tiggemann and McGill (2004) women do compare themselves to other women in media texts which can eventually lead to body dissatisfaction and have an influence on a woman's mood. Moreover, Cattarin et al. (2000) defined social comparison as the reason for the negative outcomes that arise from idealized media exposure. Their research showed that in the three conditions (comparison, distraction or neutral condition) the participants reported a greater degree of self-to-model comparison in the first condition (comparison). More interestingly is the fact that social comparison happened in all three conditions of the study. In addition, Faith et al. (1997) stated in their study that persons, who compare themselves to media images over and over, tend to report a lower body image than persons who do not. Posavac et al. (2001) confirms the idea of women routinely comparing themselves to others which results into body dissatisfaction. Moreover, they also claim that the main cause for body image disturbance is that women are socially comparing themselves to the ideal thin standard of female beauty that is present in media images. Correspondingly, when women are comparing themselves to these idealized images this will result into a discrepancy between the "attractiveness of self and other" (Jones, 2002, p. 646). The process of social comparison can therefore be seen as the direct impact of why idealized media images leads to negative consequences for women.

Another important aspect of the social comparison theory is the similarity principle. This principle believes that individuals compare themselves to other individuals who are similar on related attributes (Steg et al., 2008, p. 165). Women in sexualized advertisements are often between the age of eighteen and thirty. This means that women of that age will compare themselves to these women and that there will be less effect when women are older than that age (Tiggemann & Lynch, 2001; Dunkel, Davidson & Qurashi, 2008).

An additional element of the similarity principle is the up- and downward social comparison. An upward comparison is when persons are comparing themselves to people who are better off or have some desired attributes (Faith et al., 1997). When women are comparing themselves to thin idealized media images this can be seen as an upward social comparison. Eventually, this will lead to body dissatisfaction and negative mood, because they find themselves lacking these body attributes that are portrayed in the media (Tiggemann & McGill, 2004). Contrastingly, a downward comparison will mostly lead to more self-esteem (Cattarin et al., 2000). A downward comparison is when people are comparing themselves to other people who have less or do not have the desired attribute (Faith et al., 1997). It can therefore be said that there are differences in levels of social comparison.

Moreover, research on social comparison is mostly focused on Caucasian women. It is also important to focus on adolescents from various backgrounds (Jones, 2002). According to

Jones (2002) women from various backgrounds might focus on other attributes when comparing themselves to others. This is confirmed by Heinberg and Thompson (1995) who believe that body image concerns of women from diverse backgrounds are not only focused on a desire for thinness, but that there might be other factors that these women compare themselves to in relation to other women. As a result, this study will evaluate if Muslim women are affected just as much as non-Muslim women by sexualized commercials.

2.3. Self-objectification theory

The sexualized socio-cultural ideals presented in advertisements display an objectified body that women can compare themselves to and this can lead to self-objectification which is part of self-objectification theory. The self-objectification theory was first described and developed by Fredrickson and Roberts in 1997 in which the sexual objectification of a woman's body is the main starting point. Sexual objectification is defined as "the experience of being treated as a body (or collection of body parts) valued predominantly for its use to (or consumption) by others" (Fredrickson & Roberts, 1997, p. 174). Sexual objectification can thus be described as a phenomenon in which women are reduced to a status of nothing more than instruments (Calogero & Jost, 2011). As a result, women will not focus on the way they are feeling but on body attributes that they can see (Fredrickson & Roberts, 1997) and consequently focus on "appearance-based attributes" instead of "competence-based attributes" (Noll & Fredrickson, 1998, p. 624). Another element of self-objectification theory is that women will think about themselves in a third-person self-perspective (How do I look?) (Calogero & Jost, 2011, p. 211). The extent to which this third-person self-perspective is internalized determines the level of the trait self-objectification (Harper & Tiggemann, 2007, p. 650). Furthermore, "women experience the consequences of self-objectification primarily as a result of being concerned with physical appearance, regardless of whether they feel satisfied or dissatisfied with their bodies" (Noll & Fredrickson, 1998, p. 273). Moreover, according to Fredrickson and Roberts (1997) having a reproductively mature female body can be seen as a shared social experience. As a result, this can be linked to the social comparison theory in which other women compare themselves to other women who inherit similar or related attributes. This would then be the mature female body.

Moreover, research demonstrates that there are risks involved when women are confronted with sexual objectification. For example, according to Harper and Tiggemann (2007) advertisements in which the socio-cultural beauty ideals are presented encourage women to think about their bodies through a critical lens. This will in turn lead to negative

consequences. For example, self-objectification can lead to body shame (Noll & Fredrickson, 1998; Fredrickson, Roberts, & Noll, 1998; Kim, 2006; Tiggemann & Boundy, 2008; Calogero & Jost, 2011) and disordered eating (Noll & Fredrickson, 1998; Fredrickson, Roberts, Noll, Quinn & Twenge, 1998; Calogero, Davis, & Thompson, 2005; Tiggemann & Williams, 2011). In addition, self-objectification can also have an impact on a woman's well-being in which well-being decreases after women are exposed to idealized images (Breines, Crocker & Garcia, 2008; Mercurio & Landry, 2008). Self-objectification can even have a negative effect on sexual functioning in which self-objectification leads to higher body surveillance which results into higher body shame and less sexual self-esteem (Calogero & Thompson, 2009). Furthermore, self-objectification also leads to a greater support of cosmetic surgery (Calogero, Pina, Park & Rahemtulla, 2010).

It can therefore be said that self-objectification has a negative impact on a woman's life experience. The most important aspect of this research, however, is the effect that self-objectification has on a woman's cognitive skills. The next section will discuss this issue in more detail.

2.4. Self-objectification and cognitive skills

Research has shown that self-objectification will lead to reduced cognitive skills (Fredrickson et al., 1998, Quinn et al., 2006; Tiggemann & Boundy, 2008; Reichert, LaTour, Lambiase & Adkins, 2013) and that objectified advertisements of women have a significant effect on "cognitive, attitudinal, and behavioral responses" (Reichert et al., 2007, p. 81). Respectively, the thesis' main focus is on cognitive skills. Cognitive skills can be defined as the ability to perform a task. Specifically, this thesis deals with the cognitive response after one's brain has been confronted with sexualized images or non-sexualized images. Attention can be disrupted or focused which would mean that after women have watched sexualized advertisements attentional resources are disrupted which would make them score worse on tests that measure cognitive skills. In addition, according to Quinn et al. (2006) "a state of self-objectification is hypothesized to lead to a disruption of focused attention because part of one's attentional resources are devoted to viewing the self (especially the body) as an object" (p. 60). Accordingly, when the brain is interrupted, in this case by means of self-objectification provided by the sexualized advertisements, this will lead to a decreased performance and a decrease in cognitive skills.

The first research that tried to measure this effect is the research of Fredrickson et al. (1998) in which has been found that self-objectification leads to reduced math performance

for women. In their research, two experimental conditions were conducted in which one condition women had to wear a swimsuit and in the other condition women had to wear a sweater. The researchers believed that the difference between these situations was that the swimsuit condition would “accentuate their awareness of observers’ perspectives on their bodies” and as a result this would increase self-objectification (Fredrickson et al., 1998, p. 270). In both conditions participants had to make a math test. The results from these tests confirmed the hypothesis that self-objectification has an effect on a woman’s math performance. This would mean that self-objectification has an influence on cognitive processes.

However, there could be another explanation for the results that were found in the research of Fredrickson et al. (1998), namely “stereotype threat” (Steele & Aronson, 1995). It is generally known that math is considered as a domain in which the stereotype of women is that women are less talented in math. Correspondingly, research has proven that stereotypes have an effect on a woman’s math performance (Van Loo & Rydell, 2013). The swimsuit condition could have reminded these women of that particular stereotype that exists about women and math (Quinn et al., 2006; Gay & Castano, 2009). According to Quinn et al. (2006) “wearing the swimsuit could have led to worse performance on the math test because stereotypes about women’s abilities had become salient and not because self-objectification splits attention between the self as object and the task” (p. 60).

As a result, Quinn’s et al. (2006) study tried to duplicate the study of Fredrickson et al. (1998) in which the math test has been replaced by a Stroop color-naming task. The reason for this is that the researchers believed that there were no gender stereotypes connected to color-naming. Moreover, they also considered the Stroop task as something in which responses of this test are “affected by allocation of attentional resources” (Cohen, Dunbar & McClellan, 1990 as cited in Quinn et al., 2006, p. 60). This is in accordance with Breines, Crocker and Garcia (2008) who state that self-objectification leads to a disruption in attentional resources which leads to a reduced cognitive performance. Research by Reichert et al. (2013) confirms this as well. They have researched the effect that media videos, in which women are sexually objectified, have on a woman’s cognitive response. Their results validated the hypothesis that these images indeed had a negative effect on the cognitive skills of women. Thus, when women self-objectify, they will use a part of their attentional resources and this should lead to decreased cognitive performance. As a result, it is important to understand if this process always happens.

Attwood (2006) describes theorizing sexual and beauty ideals will primarily deal with “representation, with individual experience, and with Western cultures” (p. 91). Furthermore, Reichert and Lambiase (2006) state that it would be wisely “to examine how audiences process advertising messages featuring sexualized images [...] and how they are affected by such content” which is in this case cognitive performance, mood, self-esteem and self-objectification (p. 295). Since there is a lack of research that researches the effect that self-objectification and social comparison have on the cognitive skills, mood and self-esteem of diverse women, the focus of this thesis will be on Dutch Muslim and non-Muslim women. The next section will therefore deal with mood.

2.5. Self-objectification and mood

Self-objectification can have an effect on mood as well. Previous research has discovered that when women self-objectify, they will experience an increase in negative mood which is different from women who do not self-objectify. According to Harper and Tiggemann (2007) self-objectification has a number of negative outcomes such as body dissatisfaction, weight-related appearance anxiety and a negative mood. Their research demonstrated that exposure to thin-idealized magazine advertisements leads to a general decline in mood. Moreover, other studies by Groesz, Levine and Murnen (2002) and Heinberg and Thompson (1995) show this as well. They discovered that the exposure of thin model images leads to a negative impact on a woman’s mood. Tiggemann and Boundy’s (2008) research confirms these results. Their research illustrated that self-objectification will lead to body shame, poorer cognitive performance and a negative mood.

In addition, a negative mood resulting from self-objectification can also have an impact on the sexual functioning of women since depressed mood is correlated with self-objectification (Tiggemann & Williams, 2011). Furthermore, Tiggemann and McGill (2004) found that when women were exposed to a body part or full body images in commercials this would lead to an increase in negative mood and body dissatisfaction. Moreover, this was also enhanced by the factor of social comparison in which women compare themselves to others. This is supported by the research of Cattarin, Thompson, Thomas and Williams (2000) who exposed women to commercials which reflected the socio-cultural beauty ideals of thinness and attractiveness. The results illustrated that women who watched these images experienced a negative impact on mood and body image disturbance while women who watched neutral commercials did not experience these effects.

Another study has investigated the effect of self-objectification and compliments on mood (Fea & Brannon, 2006). They discovered that these variables were related. Women who scored high on the trait self-objectification were influenced by character or appearance compliments which lead to a difference in mood. Accordingly, women who scored high on the trait self-objectification and who received neutral compliments expressed a more negative mood than those women who received character or appearance compliments.

As a result, mood, self-objectification and media images are related. Thus, young women should experience a decrease in mood after being exposing to objectified images of women. Besides mood, self-esteem has a relation to self-objectification as well. The next section will discuss self-objectification in relation to self-esteem and body image.

2.6. Self-objectification, trait self-esteem and body image

Self-esteem is an important variable when body image is being researched. Many researchers have often included self-esteem when researching self-objectification and body image (Abell & Richards, 1996; Strelan, Mehaffey & Tiggemann, 2003; Mercurio & Landry, 2008; Breines, Crocker & Garcia, 2008; Greenberg, 2009; Calogero, Pina, Park & Rahemtulla, 2010). Self-esteem is present in everyone and is a personal judgment of overall self-worth (Mercurio & Landry, 2008). The difference is whether one has a low self-esteem or a high self-esteem. Furthermore, it can be seen as an indicator of well-being (Mercurio & Landry, 2008). For example, self-esteem can also be seen as a protective determinant that contributes to health (Mann, Hosman, Schaalma & de Vries, 2004). Correspondingly, trait self-esteem can be linked to evaluations of the self as is the case in self-objectification. In general, self-objectification occurs when people have a low global trait self-esteem (Breines et al., 2008). In addition, higher levels of body dissatisfaction were related positively to lower levels of self-esteem (Mercurio & Landry, 2008). Moreover, the relation between body satisfaction and self-esteem is much more present in young adults than in older women (Webster & Tiggemann, 2003). Consequently, the relation between body image, self-objectification and self-esteem can be considered as a complex one.

Breines, Crocker and Garcia's (2008) study confirms this complex relation between body image, self-objectification and trait self-esteem. Breines et al. (2008) predicted that self-objectification would be positively related to "women who base their self-worth on their appearance and have high self-esteem" while "for all other women, increased self-objectification should have neutral or negative association with well-being" (p. 585). In addition, women who have a high self-esteem that is based on their competences instead of

appearance should experience different levels of self-objectification. The predictions were confirmed, because the results demonstrate that when women have high self-esteem and are highly appearance-contingent, they increase in well-being when they self-objectify (Breines et al., 2008, p. 583). The reason for this is that high self-esteem, highly appearance-contingent women experience less negative outcomes when they self-objectify, because they feel less unattractive. However, participants who have low self-esteem did feel the effects of self-objectification and felt less attractive. Respectively, most women experience self-objectification negatively in the way that it has a negative effect on self-esteem while some women will receive a boost from self-objectification (Breines et al., 2008).

Another study that investigates the role of self-esteem in young women is the study of Strelan, Mehaffey and Tiggemann (2003). The study researches the relation that self-objectification has with body satisfaction, body esteem, trait self-esteem and reasons for exercising. The results demonstrated that women who scored high on self-objectification were more likely to have reduced body satisfaction, body esteem, and self-esteem. Moreover, Mercurio and Landry (2008) demonstrated that self-objectification has an impact on “overall life satisfaction through its relation with body shame and self-esteem” (p. 463). Furthermore, the American Psychological Association Task Force on the Sexualization of Girls (2007 as cited in Calogero, Pina, Park & Rahemtulla, 2010, p. 41) has also acknowledged that self-esteem is negatively related with experiences of sexual objectification. This means that when overall self-objectification is high, the trait self-esteem should be low. Commercials that strengthen self-objectification are more susceptible for women who have a low trait self-esteem.

Other researchers have argued that body satisfaction is “a component in women’s self-esteem” (Tiggemann, 1992 as cited in Kim, 2006, p. 286). Moreover, when women have a higher drive for thinness they are more likely to have a lower self-esteem (Davis & Katzman, 1998). The study of Abell and Richards (1996) confirms this as well. They have discovered that women have a lower trait self-esteem when they report a greater desire for a thinner figure. Therefore, it can be said that there is a strong and complex relationship between self-esteem, body image and self-objectification.

However, another way to gain self-esteem is through the means of religion. According to Kim (2006) “religion may serve as a protective social enclave from the socio-cultural pressures of ideal body shape that vulnerable women face by offering alternative means to establish self-esteem, or an alternative self-schema that promotes obtaining self-worth in ways

other than the body” (p. 287). As a result, the next section will deal with the issue of religion in relation to body image.

2.7. Religion and body image

Religiosity is a powerful factor when it comes to body image. Research has shown that religion can protect women against the negative consequences that sexualized commercials can have on women since there is a positive relation between young adults’ religiosity and body image (Boyatzis & Quinlan, 2008; Homan & Boyatzis, 2009). Accordingly, religious commitment is considered as a defensive factor against the socio-cultural beauty standards, because women with high levels of religious commitment underestimate their body weight (Holman, 2012). Moreover, previous research by Abell and Richards (1996) illustrates that religious women characterize themselves more heavier and realistic when asked to describe their bodies. Thereupon, the authors found out that a religious background has an influence on a woman’s perception of her ideal body shape and that it is correlated with a woman’s real and ideal weight. In addition, support for the positive role that religion can play with respect to body image is found in another study that demonstrates that a woman’s self-rated importance of religion is positively linked with a healthier body image (Joughin, Crisp, Halek & Humphrey, 1992). Moreover, women that scored high on religiosity in the research of Boyatzis and McConnell (2006) had a lower score on body dissatisfaction. Correspondingly, when self-worth is based in God’s love, academic competence, and family support this will lead to less body surveillance and less body dissatisfaction (Overstreet & Quinn, 2012). Qualitative data demonstrate this relation between body image and religiosity too. Previous research by Boyatzis, Trevino, Manning and Quinlan (2006) shows that women accredit their religion as affecting their body image in a positive way. Altogether these studies illustrate that high levels of religiosity are positively linked with a healthy body image.

More in-depth studies about religion and its practices concerning body-image demonstrate this relation as well. For example, Smith, Richards and Maglio (2003) have discovered that women who feel a close connectedness to God have fewer concerns with respect to their body image. Additionally, women who have high levels of religiosity are more likely to pray. Prayer is an effective strategy to cope with socio-cultural beauty standards and this results into a positive effect on a woman’s self-reported body image (Jacobs-Pilipski, Winzelberg, Wilfley, Bryson & Taylor, 2005). Another element in religion is sanctification. Sanctification is the process of feeling that one’s body is divine, because the body is a creation of God. This process has been described and researched in the study done by

Mahoney, Carels, Pargament, Wachholtz, Leeper, Kaplar et al. (2005). In this study they measured whether the process of sanctification was present and if this had a relation to body image. Questions in which bodies were described as an expression of God and in which bodies were described as having sacred qualities were presented to the women to measure if sanctification was present. Eventually, results showed that sanctification was positively linked to higher levels of body satisfaction.

Furthermore, Avants, Warburton and Margolin (2001) describe that religion can serve as a self-schema. Normally, the body self-schema is activated when body image comes into place. The body self-schema is a schema that has automatized beliefs, attitudes, and behaviors about the self and places self-worth in the body. However, the researchers state that religion can replace the body self-schema once it is activated. When the religion self-schema is activated this will lead to “automatized beliefs, attitudes, and behaviors consistent with a self whose worth is based on spiritual ideas and principles, instead of the body” (Avants, Warburton & Margolin, 2001 as cited in Kim, 2006, p. 286).

Related to the study of Avants et al. (2001) is the research of Boyatzis, Kline and Backof (2007). Boyatzis et al. (2007) wanted to research if body image would improve when college women would read religious body affirmations or spiritual body affirmations. In the study, the researchers let the college women watch ultra-thin fashion model pictures after which the women had to read either neutral statements, religious body affirmations (affirmations that emphasized God’s love for their bodies) or spiritual body affirmations (affirmations that did not mention God, but that were still positive about their bodies). After this, the women had to complete the posttest body-esteem measures. Results showed that the women who read the religious body affirmations had less concerns about their body image than the women that read spiritual body affirmations and neutral statements. The study illustrates that this is in accordance with Avants et al. (2001) who claim that the religion self-schema can replace the body self-schema which will lead to increased body satisfaction. This is done in the study of Boyatzis et al. (2007) by means of the religious body affirmations.

Furthermore, religion may be related to self-esteem as well. If women believe that their body is holy and a creation of God, this will eventually lead to a higher self-esteem. This self-esteem is caused by the fact that religious people believe that they have a relationship with a holy being who loves you personally and unconditionally (Sherkat & Ellison, 1999 as cited in Kim, 2006). Another way how religion can increase self-esteem is via the social relationships it provides (Kim, 2006). Religious beliefs often entail virtues such as love of one’s fellow men which can lead to an increased self-esteem (Ellison & Levin, 1998 as cited

in Kim, 2006). In addition, Ellison (1993) has found in her research among Black Americans that religious involvement did have an effect on self-perception in which religious ideals had much more affect on self-esteem than beauty ideals. Therefore it can be said that religion offers alternative ways for self-esteem.

Hence, these results show that it is important to study religiosity in relation to body image since religion enables women to feel less pressure to abide to the socio-cultural beauty standards. Several scholars have argued for this as well, because the “neglect of religiosity can only lead to an incomplete understanding of women’s well-being” (Boyatzis et al., 2007, p. 553). Moreover, studies have shown that religiousness has positive effects on “psychologically and physically healthy cognitions, emotions and behaviors” (Holman, 2012, p. 132). Therefore, religion may help as an alternative avenue of worth for the body (Kim, 2006). Nevertheless, one should bear in mind that a woman’s religion is only effective against the socio-cultural beauty standards when she has high levels of religiosity.

Unfortunately, these studies mostly focus on Christian women while there is a need for a broader and diverse understanding of this phenomenon. The link between religiosity and body image is an important one in understanding the process of self-objectification. Moreover, some scholars have argued that Muslim women are even less susceptible to these images, because of their religion. As a result, the next section will dig deeper into the issue of self-objectification and Muslim women.

2.8. Muslim women, religion and self-objectification

Unfortunately, Muslim women have received limited attention when it comes to the prevalence of body image problems (Tolaymat & Moradi, 2011). Some scholars have argued that Muslim women are less susceptible to Western beauty ideals than Western women (Mussap, 2009; Dunkel, Davidson & Qurashi, 2010; Holman, 2012). This is because of their religion since traditional clothing such as a hijab protects women from comparing themselves to other women or Western ideas of beauty (Mussap, 2009). A hijab is a head veil that covers up the hair and it can be considered as an integral part of the Islamic faith. A veil or non-Western clothing would in turn lead to less self-objectification. This effect is confirmed by Holman (2012) who states that the effect of self-objectification is even less when women are obeying a strict Muslim dressing code which includes wearing a veil. The veil and non-Western clothing style work as a protective factor against the drive for thinness and the socio-cultural beauty standards (Holman, 2012). Studies have shown that the hijab works at both levels, the interpersonal level in which women are “associated to fewer sexual objectification

experiences” and the psychological one in which “less body dissatisfaction and lower levels of negative behaviour are derived from it” (Homan, 2012, p. 130). Non-Western clothing can therefore be considered as a “specific within-group variability factor” that may be relevant to the issue of self-objectification or body image (Tolaymat & Moradi, 2011, p. 383).

The study by Dunkel et al. (2010) demonstrates that there is a difference between Muslim and non-Muslim women concerning socio-cultural beauty standards. In their study they executed a series of group comparisons involving U.S. Muslim and non-Muslim women. They categorized the women by means of age, type of dress and veiling to see if there were any differences concerning body image. The findings illustrate that the non-Western dressers reported a “lower drive for thinness, appearance pressures, and internationalization of dominant cultural standards of beauty” (Dunkel et al., 2010 as cited in Tolaymat & Moradi, p. 385). It is therefore possible to say that dressing style has an influence on body image.

Moreover, the Islamic religion believes that women should conceal their beauty when leaving the house in order to attract as less attention as possible (Reece, 1996). Additionally, many Muslim women choose to dress traditionally in Western countries to express their commitment to the Islamic religion (Droogsma, 2007; Read & Bartkowski, 2000). Furthermore, a Islamic clothing can result into less pressure to dress alluring (Droogsma, 2007). This is related to research that has demonstrated that lower reports of sexual objectification experiences were related to wearing a hijab (Tolaymat & Moradi, 2011). However, this can also be, because women who wear non-Western clothing want to appear sexually modest and as a result they will report lower experiences of sexual objectification (Ruby, 2006).

Furthermore, Muslim women also report that restricted dressing allows them to “focus on aspects of life other than their appearances and bodily representations” (Dunkel, 2010, p. 57). In addition, according to Dunkel (2010) it can be that dress preferences that belong to religious beliefs have a stronger effect than the religion itself. But still, it is possible to say that “an adherence to Islam can indirectly protect women’s body image from appearance-based public scrutiny and from exposure to Western media” (Mussap, 2009, p. 121).

Contrasting to the previous mentioned studies, other researchers believe that there already is an internalization of dominant beauty standards in Western Muslim women which can be seen as a form of acculturation (Tolaymat & Moradi, 2011; Moradi & Huang, 2008). Their studies have found correlations among the internalization of beauty standards. Therefore, there should not be any difference between Muslim and non-Muslim women concerning their body images and self-objectification.

In conclusion, research has shown that there is a complex relationship between Muslim women and the issue of self-objectification. Some scholars argue that religion and the accompanying customs that belong to a religion can have an effect on the way women are comparing themselves to sexualized images. This would mean that according to the similarity principle in social comparison theory that there is too little to compare to. However, others have argued that the socio-cultural beauty standards of Western society are already internalized in Muslim women.

According to Moradi and Huang (2008): “research with Muslim women could explore links of internalization of hijab standards with objectification theory variables” (p. 392). This research will therefore contribute to the field of cross-cultural generalizability of self-objectification theory. Consequently, the study in this thesis will examine if there is a difference between Muslim and non-Muslim women regarding cognitive skills, self-objectification, self-esteem and mood after exposing them to sexualized advertisements.

3. Hypotheses

This chapter provides the research question, sub-questions and hypotheses. For every variable in the research, a sub-question and hypothesis are set-up based on expectations that have arisen from the existing literature.

3.1. Research question and sub-questions

The main aim of this study is to critically investigate whether sexualized advertisements have an effect on a woman's cognitive skills and if there are any differences between Dutch Muslim and non-Muslim women regarding these cognitive skills. The findings that result from this research will provide an overview about the effects of advertising on cognitive skills regarding different cultures. Consequently, the main research question is

RQ: To what extent does the sexualization of advertising have an effect on the cognitive skills of Dutch Muslim and Dutch non-Muslim women?

In order to answer the main research question, the following sub-questions were formulated. These sub-questions will deal with the level of self-objectification, self-esteem and mood. Self-objectification is included in the sub-questions, because the variable has to be present in order for sexualized advertisements to have an effect on a woman's cognitive skills. Moreover, the variables self-esteem and mood are included to see if these variables have a relation to the variable self-objectification. Furthermore, a non-Western clothing style is included as a variable as well. According to the literature, this can possibly have a stronger effect than just religion on self-objectification. As a result, the sub-questions will be

SQ1: To what extent is self-objectification present in Muslim and non-Muslim women after watching sexualized advertisements?

SQ2: To what extent does watching sexualized advertisements have an effect on the mood of Muslim and non-Muslim women?

SQ3: What effect does being a Muslim or non-Muslim women have on the trait self-esteem?

SQ4: To what extent does self-objectification have a relation to self-esteem in Muslim and non-Muslim women?

SQ5: To what extent does a non-Western clothing style, that is part of the Islamic faith, have an effect on cognitive skills after women are confronted with sexualized advertisements?

SQ6: To what extent does a non-Western clothing style, that is part of the Islamic faith, have an effect on self-objectification after women are confronted with sexualized advertisements?

SQ7: To what extent does a non-Western clothing style, that is part of the Islamic faith, have an effect on mood after women are confronted with sexualized advertisements?

SQ8: What effect does having a non-Western clothing style have on trait self-esteem?

3.2. Hypotheses

According to previous research results, the research question, sub-questions, and expectations, the following hypotheses have been set up.

Hypothesis 1

H0 The sexualization of advertising has no effect on a woman's cognitive skills.

H1 The sexualization of advertising has an effect on a woman's cognitive skills.

Hypothesis 2

H0 The sexualization of advertising and the effect on cognitive skills will not result into a difference between Muslim and non-Muslim women.

H1 The sexualization of advertising and the effect on cognitive skills will result into a difference between Muslim and non-Muslim women.

Hypothesis 3

H0 The sexualization of advertising has no effect on a woman's mood.

H1 The sexualization of advertising has an effect on a woman's mood.

Hypothesis 4

H0 The sexualization of advertising and its effect on mood will not result into a difference between Muslim and non-Muslim women.

H1 The sexualization of advertising and its effect on mood will result into a difference between Muslim and non-Muslim women.

Hypothesis 5

H0 The sexualization of advertising has no effect on a woman's self-objectification.

H1 The sexualization of advertising has an effect on a woman's self-objectification.

Hypothesis 6

H0 The sexualization of advertising and its effect on self-objectification will not result into a difference between Muslim and non-Muslim women.

H1 The sexualization of advertising and its effect on self-objectification will result into a difference between Muslim and non-Muslim women.

Hypothesis 7

H0 There will not be a difference between Muslim and non-Muslim women on trait self-esteem.

H1 There is a difference between Muslim and non-Muslim women on trait self-esteem.

Hypothesis 8

H0 Higher scores on trait self-esteem will not result into lower scores on self-objectification.

H1 Higher scores on trait self-esteem will result into lower scores on self-objectification.

Hypothesis 9

H0 The sexualization of advertising and its effect on mood will not result into a difference between Western dressers and non-Western dressers.

H1 The sexualization of advertising and its effect on mood will result into a difference between Western dressers and non-Western dressers.

Hypothesis 10

H0 The sexualization of advertising and its effect on self-objectification will not result into a difference between Western dressers and non-Western dressers.

H1 The sexualization of advertising and its effect on self-objectification will result into a difference between Western dressers and non-Western dressers.

Hypothesis 11

H0 The sexualization of advertising and its effect on cognitive skills will not result into a difference between Western dressers and non-Western dressers.

H1 The sexualization of advertising and its effect on cognitive skills will result into a difference between Western dressers and non-Western dressers.

Hypothesis 12

H0 There will not be a difference between Western dressers and non-Western dressers on trait self-esteem.

H1 There is a difference between Western dressers and non-Western dressers on trait self-esteem.

4. Method

This chapter provides information about the method that is chosen for the study along with detailed information about the different scales that are used.

4.1. Overview

The main research activity is to measure whether there is a difference between Muslim and non-Muslim women and their cognitive skills, self-objectification and mood after watching sexualized advertisements and non-sexualized advertisements. The method that is chosen for this research in order to answer the research question, sub-questions and to test the hypotheses is an experimental design for the reason that an experiment is the perfect method to define causal relationships (Cook & Campbell, 1976). Moreover, Moradi and Huang (2008) state that experimental manipulations have been proven effective in heightening self-objectification in women. It can therefore be said that “because many of the manipulations involve exposing women to appearance pressures that can heighten sexual objectification, the findings of these studies can be interpreted as tests of the consequences of inducing sexual objectification” (Moradi & Huang, 2008, p. 385). An experimental design can therefore be seen as an excellent measurement to assess the effects of self-objectification.

Moreover, “an experimental design is a plan for assigning experimental units to treatment levels and the statistical analysis associated with the plan” (Kirk, 1995, p. 1). In order to test the hypotheses different treatment levels are necessary to measure a difference. Accordingly, there will be an experimental and a control group. The experimental group is confronted with sexualized advertisements while the control group is confronted with non-sexualized advertisements. Participants will each take part in only one condition. The allotment to the groups will happen at random to ensure validity. Moreover, there will be two groups in total (experimental and control) for non-Muslim women and two groups in total (experimental and control) for Muslim women. Accordingly, the research makes use of a quasi-experiment. A quasi-experiment is used when subjects are already part of pre-existing groups. In this case it is the Muslim group and the non-Muslim group.

In addition, the unit advertisements, the unit Muslim and non-Muslim women and the variable trait self-esteem are considered as the independent variables while the units cognitive skills, mood, and self-objectification are considered as the dependent variables.

4.2. Design

The study employed a 2 x 2 between subjects experimental design with two levels of the independent variable (image type: sexualized advertisements and non-sexualized advertisements) to investigate effects on self-reported and experimentally heightened self-objectification, cognitive skills and mood.

4.3. Sample

The participants for the research are Dutch non-Muslim and Muslim women. Both groups of women are living in the Netherlands. The criterion to be defined as a Muslim women is that the woman's religion should be Islam. Questions were incorporated in the experiment in the demographics section to check if this is the case. Other demographic questions will include age, education, and dress preference (Dunkel et al., 2010). As is mentioned in the theory review, dress preference can be important since this will lead to less social comparison (Dunkel et al., 2010).

Participants were randomly chosen from both groups. There is an experimental Muslim women group ($N = 17$), an experimental non-Muslim women group ($N = 20$), a control Muslim women group ($N = 17$) and a control non-Muslim women group ($N = 20$). This makes a total of seventy-four participants when all groups are combined. The individuals were randomly assigned to one of the four conditions in the experiment. Moreover, the contestants are between eighteen and thirty years old. The reason for this age is that women that fall in this age category are mostly portrayed in advertisements. As a result, this age group is more susceptible to compare themselves to the women in the advertisements.

4.4. Data collection

The participants are all college students. The participants were gathered by asking them personally on the university campus. Participants were told that they would participate in an experiment about commercials. Nothing has been said about the true nature of the research that could influence outcomes.

If they agreed to participate in the experiment, participants had to fill in a time slot on paper when they were available to participate. After this, a confirmation e-mail was send with further information and the time that they had selected (the experiment in the room took place on four different dates, namely April 8, April 10, April 15 and April 22. On these four days, room L3-75 was hired at Erasmus University from 09:00 to 17:00). In addition, some participants were participating in the experiment at quiet times in the canteen of the university campus due to a limited time available for the room that was rented on the university.

Additionally, the data was collected in the months April and May. Furthermore, after each experiment the participant received a small present. In addition, three people of all participants were able to win a Bol.com voucher of 10 Euros.

4.5. Stimulus material

The advertisements that were selected are originally from the United States and are broadcasted on television. The reason for this is that most of the American advertisements are not broadcasted in the Netherlands yet. This allowed participants to see the advertisements without any pre-judgements.

The following characteristics, as described in the report on the sexualization of girls of the American Psychological Association, are used to define an advertisement as sexualized. The report defines sexualization in the following way

- “(a) a person’s value comes only from his or her sexual appeal or behavior, to the exclusion of other characteristics;
- (b) a person is held to a standard that equates physical attractiveness (narrowly defined) with being sexy;
- (c) a person is sexually objectified – that is, made into a thing for others’ sexual use, rather than seen as a person with the capacity for independent action and decision making” (APA, 2007).

These definitions have to be met in order to define a televised advertisement sexualized. Moreover, the number of advertisements that are going to be shown will be four advertisements per group. Furthermore, the commercials have to be comparable for the experimental and the control group.

A small content analysis has been conducted on the advertisements in which the definitions of APA are measured with a five-point Likert scale (strongly disagree – strongly agree). The content analysis will test how much an advertisement is sexualized. Three statements were given after each advertisement. These statements were (1) The person(s) is/are sexually objectified. (i.e. made into a thing for others’ sexual use, rather than seen as a/- person(s) with the capacity for independent action and decision making), (2) The physical attractiveness of the person(s) can be defined as being sexy, and (3) The person(s)'s value in the advertisement comes only from sexual appeal or behavior.

Accordingly, advertisements have been selected in the following categories: lingerie, fast-food/burger, soda, cars, candy, perfume, chips, tea, web hosting and alcoholic consumptions. The advertisements for the control group were from the brands *Levi's*, *McDonald's*, *CocaCola*, *Snickers*, *Dior*, *Lays*, *Lipton*, *BlueHost* and *Jagermeister*. The advertisements for the experimental group were from the brands *Victoria's Secret*, *Carl's Jr.*, *SodaStream*, *Clark Bar*, *Diesel*, *Doritos*, *SoBe*, *GoDaddy* and *Campari*. Appendix A provides an overview of these advertisements together with the links to the videos.

After this, a pre-test has been conducted to test the chosen twenty advertisements. The pre-test will justify the chosen sexualized advertisements and choose the best four categories of advertisements that are going to be used during the experiment. The same three questions and Likert scale have been used in the pre-test. The pre-test has been made in the program Qualtrics which is an online survey program.

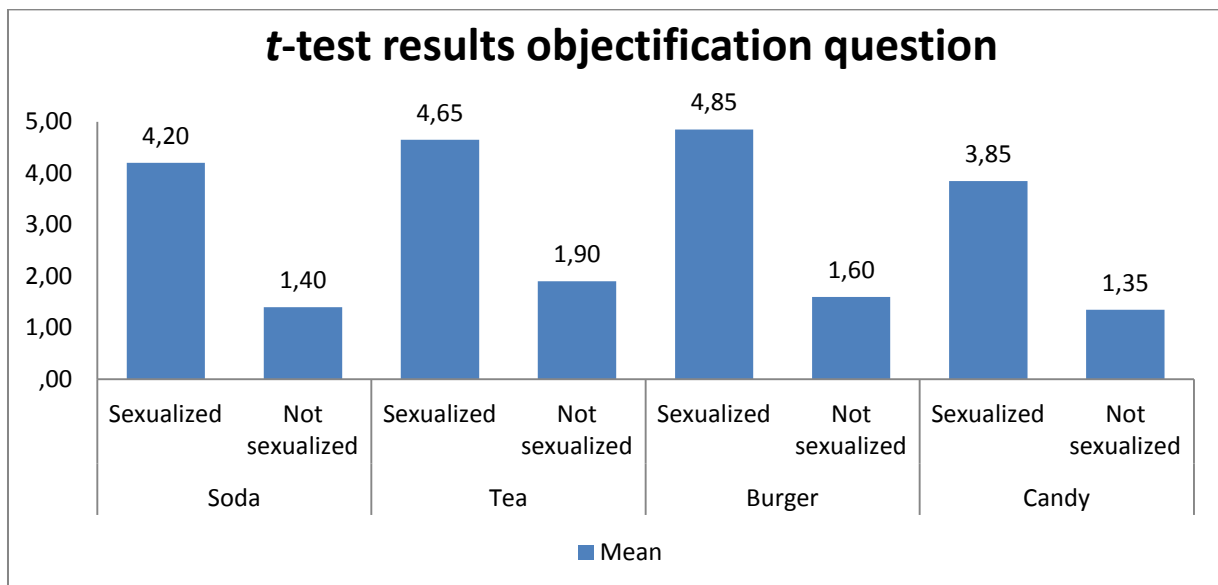
Results pre-test: demographics Twenty participants have completed the pre-test of which six males and fourteen females. Participants between the age of sixteen and twenty-four have completed the test. Participants that were twenty-two years of age participated the most with 35%. After this, from the twenty-three year olds a total of 25% participated in the pre-test. 45% of participants finished a bachelor's degree. Whereas, 35% completed high school, 15% completed HBO, and 5% completed MBO. 80% of the participants is Dutch and 20% of the participants has a different nationality (Greek, Swedish, Polish and Czech). Furthermore, Christianity is the religion of 35% of the participants, no religion for 50% of the participants, and 5% believes in ietsism.

Results pre-test: advertisements First, a two-way ANOVA has been conducted to see if the difference between all the advertisements is significant. A two-way ANOVA analysis of all three questions on these advertisements shows that there is a significant difference (objectification question shows $F(1,19) = 1552.25, p = .00, \eta_p^2 = .99$; attractiveness question shows $F(1,19) = 1865.41, p = .00, \eta_p^2 = .99$; and the value question shows $F(1,19) = 1012.93, p = .00, \eta_p^2 = .98$). Accordingly, *t*-tests have been conducted in which four commercials have been chosen in the categories soda, burger, tea and candy.

Paired samples *t*-tests have been conducted to measure if there is a statistically significant difference in the mean scores for the sexualized advertisement and the non-sexualized advertisement for each question in each category. Four pairs (soda, burger, tea and candy) of product categories were tested.

(1) *The person(s) is/are sexually objectified. (i.e. made into a thing for others' sexual use, rather than seen as a/- person(s) with the capacity for independent action and decision making).*

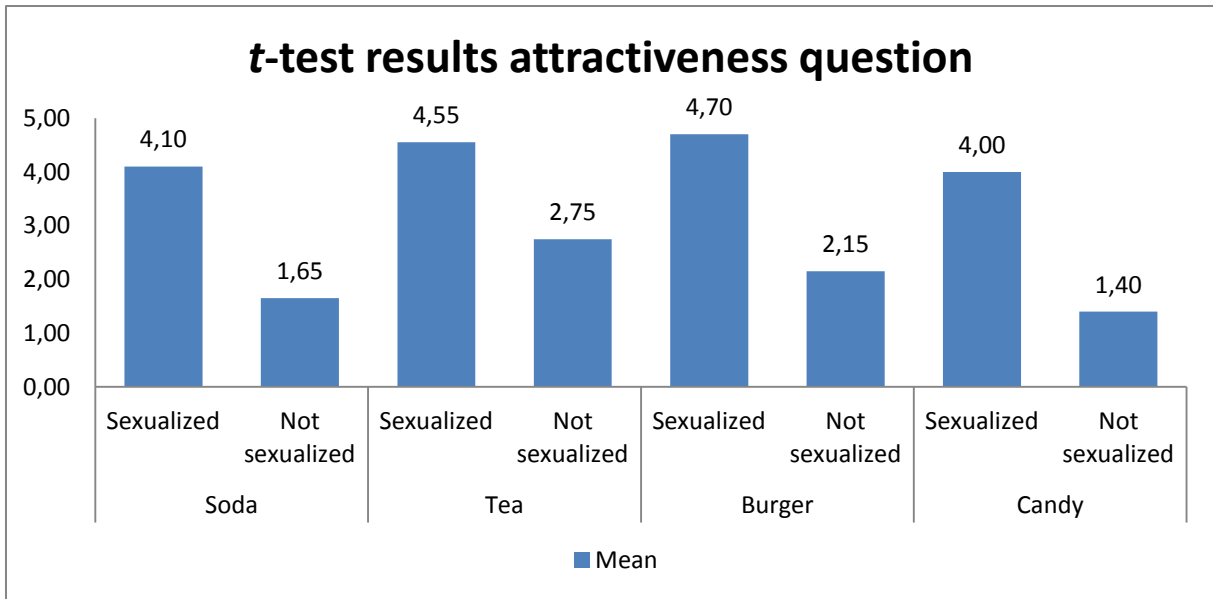
All pairs in the question about objectification have a significant difference and can therefore be used for the experiment. Consequently, pair 1 (soda) shows that there is a statistically significant difference between the sexualized and the non-sexualized advertisement, $t(19) = 10.10, p = .00$. Pair two (tea) shows this as well, $t(19) = 13.51, p = .00$. And so does pair three (burger), $t(19) = 18.48, p = .00$, and pair four (candy), $t(19) = 11.18, p = .00$. Graph 3.1. illustrates the differences between the advertisements per category in a graph.



Graph 4.1. *t*-tests results objectification question

(2) *The physical attractiveness of the person(s) can be defined as being sexy.*

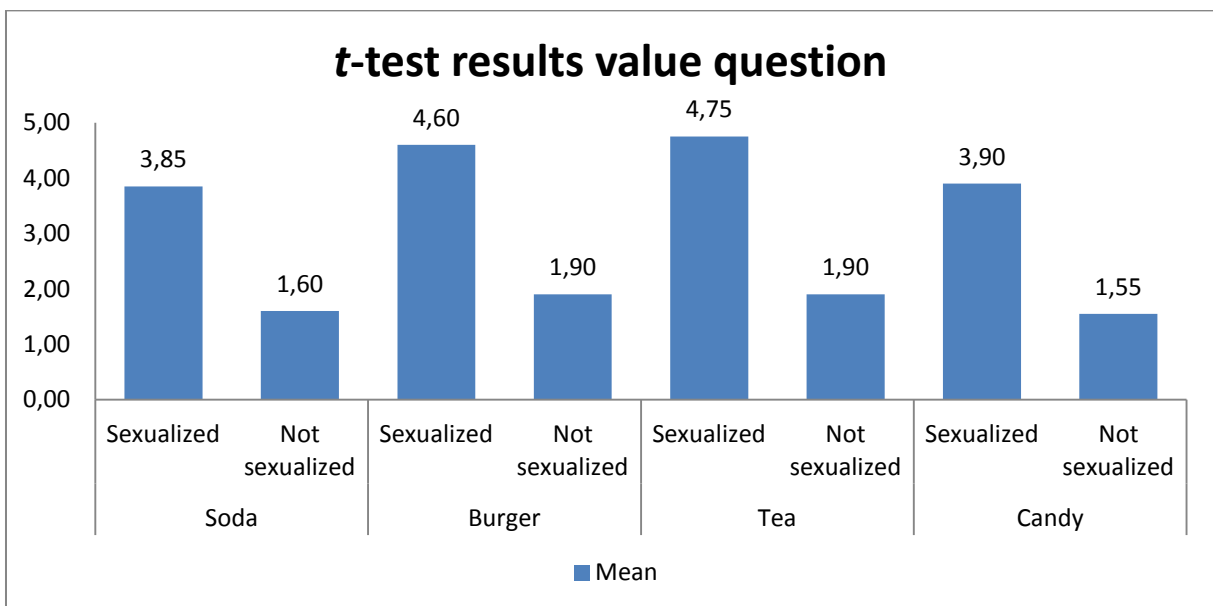
All pairs in the question about attractiveness have a significant difference and can therefore be used for the experiment. (Pair 1 (soda), $t(19) = 8.88, p = .00$, pair 2 (tea), $t(19) = 7.29, p = .00$, pair 3 (burger), $t(19) = 12.86, p = .00$, pair 4 (candy), $t(19) = 11.11, p = .00$. Graph 3.2. illustrates the differences between the advertisements per category in a graph.



Graph 4.2. *t*-test results attractiveness question

(3) *The person(s)'s value in the advertisement comes only from sexual appeal or behavior.*

All pairs in the question about value have a significant difference and can therefore be used for the experiment. (Pair 1 (soda), $t(19) = 7.55, p = .00$, pair 2 (tea), $t(19) = 10.28, p = .00$, pair 3 (burger), $t(19) = 14.57, p = .00$, pair 4 (candy), $t(19) = 8.57, p = .00$. Graph 3.3. illustrates the differences between the advertisements per category in a graph.



Graph 4.3. *t*-test results value question

As a result the following commercials have been chosen for the experiment in the following product categories.

1. Soda	SodaStream (<i>sexualized</i>)
	CocaCola (<i>non-sexualized</i>)
2. Tea	SoBe (<i>sexualized</i>)
	Lipton (<i>non-sexualized</i>)
3. Burger	Carl's Jr. (<i>sexualized</i>)
	McDonald's (<i>non-sexualized</i>)
4. Candy	Clark Bar (<i>sexualized</i>)
	Snickers (<i>non-sexualized</i>)

Table 4.1. Selected advertisements

4.6. Measurements

Variables For the research the independent variables are sexualized and non-sexualized advertisements, the people (non-Muslim or Muslim), and trait self-esteem. The dependent variables are cognitive skills, mood, and self-objectification.

Cognitive Skills A Stroop test deals with words and colors. Reading words is an easy cognitive skill that happens automatically. However, naming the ink color of the word instead of what the word is actually saying appears to be more difficult and takes in general more time. This speed difference is critical and is called “interference” (MacLeod, 1991).

This research will use a modified Stroop color-naming task to examine whether self-objectification would interfere in the attention process. A Stroop color-naming task is done in previous research by Quinn et al. (2006) in which is stated that a Stroop test is a “clear measure of attentional resources” (p. 61). Furthermore, the Stroop test deals with the “primitive operations of cognition” and is therefore a great way to measure cognitive skills (MacLeod, 1991, p. 163). Previous research has shown that the effects of the Stroop test are affected when there is an allocation of attentional resources (Cohen, Dunbar & McClelland, 1990 as cited in Quinn et al., 2006). Thus, if women have high levels of self-objectification after watching sexualized advertisements this will lead to less attentional resources available

for the task and thus to slower overall responding (Quinn et al., 2006). The average incongruent word time and interference time are therefore important measurements to decide whether cognitive skills become less after women have watched sexualized advertisements.

Consequently, women will read twenty-five words (congruent condition) after which their average response latency is measured and their Stroop accuracy. Thereafter, women will be typing the first letter of the ink color of the word (incongruent condition) after which their average response latency is measured and their Stroop accuracy as well. Due to selective attention there is a difference between the congruent condition and the incongruent condition. The measurements will be done via the Internet site Cognitive Laboratory Experiments from the Hanover College Psychology Department (see appendix B for screenshots of the website). Hanover College Psychology Department is a private institution in the United States that teaches psychology at university level. Moreover, the experiments on this site, such as the Stroop test, are specifically designed for the cognitive psychology class of the Hanover College Psychology Department. The experiments are all accessible via the web and the parameters can be adjusted which makes it a perfect tool for the researcher to choose how many words, what kind of words, and what colors are being used for the Stroop experiment.

Self-objectification Previous research has shown that when self-objectification is present, this can have an effect on a woman's cognitive skills, because women are preoccupied with their own physical appearance. Therefore, it is necessary to test if these elements are indeed present after watching the sexualized advertisements. For this, the self-objectification questionnaire from Noll and Fredrickson (1998) is used to measure trait self-objectification (appendix C). This instrument will have ten questions and is based on Noll and Fredrickson's objectification theory and the Body Esteem Scale from Franzoi and Shields (1984) (Noll & Frederickson, 1998). The questionnaire measures self-objectification without any judgemental or evaluative component which is critical in this questionnaire (Noll & Fredrickson, 1998). The reason for this is that with self-objectification "women experience the negative consequences of self-objectification primarily as a result of being concerned with physical appearance, regardless of whether they feel satisfied or dissatisfied with their bodies" (Noll & Fredrickson, 1998, p. 273). Scores can range from -25 to 25. The scores of the questionnaire are the result of the difference between the sum of the competence ratings and the sum of the appearance ratings. Higher scores means higher levels of self-objectification (Noll & Frederickson, 1998).

Mood Another dependent variable is mood. Therefore, a mood measurement will be conducted before and after the display of advertisements. As mentioned in the literature review, self-objectification can lead to a negative mood. For this, the brief mood introspection scale (BMIS) of Mayer and Gaschke (1988) is used to measure the mood before and after the advertisements (appendix E). The scale consists out of sixteen mood adjectives. Participants rate each mood adjective on a 4-point scale (definitely do not feel, do not feel, slightly feel, definitely feel) according to how they feel at that moment. Scores on the negative items were reverse coded and summed with the scores on the positive items. Higher scores indicating a more pleasant mood and lower scores a more unpleasant mood. Scores range from 8 to 56. The scale had an acceptable internal consistency in the present sample (Cronbach's $\alpha = 0.76$ for the positive items and $\alpha = 0.78$ for the negative items). Furthermore, this scale is used in many other psychological studies and is proven effective (e.g. Kokkonen & Pulkkinen, 2001; Halberstadt, Niedenthal & Kushner, 1995; Hall & Baum, 1995). Moreover, Tiggemann and Boundy (2008) have used this scale as well to measure the relation of mood with self-objectification. As a result, this mood measurement scale is used in the experiment to measure if self-objectification has an effect on mood.

Self-esteem Furthermore, the Rosenberg (1979) scale (RSE) is used to measure the trait self-esteem (appendix B). This instrument will have ten components as well. The self-reporting RSE scale is a reliable and a valid measure of global self-worth that is widely known around the world (Gray-Little et al., 1997) and is successfully used in earlier studies, for example Mercurio and Landry (2008), Calogero and Thompson (2009) and Abell and Richards (1996). Moreover, preceding studies have reported Cronbach's alphas between .77 and .88 (Blascovich & Tomaka, 1991 as cited in Kim, 2006). For this sample, Cronbach's alpha was $\alpha = .83$ which indicates a good internal consistency. The ten point scale measures self-esteem by means of providing statements such as 'On the whole I am satisfied with myself' to which participants have to select if they agree or disagree on a four-point scale that does not include the neutral option. Moreover, the scale has five positive items and five negative items. Negative items were reverse coded and summed with the scores of the positive items. Scores can range from 0 to 30 in which scores between 15 and 25 are considered as a healthy self-esteem score.

4.7. Procedure

The structure of the experiment will be as followed. At first, the experiment will start with a mood measurement. Hereafter, the advertisements are being shown. There will be a difference in advertisements for the control group and the experimental group. The advertisements for the control group are: (1) *Coca-cola* (2) *Lipton* (3) *McDonald's* (4) *Snickers*. The advertisements for the experimental group are: (1) *SodaStream* (2) *SoBe* (3) *Carl's Jr.* (4) *Clark Bar*.

Consequently, a modified Stroop color-naming test will be conducted to measure the cognitive skills of the participants. Next, the self-objectification questionnaire will be carried out to see if self-objectification is present. After this, there will be a measurement of self-esteem. Consequently, a mood measurement will be carried out again. Lastly, demographics are asked in which participants had to answer some questions about their self-described religiosity and participants had to answer some general demographics questions. Hereby, the following questions are being asked in which some questions are modified and based on previous research by Dunkel et al. (2010):

- (1) What is your age?;
- (2) What is the highest education you have completed so far?;
- (3) What is your country of origin?;
- (4) If your answer is different than the Netherlands, for how long have you been living in the Netherlands? Otherwise, just fill in “-“;
- (5) Do you have a religion? Yes/no;
- (6) If your answer is yes, what is your religion?;
- (6) Are you a strong believer? Yes/no;
- (7) Do you follow the rules in the case of praying? Yes/no;
- (8) Do you wear the traditional clothing of your religion? Yes/no;
- (9) What are you wearing (please check the type of clothing that you wear most often)?
Salwar-kameez / Jilbab / Hijab / Niqab / Western clothing / Conservative Christian clothing /
Other / Hijab and western clothing / Hijab and jilbab.

Participants will come to one of the rooms or to the canteen at Erasmus university. The participants are scheduled, because only one participant can participate in the experiment. There will be a computer. The computer will be used for the demographics, mood

measurement, advertisements, self-objectification questionnaire and the self-esteem measurement. These measurements are presented in the program Qualtrics.

After the advertisements are being shown in this experiment, the screen in Qualtrics will say that a Stroop test will now be conducted by the researcher. Participants have to type the first letter of the twenty-five congruent words. After this, participants have to type the first letter of the ink color of the words. Again, twenty-five words will appear on the screen. After they have completed these tests, the average response latency and Stroop accuracy of each item will be written down. When this is done, the participant will return to the questions on the computer and will finish the experiment.

5. Results

This chapter discusses the characteristics of the sample and outcomes of the experiment. To test the hypotheses, the relevant dependent measures were analyzed according to a 2 x 2 design with experimental versus control group and Muslim versus non-Muslim. One-way ANOVA's, two-way ANOVA's, repeated measurement ANOVA's and independent-samples t-tests were used to determine whether results were statistically significant. Appendix F shows the most important SPSS output.

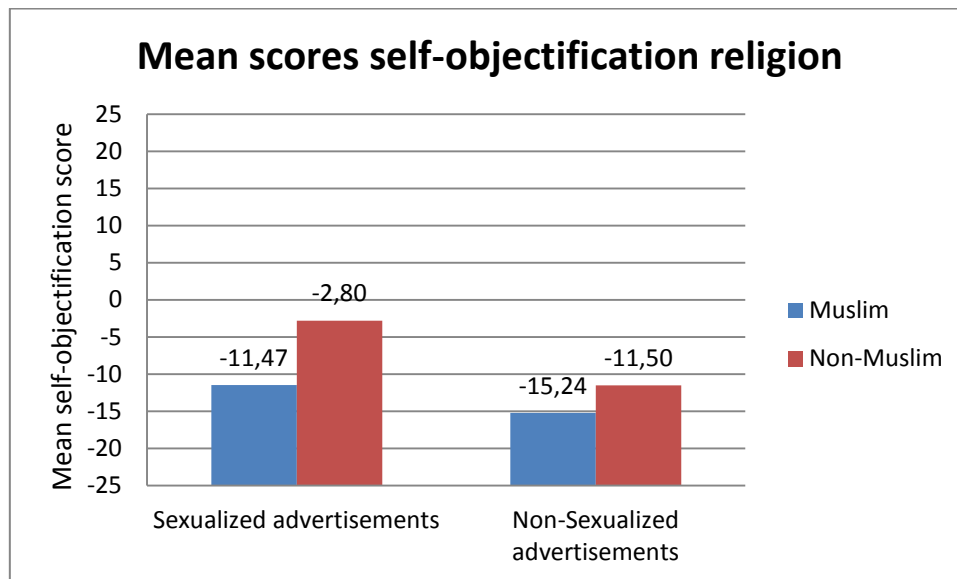
5.1. Characteristics of the sample

Seventy-four students participated in the experiment of which 34 Muslim women and 40 non-Muslim women. Participants' mean age was 21.72 years ($SD = 1.98$ years). 43.2% of participants completed their bachelor's degree, 40.5% completed their high school degree, 5.4% completed their master's degree, 4.1% completed their HBO degree, 4.1% completed their MBO degree, and 2.7% completed something else. Moreover, 85.1% of all participants were originally born in the Netherlands, whereas 5.4% was born in Morocco, 2.7% in Indonesia, and others of each 1.4% in Iraq, Somalia, Turkey, Yemen and Germany of which most participants (81.8%) lived in the Netherlands for more than 10 years. 62.2% ($N = 46$) of the participants had a religion, whereas 37.8% ($N = 28$) did not. Of all participants 37.8% ($N = 28$) had no religion, 45.9% ($N = 34$) had Islam as their religion, 8.1% ($N = 6$) had protestant as their religion, 5.4% ($N = 4$) had Roman Catholic as their religion, 1.4% ($N = 1$) has Hinduism as their religion, and 1.4% ($N = 1$) has other as their religion. From the participants who had a religion was 43.2% ($N = 32$) a strong believer and 18.9% ($N = 14$) was not. Of all religious people, 39.2% ($N = 29$) said that they followed the rules of praying of their religion, while 23% ($N = 17$) did not. Furthermore, of all religious people, 33.8% ($N = 25$) said that they followed the rules of clothing of their religion, while 28.4% ($N = 21$) did not. Lastly, 66.2% ($N = 49$) of participants wore Western clothing, 12.2% ($N = 9$) of participants wore hijab and Western clothing, 10.8% ($N = 7$) wore hijab, 4.1% ($N = 3$) wore hijab and jilbab, 4.1% ($N = 3$) wore something else, and 2.7% ($N = 2$) wore jilbab.

5.2. Self-objectification

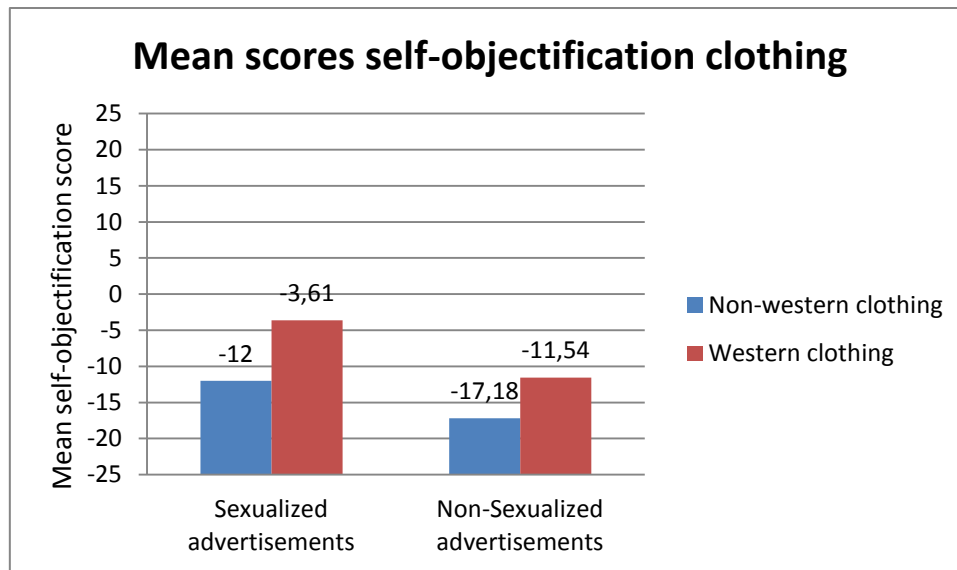
ANOVA revealed a significant main effect for advertisements, $F(1,70) = 5.64, p = .02, \eta_p^2 = .08$. If advertisements were sexualized, self-objectification is higher ($M = -6.78, SD = 13.00$) compared to non-sexualized advertisements ($M = -13.22, SD = 9.99$). In addition, ANOVA revealed a significant main effect for Islam as well, $F(1,70) = 5.59, p = .02, \eta_p^2 = .07$. If the

religion Islam is present self-objectification is less ($M = -13.35$, $SD = 10.35$) in comparison to non-Muslim women ($M = -7.15$, $SD = 12.61$). The interaction effect between advertisements and religion was not significant, $F(1,70) = 0.88$, $n.s.$. However, post-hoc independent-samples t -tests showed that sexualized advertisements influenced self-objectification more for non-Muslim women than for Muslim participants, $t(35) = 2.12$, $p = .04$ but this was not the case for non-sexualized advertisements, $t(35) = 1.14$, $n.s.$ (see graph 4.1).



Graph 5.1. Mean scores self-objectification religion

Furthermore, ANOVA revealed a significant main effect for clothing style on self-objectification score as well, $F(1,72) = 5.11$, $p = .03$, $\eta_p^2 = .07$. A non-Western clothing style causes self-objectification scores to be lower ($M = -14.28$, $SD = 10.13$) compared to a Western clothing style ($M = -7.82$, $SD = 12.32$). The interaction effect between advertisements and clothing style was not significant, $F(1,70) = 0.25$, $n.s.$. Moreover, post-hoc independent-samples t -tests showed that sexualized advertisements significantly influenced self-objectification more for women who wear Western clothing than for women who wear non-Western clothing, $t(41.4) = 2.92$, $p = .01$, but this was not the case for non-sexualized advertisements, $t(27) = 0.78$, $n.s.$ (see graph 4.2).



Graph 5.2. Mean scores self-objectification clothing

5.3. Self-esteem

ANOVA did not reveal a significant main effect for advertisements on the trait self-esteem, $F(1,70) = 0.01, n.s.$ If advertisements were sexualized, self-esteem is the same ($M = 20.08, SD = 3.78$) as for non-sexualized advertisements ($M = 20.05, SD = 4.34$). In addition, religion did not reveal a significant main effect on the trait self-esteem $F(1, 70) = 0.52, n.s.$ Religion has the same effect on self-esteem ($M = 19.85, SD = 3.73$) as for non-religious women ($M = 20.32, SD = 3.73$). The interaction effect between advertisements and religion was not significant, $F(1,70) = 2.5, n.s.$ Post-hoc independent-samples t -tests demonstrated that sexualized advertisements did not influence self-esteem more for non-Muslim women than for Muslim women, $t(35) = 0.81, n.s.$ In addition, non-sexualized advertisements did not influence self-esteem more for non-Muslim women than for Muslim women, $t(35) = 1.39, n.s.$

Moreover, ANOVA revealed a significant main effect for clothing style on total self-esteem score, $F(1,70) = 9.53, p = .00, \eta_p^2 = .12$. A non-Western clothing style causes total self-esteem scores to be higher ($M = 21.88, SD = 3.35$) compared to Western clothing style ($M = 19.14, SD = 4.08$). The interaction effect between advertisements and clothing style is significant as well, $F(1,70) = 5.02, p = .03, \eta_p^2 = .07$. Furthermore, post-hoc independent t -tests showed that sexualized advertisements did not significantly influence total self-esteem scores more for women who wear Western clothing than women who wear non-Western clothing, $t(39.89) = 1.51, n.s.$, but did report that women who wear Western clothing have less total self-esteem scores than women who wear non-Western clothing in the case of non-sexualized advertisements, $t(27) = 2.68, p = .01$ (see graph 4.3).



Graph 5.3. Mean scores self-esteem

5.4. Self-objectification and self-esteem

Linear regression analysis was used to test if self-esteem significantly predicted participants' self-objectification score. The results of the regression did not indicate a significant result ($R^2 = .10$, $F(2,73) = 3.72$, $n.s.$) for self-esteem and total self-objectification score.

5.5. Mood

A repeated measurement ANOVA did not reveal a significant main effect for advertisements on positive mood, $F(1,70) = 0.14$, $n.s.$. Furthermore, religion did not have a significant effect on positive mood as well, $F(1,70) = 0.11$, $n.s.$. The interaction effect between advertisements and religion was not significant as well, $F(1,70) = 0.58$, $n.s.$.

By the same token, the main effect for advertisements on negative mood is not significant, $F(1, 70) = 0.17$, $n.s.$. In addition, religion did not have a significant effect on negative mood, $F(1,70) = 0.14$, $n.s.$. Lastly, the interaction effect between advertisements and religion was not significant as well, $F(1,70) = 1.72$, $n.s.$.

Subsequently, a repeated measurements ANOVA did not reveal a significant main effect for clothing style on positive mood score, $F(1,70) = 2.95$, $n.s.$. The interaction effect between advertisements and type of clothing was not significant as well, $F(1,70) = 1.78$, $n.s.$.

Correspondingly, a repeated measurements ANOVA did not reveal a significant main effect for clothing style on negative mood score, $F(1,70) = 0.18$, $n.s.$. The interaction effect between advertisements and type of clothing on negative mood was significant, $F(1,70) = 4.22$, $p = .04$, $\eta_p^2 = .06$. However, post-hoc t -tests revealed that there was no significant difference for type of clothing and for the measurement of negative mood before watching

sexualized advertisements ($t(35) = 1.21, n.s.$), for the measurement of negative mood before watching non-sexualized advertisements ($t(35) = 1.63, n.s.$), for the measurement of negative mood after watching sexualized advertisements ($t(35) = 0.85, n.s.$), and for the measurement of negative mood after watching non-sexualized advertisements ($t(35) = 1.91, n.s.$).

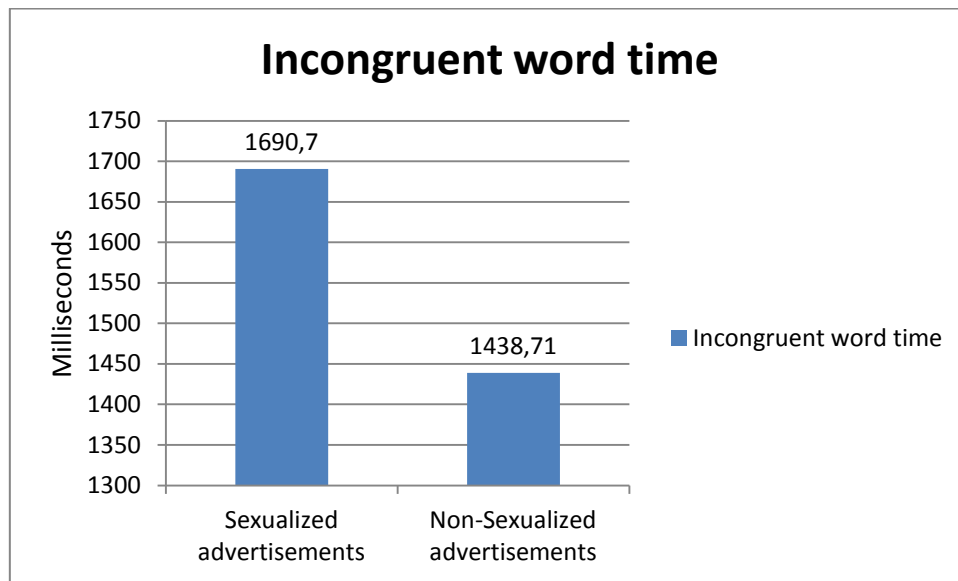
5.6. Cognitive skills

ANOVA did not reveal a significant main effect for advertisements on congruent word time, $F(1,70) = 0.04, n.s.$. Accordingly, sexualized advertisements ($M = 906.73, SD = 125.34$) did not reveal a significant difference compared to non-sexualized advertisements ($M = 909.60, SD = 124.16$). Moreover, ANOVA did not reveal a significant main effect for religion on congruent word time as well, $F(1,70) = 0.03, n.s.$. The effect was the same for Muslim women ($M = 910.65, SD = 114.07$) and non-Muslim women ($M = 906.06, SD = 133.10$). The interaction effect between advertisements and religion was not significant, $F(1,70) = 1.67, n.s.$. Hereafter, post-hoc independent-samples t -tests were conducted in which no significant difference was found for sexualized advertisements on congruent word time between Muslim and non-Muslim women, $t(35) = 0.80, n.s.$. No significant difference for non-sexualized advertisements on congruent word time between Muslim and non-Muslim was found as well, $t(35) = 1.03, n.s.$.

In addition, ANOVA did not reveal a significant main effect for type of clothing on congruent word time, $F(1,70) = 0.25, n.s.$. The effect was the same for non-Western ($M = 897.25, SD = 103.94$) dressers as for Western dressers ($M = 913.74, SD = 133.61$). The interaction effect between advertisements and type of clothing for congruent word time was not significant, $F(1,70) = 0.23, n.s.$. Hereafter, post-hoc independent-samples t -tests were conducted in which no significant difference was found for sexualized advertisements on congruent word time between non-Western dressers and Western dressers, $t(43) = 0.63, n.s.$. No significant difference for non-sexualized advertisements on congruent word time between women who wear non-Western clothes and women who wear Western clothes were found as well, $t(27) = 0.43, n.s.$.

Furthermore, ANOVA revealed a significant main effect for advertisements on incongruent word time, $F(1,70) = 4.73, p = .03, \eta_p^2 = .06$. If advertisements were sexualized incongruent word time was higher ($M = 1619.70, SD = 368.36$) compared to non-sexualized advertisements ($M = 1438.71, SD = 349.67$). Additionally, ANOVA did not reveal a significant main effect for religion on incongruent word time, $F(1,70) = 0.26, n.s.$. The effect was the same for Muslim women ($M = 1552.32, SD = 423.93$) compared to non-Muslim

women ($M = 1509.56$, $SD = 317.37$). Moreover, there was no significant interaction effect between advertisement type and religion, $F(1,70) = 0.22$, $n.s.$. In addition, post-hoc independent-samples t -tests illustrated that sexualized advertisements did not reveal any significant difference on incongruent word time for Muslim and non-Muslim women, $t(35) = 0.68$, $n.s.$. There was also no significant difference for non-sexualized advertisements on incongruent word time between Muslim and non-Muslim women, $t(35) = 0.02$, $n.s.$.

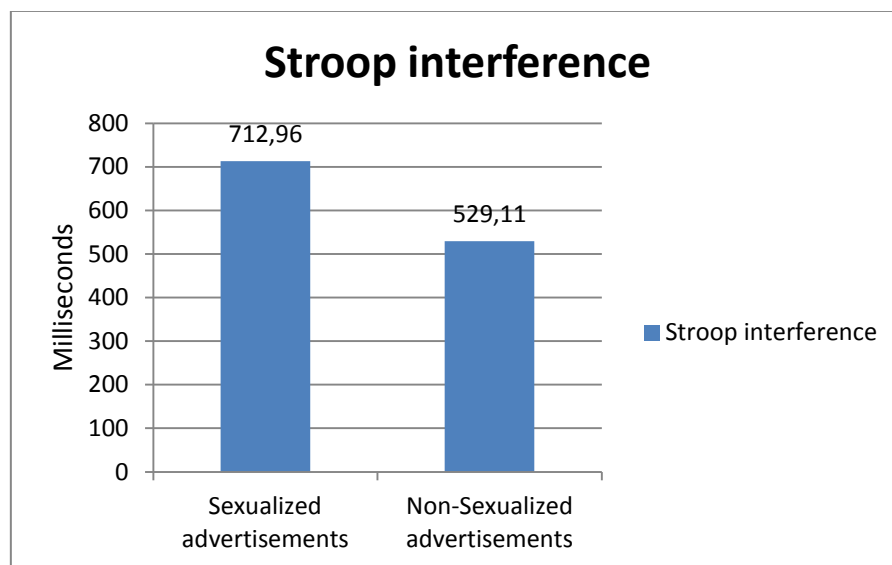


Graph 5.4. Incongruent word time

In addition, ANOVA did not reveal any significant main effect for type of clothing on incongruent word time, $F(1,70) = 0.01$, $n.s.$. The effect was the same for non-Western dressers ($M = 1538.39$, $SD = 418.60$) and Western dressers ($M = 1524.52$, $SD = 344.11$). The interaction effect between advertisements and type of clothing for incongruent word time was not significant, $F(1,70) = 0.61$, $n.s.$. After this, post-hoc independent-samples t -tests were conducted in which no significant difference was found for sexualized advertisements on incongruent word time between non-Western dressers and Western dressers, $t(36.74) = 0.52$, $n.s.$. No significant difference for non-sexualized advertisements on incongruent word time between women who wear non-Western clothes and women who wear Western clothes were found as well, $t(27) = 0.41$, $n.s.$.

Moreover, ANOVA revealed a significant main effect for advertisements on Stroop interference, $F(1,70) = 5.38$, $p = .02$, $\eta_p^2 = .07$. Sexualized advertisements cause Stroop interference to be higher ($M = 712.96$, $SD = 370.35$) compared to non-sexualized advertisements ($M = 529.11$, $SD = 327.13$). In addition, ANOVA did not reveal a significant

main effect for religion on Stroop interference, $F(1,70) = 0.22, n.s.$. The effect was the same for Muslim women ($M = 641.67, SD = 423.48$) and non-Muslim women ($M = 603.50, SD = 298.31$). There was no significant interaction effect between advertisements and religion, $F(1,70) = 0.90, n.s.$. Post-hoc independent-samples t -tests showed that sexualized advertisements did not reveal any significant difference on Stroop interference for Muslim and non-Muslim women, $t(35) = 0.95, n.s.$. Non-sexualized advertisements and Stroop interference did not reveal any significant difference between Muslim and non-Muslim women as well, $t(35) = 0.36, n.s.$.



Graph 5.5. Stroop interference

Additionally, ANOVA did not reveal a significant main effect for type of clothing on Stroop interference, $F(1,70) = 0.01, n.s.$. The effect was the same for women who wear Western clothing ($M = 610.78, SD = 315.20$) and women who wear non-Western clothing ($M = 641.13, SD = 439.29$). The interaction effect between advertisements and type of clothing on Stroop interference was not significant, $F(1,70) = 0.96, n.s.$. Consequently, post-hoc independent-samples t -tests were conducted in which no significant difference was found for sexualized advertisements on Stroop interference between non-Western dressers and Western dressers, $t(35.03) = 0.47, n.s.$ which is the same for non-sexualized advertisements, $t(27) = 0.29, n.s.$.

6. Discussion

This chapter provides a discussion of the results of the study in more detail substantiated by existing literature on the topic. Cognitive skills after watching advertisements and finding a difference between Muslim and non-Muslim women are considered as the most important elements in the study. Accordingly, the results of the present study provide experimental support for several hypotheses that were set up.

6.1. Self-objectification

Previous studies have confirmed that advertisements in which the socio-cultural ideal of thinness is portrayed, can have an effect on self-objectification (e.g. Fredrickson et al., 1998; Harper & Tiggemann, 2007; Tiggemann & Boundy, 2008; Calogero & Jost, 2011). In light of these studies, the current study aimed to answer the question whether sexualized advertisements have an influence on the self-objectification of women. TV commercials often display women who are sexually objectified which can induce self-objectification. As a result, the expectation would be that sexualized advertisements have an effect on the self-objectification of women and that non-sexualized advertisements would not have an effect on the self-objectification of women.

The outcomes of this study validated these expectations. A significant main effect has been found, namely the type of advertisement has an effect on trait self-objectification. Women score higher on trait self-objectification after having watched sexualized advertisements than women who have watched non-sexualized advertisements. This is in accordance with the study done by Fredrickson, Roberts, Noll, Quinn and Twenge (1998). Their research demonstrated that the trait self-objectification was significantly higher in the condition that experimentally heightened self-objectification. It can therefore be said that sexualized advertisements influence the self-objectification of women. Hereby, of hypothesis 5, H₀ can be rejected.

Moreover, the current study also aimed to answer the question if there is a difference between Muslim and non-Muslim women regarding self-objectification. Expectations would be that Muslim women would self-objectify less than non-Muslim women. Earlier research has confirmed these expectations. For example, Boyatzis, Trevino, Manning and Quinlan (2006) show that women accredit their religion as affecting their body image in a positive way by focusing on other things than appearance based attributes. According to Mussap (2009) Muslim women can be indirectly protected against appearance-based ideals because of a devotion to the Islamic faith. The expectation would therefore be that Muslim women have

lower scores on the Noll and Fredrickson's (1998) self-objectification questionnaire, because they accredit more value to competence items than appearance items.

The results that stem from the experiment confirm this expectation. A significant main effect has been found, namely Muslim women have lower scores on trait self-objectification than non-Muslim women. These outcomes indicate that a certain adherence to the Islamic faith does have an effect on the way women perceive their bodies. These women have accredited more value to the competence attributes in the self-objectification questionnaire. Hereby, from hypothesis 6, H0 can be rejected.

Accordingly, sexualized advertisements influence the total self-objectification score of non-Muslim women more than for Muslim women. Again, it can be said that the significant difference between these results is that Muslim women are less susceptible to these advertisements than non-Muslim women because of an adherence to the Islamic faith (Mussap, 2009). Moreover, religion is considered as a defensive factor against the socio-cultural beauty standards since religious women attain more value to other attributes than appearance attributes (Holman, 2012). Therefore, Muslim women seem to be less susceptible to these sexualized advertisements. Muslim women will compare themselves less to these objectifying images as well, because they are more realistic in terms of their body image (Abell & Richards, 1996). In addition, as expected non-sexualized advertisements do not show a significant difference between Muslim and non-Muslim women. These outcomes demonstrate that objectified images of women enhance self-objectification in women who are more susceptible to these images. Non-Muslim women do not strongly adhere to a religion and this makes them mouldable to sexualized images. The results that stem from this tests prove this expectation once again.

The first results have thus answered the first sub-question of this thesis. Sexualized advertisements and being Muslim or non-Muslim have an effect on the total self-objectification score of women. There is definitely a significant difference between Muslim and non-Muslim women after having watched sexualized advertisements.

Moreover, literature has discussed that the clothing style that is part of Islam can have an influence on the total self-objectification score of women as well. According to Tolaymat and Moradi (2011) a non-Western clothing style can be considered as a specific within-group variability factor (p. 383). Furthermore, Holman (2012) describes that the effect is stronger when women are obeying a strict Muslim dressing code since these women expressed less drive for attaining to the socio-cultural beauty ideals. As a result, clothing style is incorporated in the tests as a variable in which Western clothing and non-Western clothing

were the two items that replaced the two items of Muslim and non-Muslim. The reason for this is that, non-Muslim women do not wear the traditional clothing of Islam. As a result, a non-Muslim woman would never ascribe herself as someone who is for example wearing a hijab. Moreover, within the Islamic faith some woman wear Western clothing instead of the clothing that is part of Islam. Therefore, this distinction could be made, because it now is possible to see whether the variable type of clothing has an effect on the variable self-objectification instead of the Islamic religion.

Moreover, clothing style can be connected to the similarity principle of the theory of social comparison in which is stated that one will compare themselves to similar others. Expectations are that wearing non-Western clothing will not induce the similarity principle since there is too little to compare to. Thus, traditional clothing protects Muslim women from comparing themselves to the Western ideals of beauty (Mussap, 2009). These expectations are confirmed by the results. A significant effect has been found for clothing style on total self-objectification score. A non-Western clothing style will result into overall lower self-objectification scores in both conditions (after watching sexualized advertisements and after watching non-sexualized advertisements), while Western clothing will result into higher self-objectification scores in both conditions. Again, no interaction effect was found. However, post-hoc independent-samples *t*-tests revealed a significant difference between women who wear Western-clothing and women who wear non-Western clothing on total self-objectification score after having watched sexualized advertisements. While there was no significant difference found between women who wear Western-clothing and women who wear non-Western clothing after watching non-sexualized advertisements. Hereby, from hypothesis 10, H₀ can be rejected.

For both conditions, religion and clothing style, the same results were found. In this case, Muslim-women in general have an advantage considering trait self-objectification after having watched sexualized advertisements. This is in accordance with the expectations. Both religion itself and clothing style cause Muslim-women to have lower scores on trait self-objectification than non-Muslim women. Hereby, sub-questions one and six of the study have been answered.

6.2. Self-esteem

To answer sub-questions three, four and eight, the following discussion will take place. Many studies have measured self-esteem in their research on self-objectification (Mercurio & Landry, 2008; Breines, Crocker & Garcia, 2008; Greenberg, 2009; Calogero, Pina, Park &

Rahemtulla, 2010). These studies have researched the relationship between self-objectification and trait self-esteem in great detail. The overall idea is that women who have low self-esteem are more likely to have higher scores on trait self-objectification (Strelan, Mehaffey & Tiggemann, 2003). In consequence, expectations that have arisen according to the literature about self-esteem and self-objectification are that advertisements do not have an effect on trait-self esteem, but that trait self-esteem should influence the degree of self-objectification. Accordingly, total self-esteem scores should not significantly differ after participants were placed in one of the two conditions, while self-esteem should have a relation to the total self-objectification scores: how lower the self-esteem score, how higher the self-objectification score in both conditions. The results show that advertisements did not have a significant main effect on the total scores of self-esteem. This confirms the idea that self-esteem is an inherent trait.

In addition, self-esteem did not predict the total self-objectification score since no significant relation was found. An explanation for this can be that, according to Noll and Fredrickson (1998), “women experience the consequences of self-objectification primarily as a result of being concerned with physical appearance, regardless of whether they feel satisfied or dissatisfied with their bodies” (p. 273). Thus, self-esteem will not have an effect on total objectification score since women will always experience the consequences of self-objectification. It can therefore be said that advertisements only have an effect on the total self-objectification score. Moreover, even women who have a high self-esteem score are susceptible to sexualized advertisements. As a result, sub-question four is answered in which self-objectification does not have any relation to trait self-esteem. Hereby, from hypothesis 8, H1 can be rejected.

Additionally, other research has studied the relation between religion and self-esteem (Ellison, 1993; Kim, 2006). This brings about sub-question three. Research has proven that religion can give women more self-esteem. For example, religion provides certain social relationships (Kim, 2006). Moreover, religious women accredited more value to religious ideals than to beauty ideals (Ellison, 1993). Furthermore, religious women often considered their body as a creation of God which results into higher self-esteem, because religious people believe they have a relationship with a holy being who loves you personally and unconditionally (Mahoney, Carels, Pargament, Wachholtz, Leeper, Kaplar et al., 2005; Sherkat & Ellison, 1999 as cited in Kim, 2006). Moreover, another way that religion gives women self-esteem is that religion has incorporated virtues such as love of one’s fellow men (Ellison & Levin, 1998 as cited in Kim, 2006). Correspondingly, expectations were that

religion would cause Muslim women to have higher total scores on self-esteem than non-Muslim women, just as Muslim women scored better on the self-objectification test concerning competence attributes than non-Muslim women. However, results showed no significant effect for religion on trait self-esteem. An explanation for this could be that there was no measurement of how strongly religious a woman was. Highly religious women tend to have more self-esteem than women who do not believe strongly. Research by Mussap (2009) has demonstrated that the strength of faith in Islam can have an influence on self-esteem. This could explain why there would not be a significant difference between the two groups. Another explanation for this could be that scores between 15 and 25 on the Rosenberg self-esteem scale are considered as a healthy self-esteem. Since most women have a healthy self-esteem, scores should fall in this category. Therefore, there would not be a significant enough difference in total self-esteem scores of women. Moreover, the Rosenberg self-esteem scale did not measure body self-esteem but overall global self-esteem. Future research could include a body self-esteem scale such as the Body Esteem Scale for Adolescents and Adults (BESAA: Mendelson, Mendelson, & White, 2001 as cited in Strelan, Mehaffey & Tiggemann, 2003). Therefore, the answer to sub-question three is that it does not matter whether one is Muslim or non-Muslim, because scores on trait self-esteem do not significantly differ. Hereby, from hypothesis 7, H1 can be rejected.

In order to answer sub-question eight, clothing style has to be considered in relation to trait self-esteem. Clothing style can be considered as an important factor that can contribute to a Muslim woman's self-esteem score. Having a non-Western clothing style can be taken into account as a sign that she has a strong adherence to the Islamic faith. Accordingly, she can be considered as a strong believer which could result into a higher self-esteem score than women who are not strong believers of a religion. As mentioned before, if one is a strong believer, one should have a higher self-esteem score. Thus, expectations are that women who wear non-Western clothing have an overall higher self-esteem score than women who wear Western clothing. Results show that these expectations are met and that a non-Western clothing style indeed has an effect on self-esteem score. Women who wear non-Western clothing have a higher self-esteem score than women who wear Western clothing. It can therefore be said that a strong adherence to the Islamic faith will lead to higher scores on trait self-esteem, but that the adherence only to the Islamic faith does not provide a difference in total self-esteem scores.

Thus, globally being a Muslim or a non-Muslim woman does not matter on total self-esteem score. However, more specifically, if the Muslim woman is a strong believer, by

means of wearing clothing that belongs to the Islamic faith, this will result into higher total self-esteem scores than women who do not wear Islamic clothing. Consequently, there is a difference between non-Western dressers and Western dressers on total self-esteem score. This provides the answer for sub-question eight. Moreover, hereby from hypothesis 12, H0 can be rejected.

6.3. Mood

To answer sub-question two and seven, the following analysis has been carried out. In view of that, previous research has discovered that when women self-objectify, they will experience an increase in negative mood which is different from women who do not self-objectify (Groesz, Levine & Murnen, 2002; Harper & Tiggemann, 2007; Tiggemann & Boundy, 2008). A negative mood is enhanced by means of social comparison in which women compare themselves to others after having watched images of the socio-cultural beauty ideals of thinness and attractiveness (Cattarin, Thompson, Thomas & Williams, 2000). Thus, since it has been proven that sexualized advertisements induce self-objectification, expectations are that a woman's mood will decline after having watched sexualized advertisements while there should not be a decline in mood after women have watched non-sexualized advertisements.

Unfortunately, a repeated measurements did not reveal any changes in mood, both for negative mood and positive mood. This means that mood stays relatively the same before and after watching the commercials in both conditions. Moreover, type of clothing did not cause a difference in mood as well. An explanation for this could be that self-objectification is a rather unconscious cognitive process. Self-objectification can be considered as a cognitive process, because the self-objectification procedure entails that a woman internalizes an objectified self image (Riva, Gaudio & Dakanalis, 2014; Fredrickson & Noll, 1998). When women self-objectify this happens unconsciously (Allard & Harwood, 2014; Zubriggen, 2013; Krauss Withbourne, 2013). Because the process of self-objectification is rather unconscious, this could mean that mood was not affected. Woman who are watching the commercials do not consciously compare themselves to these women. For that reason, they will not feel bad about the upward social comparison, because this process is mainly an unconscious cognitive process. So by answering sub-question two and eight, it can be said that sexualized advertisements do not affect mood. Hereby, from hypothesis 3, H1 can be rejected. Moreover, because there was no effect on mood, there was also no difference between Muslim and non-Muslim women concerning mood. Thus, from hypothesis 4, H1 can

be rejected as well. Furthermore, no difference in mood was found for women who are wearing non-Western clothes. Hereby, from hypothesis 9, H1 can be rejected.

6.4. Cognitive skills

The main aim of this study is to find out if sexualized advertisements have an effect on a woman's cognitive skills and if there is a difference between Muslim and non-Muslim women. To answer the hypotheses, results from the Stroop color-naming test in all three conditions (congruent, incongruent and interference) will be analyzed. According to the literature, there should be a difference in response time after women are confronted with sexualized advertisements and non-sexualized advertisements (Quinn et al., 2006; Tiggemann & Boundy, 2008; Riva, Gaudio & Dakanalis, 2014). Research has shown that self-objectification is a cognitive process which results into a decline of cognitive resources available to perform a certain task (Quinn et al., 2006; Gay & Castano, 2009). Thus, when women, after having watched sexualized advertisements, see themselves as an objectified sexual being, this "is likely to increase cognitive load, with a resulting decrease in the availability of cognitive resources for the tasks the individual engages in" (Gay and Castano, 2010, p. 7). Correspondingly, unconsciously a part of the attentional resources is devoted to review the self as an object (Quinn et al., 2006). Consequently, self-objectification will occupy a part of a woman's attentional resources which makes it harder for the woman to perform a task in which more cognitive resources are necessary, such as the incongruent condition in the Stroop-test.

Moreover, as discussed earlier, there should be a difference between Muslim and non-Muslim women. As earlier results have shown, Muslim women have an overall lower self-objectification score than non-Muslim women, because of their adherence to the Islamic faith. As a result, it is expected that Muslim women are less susceptible to these images and therefore will not need as much time for the incongruent condition as non-Muslim women.

6.4.1. Congruent condition

Expectations are that there will be no differences between the sexualized advertisements and the non-sexualized advertisements in the congruent condition, because the attentional resources that are used for this condition are minimal in comparison to the incongruent condition. In accordance with this, expectations are that for the congruent condition results will be the same for Muslim and non-Muslim women.

Results show that there is no significant main effect for advertisements on the congruent condition. Both sexualized and non-sexualized advertisements have the same effect on a cognitive task for the congruent condition in which not many cognitive resources are necessary. Moreover, there was no significant main effect for religion on the congruent condition in which Muslim-women and non-Muslim women scored the same. Post-hoc tests that have more power demonstrated this as well. The same results were present with the variable type of clothing. It can therefore be said that the expectations are in accordance with the existing literature: no significant difference is found between sexualized and non-sexualized advertisements and no difference is found between Muslim and non-Muslim women in the congruent condition.

6.4.2. Incongruent condition and interference

However, expectations for incongruent word time are that in the sexualized advertisements condition, women will have a higher response time than women who participated in the non-sexualized advertisements condition. As a result, interference time, the difference between the incongruent condition and the congruent condition, will be longer. Accordingly, the incongruent condition requires more attentional resources than the congruent condition: the attentional resources are caught up with self-objectification and thus responding time should be slower. Thus, interference time is longer for women in the sexualized condition than for women who participated in the non-sexualized advertisements condition. Moreover, since self-objectification is less present in Muslim women and women who wear non-Western clothing, self-objectification should not affect their response time in the incongruent condition and interference time. Their response time should therefore be the same as the women who participated in the control condition of the non-sexualized advertisements.

Some expectations were found to be true in which a significant effect for advertisements on incongruent word time has been found. This means that women overall respond slower to incongruent word time after being exposed to sexualized advertisements than women who have watched non-sexualized advertisements. This has been in accordance with the literature. Furthermore, as expected, there was a significant difference found for interference time as well. Interference is the difference for both conditions, congruent and incongruent, and is the most important factor of the Stroop color-naming test. By having a significant difference between the sexualized advertisements and the non-sexualized advertisement, it can be said that sexualized advertisements do have an influence on the

cognitive processes in a woman's brain. As a result, from hypothesis 1, H0 can be rejected; thus, the sexualization of advertising has an effect on a woman's cognitive skills.

However, no significant difference was found for Muslim and non-Muslim women for both conditions even after post-hoc tests, that provide more power in the statistical analysis, were conducted. Furthermore, no significant difference was found between the different types of clothing as well. Consequently, from hypothesis 2, H1 is rejected since no significant difference is found on cognitive skills between Muslim and non-Muslim women. Moreover, from hypothesis 11, H1 can be rejected, because no significant difference is found on cognitive skills between Western dressers and non-Western dressers. Hereby, the main research question is answered as well. The sexualization of advertisements has an effect on Dutch Muslim and non-Muslim women and their cognitive skills. No significant difference has been found between the two groups. After having watched sexualized advertisements both groups in the experiment group have a slower response time in the Stroop color-naming test than both groups in the control group.

An explanation for the non-existent difference between Muslim and non-Muslim women could be that self-objectification is an unconscious process (Allard & Harwood, 2014). Although Muslim women score lower on the trait self-objectification after having watched sexualized advertisements, these women still have a slower response time than Muslim women in the control condition. So although these women think they are not affected by these advertisements, they still are.

Moreover, it could be that no difference has been found between Muslim and non-Muslim, because "self-objectification processes are hypothesized to affect all women who live in an objectifying culture" (Quinn et al., 2006, p. 60). The women who participated in the study are Dutch. The Netherlands is a Western culture in which women are confronted with many objectifying images on a daily basis. Dutch Muslim women could have internalized these socio-cultural ideals of beauty. Researchers such as Tolaymat and Moradi (2011) and Moradi and Huang (2008) believe that there is already an internalization of dominant beauty standards in Western Muslim women. As a result, these women will be as much affected by these sexualized advertisements as non-Muslim women. Nevertheless, it must be noted that there are individual differences in women concerning the degree of self-objectification (Tiggemann & Boundy, 2008), however, no significant differences between the groups were found for Muslim women and non-Muslim women.

6.5. Limitations of the study

Despite some successful results, some limitations of the current study have to be mentioned. Firstly, the Stroop color-naming test had some restraints, namely the language and the execution thereof. Since the study focused on Dutch Muslim and Dutch non-Muslim women, all of the participants were of Dutch nationality. Nonetheless, the Stroop color-naming test was conducted in the English language. This caused some problems. For some girls it was more difficult to come up with the translation of the Dutch word to the English word. For that reason, the response time in the incongruent condition could have been slower for the women who had more difficulty with translating. Besides language problems another limitation of the Stroop color-naming test was the execution thereof. Participants had to type the first letter of each word. Yet some women experience more difficulty when typing, while other women are much faster and skilled when typing on a computer. This could have resulted into lower response time as well in all conditions.

Secondly, the experiment was not always conducted in a quiet room at the university. Because many respondents did not show up to their appointment or did not want to participate in the research at the dates that were set-up, the experiment has been conducted at quiet times in the canteen of Erasmus University as well. However, there is a big difference between conducting an experiment in a canteen and in a room. Therefore, the experiments that were conducted in the canteen could have been influenced by confounds that can threaten internal validity.

Thirdly, questions about religion such as “are you a strong believer?” should have been formulated differently, because these questions can be perceived as confusing. Being a strong believer means something different for everyone. For that reason, a religion questionnaire should have been incorporated. An example of a religion questionnaire to measure the degree of religiosity is the 10-item Santa Clara Strength of Religious Faith Questionnaire (Plante & Boccaccini, 1997) which is also used in earlier research by Mussap (2009).

Moreover, another limitation is that ANOVA's did not reveal any significant interaction effects. This means that there is no interplay between type of advertisements and religion type to influence some of the dependent variables such as self-objectification score. Nevertheless, *t*-tests have been conducted in which the relationships were present and significant. It was necessary to conduct post-hoc tests since an overall one-way ANOVA tests the mean values for all treatments groups due to random sampling. The post-hoc independent-samples *t*-test has more overall power in finding a significant difference, because such a test

will focus on the means of the two groups and as a result can find differences between these different groups. Thus, *t*-tests are more specific. So although ANOVA did not reveal any significant interaction effect, so did the post-hoc *t*-tests.

Lastly, it was complex to find participants for the Muslim-women condition. Many participants did not show up when an appointment was scheduled (non-response) or wanted to participate in the research. As a result, snowball sampling was done in order to get the amount of participants for the Muslim-women condition. This caused the sample to be not as random as anticipated.

7. Conclusion

This thesis has demonstrated that sexualized advertisements affect women and their cognitive skills. Unfortunately, every woman is affected by these images that portray the socio-cultural beauty ideal. Even religion, a particular type of clothing, or a high self-esteem does not matter whether one is influenced. In accordance with this is Quinn's et al. (2006) statement about that the objectification process affects every woman who lives in a Western objectifying culture. Since the Netherlands has such culture, every woman that participated in this study was affected by the sexualized commercials. Consequently, the study has contributed to the self-objectification literature and enriched the field of diversity, because it can be said that every women despite religion who lives in an objectifying culture is affected by images of sexualized and objectified women. Moreover, the findings in this research extend recent studies on self-objectification in relation to the Islamic faith.

Most importantly is the effect of self-objectification on a woman's cognitive skills. Consequently, when a difficult task has to be performed, the self-objectification process causes a decrease in the availability of cognitive resources which will make it more difficult for a woman to perform such a task. This is in stark contrast to women who have watched non-sexualized advertisements. Therefore, the study has enriched the field of media effects regarding the effects of advertising on cognitive skills.

In this manner, the study confirms that the environment poses some significant risks for women. It has provided evidence for some of the hypotheses that women are affected by sexualized advertisements in various ways. If woman are constantly surrounded by these images this would lead to less cognitive skills to perform difficult tasks in comparison to males. Furthermore, many other risks are involved when women self-objectify. As the theoretical framework demonstrated, self-objectification can lead to a lot of mental health consequences such as body shame, eating behavior and sexual functioning.

Therefore, it is important to make the environment conscious of what is happening in our society. If people are conscious about the self-objectification process, there could be a graduate change. Of course, this change will be difficult to achieve and it must be emphasized that these images are part of our ideology for many years. Additionally, it is impossible to change a whole society. However, by providing small bits of information about the negative consequences that the self-objectification process can have, it can make people aware of these consequences. And this could help women all around the world.

Moreover, future research should incorporate a measurement of the internalization of beauty standards. As discussed in the discussion, one of the main explanations for the Stroop test scores can be an internalization of beauty standards. Furthermore, state self-objectification should be incorporated in future research as well in which the state is measured and not only trait self-objectification. In addition, more in-depth information about each participant should be incorporated concerning religion by means of a religion scale.

Additionally and most importantly, future research should investigate whether Muslim women in the Arabic world are affected by these images. Since these women are not surrounded by Western images, it could be that they are less affected by images that can trigger self-objectification. Future research should therefore focus on women who do not live in a Western world. And then maybe, time will tell if it is not too late for these women to be protected against the Western socio-cultural ideals of beauty.

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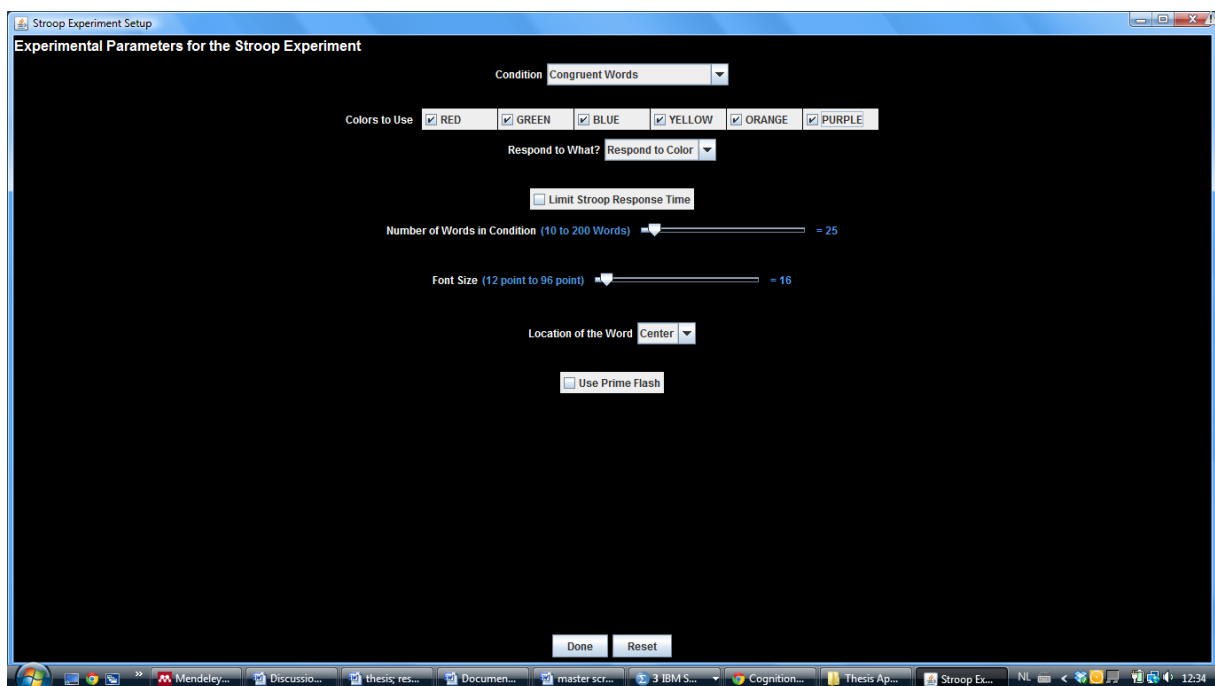
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Appendix A

Victoria's Secret http://www.youtube.com/watch?v=_niTldm-IP8	Levi's http://vimeo.com/31539140
Carl's Jr. http://www.youtube.com/watch?v=-VEDmU2Tvdl	McDonalds http://www.youtube.com/watch?v=1AqTLvRkUZs
Sodastream http://www.youtube.com/watch?v=zxq4ziuwrl	Coca Cola http://www.youtube.com/watch?v=443Vy3I0gJs
Volkswagen http://www.youtube.com/watch?v=rdQO4zRGBII	Mini Cooper http://www.youtube.com/watch?v=BnAhv26AEBw
Clark Bar http://www.youtube.com/watch?v=IcSqB711mU	Snickers http://www.youtube.com/watch?v=Fz9M-TyP6o
Diesel http://www.youtube.com/watch?v=hs9rFUc6KbM	Dior http://www.youtube.com/watch?v=iRBcTibFMos
Doritos http://www.youtube.com/watch?v=PzYKsLch4GM	Lays http://www.youtube.com/watch?v=acBK4V2Hq3U
SoBe http://www.youtube.com/watch?v=voEbeVfmO2Q	Lipton http://www.youtube.com/watch?v=74JzbyGxB78
Godaddy http://www.youtube.com/watch?v=hzwgVHIeklo	Bluehost http://www.youtube.com/watch?v=3KaD6-UuB8Q
Campari http://www.youtube.com/watch?v=377kVIgBOJQ	Jagermeister http://www.youtube.com/watch?v=1b0oh_2L3DE

Appendix B

Screenshots of website that is used for the Stroop color-naming test during the experiment.



Appendix C

The Self-Objectification Questionnaire

We are interested in how people think about their bodies. The questions below identify 10 different body attributes. We would like you to rank order these body attributes from that which has the greatest impact on your physical self-concept (rank this a "9"), to that which has the least impact on your physical self-concept (rank this a "0").

Note: It does not matter how you describe yourself in terms of each attribute. For example, fitness level can have a great impact on your physical self-concept regardless of whether you consider yourself to be physically fit, not physically fit, or any level in between.

Please first consider all attributes simultaneously, and record your rank ordering by writing the ranks in the rightmost column.

IMPORTANT: Do Not Assign The Same Rank To More Than One Attribute!

When considering your physical self-concept . . .

9 = greatest impact

8 = next greatest impact

1 = next to least impact

0 = least impact

- 1 . . . what rank do you assign to physical coordination? _____
- 2 . . . what rank do you assign to health? _____
- 3 . . . what rank do you assign to weight? _____
- 4 . . . what rank do you assign to strength? _____
- 5 . . . what rank do you assign to sex appeal? _____
- 6 . . . what rank do you assign to physical attractiveness? _____
- 7 . . . what rank do you assign to energy level (e.g., stamina)? _____
- 8 . . . what rank do you assign to firm/sculpted muscles? _____
- 9 . . . what rank do you assign to physical fitness level? _____
- 10 . . . what rank do you assign to measurements (e.g., chest, waist, hips)? _____

In administering the measure, the title is not included. Scores are obtained by separately summing the ranks for appearance-based items (3, 5, 6, 8 and 10) and competence-based items (1, 2, 4, 7 and 9), and then subtracting the sum of competence ranks from the sum of appearance ranks. Scores may range from -25 to 25, with higher scores indicating a greater emphasis on appearance, interpreted as higher trait self-objectification.

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Appendix D

Rosenberg self-esteem scale

Please record the appropriate answer for each item, depending on whether you Strongly agree, agree, disagree, or strongly disagree with it.

- 1 = Strongly agree
- 2 = Agree
- 3 = Disagree
- 4 = Strongly disagree

- _____ 1. On the whole, I am satisfied with myself.
- _____ 2. At times I think I am no good at all.
- _____ 3. I feel that I have a number of good qualities.
- _____ 4. I am able to do things as well as most other people.
- _____ 5. I feel I do not have much to be proud of.
- _____ 6. I certainly feel useless at times.
- _____ 7. I feel that I'm a person of worth.
- _____ 8. I wish I could have more respect for myself.
- _____ 9. All in all, I am inclined to think that I am a failure.
- _____ 10. I take a positive attitude toward myself.

Rosenberg, M. (1979). *Conceiving the Self*. New York: Basic Books.

Appendix E

Brief Mood Introspection Scale (BMIS) by John D. Mayer

INSTRUCTIONS: Circle the response on the scale below that indicates how well each adjective or phrase describes your present mood.

(definitely do not feel) (do not feel) (slightly feel) (definitely feel)

XX

X

V

VV

Lively	XX X V VV	Drowsy	XX X V VV
Happy	XX X V VV	Grouchy	XX X V VV
Sad	XX X V VV	Peppy	XX X V VV
Tired	XX X V VV	Nervous	XX X V VV
Caring	XX X V VV	Calm	XX X V VV
Content	XX X V VV	Loving	XX X V VV
Gloomy	XX X V VV	Fed up	XX X V VV
Jittery	XX X V VV	Active	XX X V VV

Overall, my mood is:

Very Very
Unpleasant Pleasant

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10

Please Note: The “Overall, my mood is” section is usually omitted, although some people use it and fold it into the overall score.

Appendix F

SPSS output

Tests of Between-Subjects Effects

Dependent Variable: totselfobjscore

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1584,506 ^a	3	528,169	4,174	,009	,152
Intercept	7725,730	1	7725,730	61,056	,000	,466
type	713,857	1	713,857	5,642	,020	,075
muslim_nonmuslim	707,135	1	707,135	5,588	,021	,074
type * muslim_nonmuslim	111,911	1	111,911	,884	,350	,012
Error	8857,494	70	126,536			
Total	17842,000	74				
Corrected Total	10442,000	73				

a. R Squared = ,152 (Adjusted R Squared = ,115)

Independent Samples Test sexualized advertisements

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
totselfobjscore	Equal variances assumed	1,646	,208	2,117	35
	Equal variances not assumed			2,162	34,720

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
totselfobjscore	Equal variances assumed	,041	8,671	4,096
	Equal variances not assumed	,038	8,671	4,010

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
totselfobjscore	Equal variances assumed	,356	16,986
	Equal variances not assumed	,527	16,815

Independent Samples Test non-sexualized advertisements

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
totselfobjscore	Equal variances assumed	,275	,603	1,138	35
	Equal variances not assumed			1,137	33,883

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
totselfobjscore	Equal variances assumed	,263	3,735	3,281
	Equal variances not assumed	,263	3,735	3,285

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
totselfobjscore	Equal variances assumed	-2,925	10,396
	Equal variances not assumed	-2,941	10,412

Tests of Between-Subjects Effects

Dependent Variable: totselfobjscore

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1624,424 ^a	3	541,475	4,299	,008	,156
Intercept	8044,369	1	8044,369	63,862	,000	,477
typeofclothing2	806,344	1	806,344	6,401	,014	,084
type	703,764	1	703,764	5,587	,021	,074
typeofclothing2 * type	30,912	1	30,912	,245	,622	,003
Error	8817,576	70	125,965			
Total	17842,000	74				
Corrected Total	10442,000	73				

a. R Squared = ,156 (Adjusted R Squared = ,119)

Tests of Between-Subjects Effects

Dependent Variable: esteemscore

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	196,247 ^a	3	65,416	4,596	,005	,165
Intercept	27846,855	1	27846,855	1956,293	,000	,965
typeofclothing2	135,694	1	135,694	9,533	,003	,120
type	12,801	1	12,801	,899	,346	,013
typeofclothing2 * type	71,517	1	71,517	5,024	,028	,067
Error	996,415	70	14,235			
Total	30993,000	74				
Corrected Total	1192,662	73				

a. R Squared = ,165 (Adjusted R Squared = ,129)

Tests of Between-Subjects Effects

Dependent Variable: incongruent

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	669129,245 ^a	3	223043,082	1,693	,176	,068
Intercept	172298857,797	1	172298857,797	1307,665	,000	,949
type	623796,706	1	623796,706	4,734	,033	,063
muslim_nonmuslim	33610,493	1	33610,493	,255	,615	,004
type * muslim_nonmuslim	29566,946	1	29566,946	,224	,637	,003
Error	9223252,134	70	131760,745			
Total	182938855,428	74				
Corrected Total	9892381,379	73				

a. R Squared = ,068 (Adjusted R Squared = ,028)

Independent Samples Test sexualized advertisements

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
incongruent	Equal variances assumed	7,797	,008	-,677	35
	Equal variances not assumed			-,653	25,992

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
incongruent	Equal variances assumed	,503	-82,87426	122,44122
	Equal variances not assumed	,520	-82,87426	126,99786

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
incongruent	Equal variances assumed	-331,44315	165,69462
	Equal variances not assumed	-343,92591	178,17738

Independent Samples Test non-sexualized advertisements

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
incongruent	Equal variances assumed	,001	,981	-,023	35
	Equal variances not assumed			-,023	32,835

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
incongruent	Equal variances assumed	,982	-2,65482	116,98499
	Equal variances not assumed	,982	-2,65482	117,86920

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
incongruent	Equal variances assumed	-240,14697	234,83733
	Equal variances not assumed	-242,50723	237,19758

Tests of Between-Subjects Effects

Dependent Variable: interference

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	763337,916 ^a	3	254445,972	2,059	,114	,081
Intercept	28494512,683	1	28494512,683	230,536	,000	,767
type	664567,776	1	664567,776	5,377	,023	,071
muslim_nonmuslim	26770,520	1	26770,520	,217	,643	,003
type * muslim_nonmuslim	111250,341	1	111250,341	,900	,346	,013
Error	8652074,125	70	123601,059			
Total	37956100,173	74				
Corrected Total	9415412,041	73				

a. R Squared = ,081 (Adjusted R Squared = ,042)

Independent Samples Test sexualized advertisements

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
interference	Equal variances assumed	7,611	,009	-,948	35
	Equal variances not assumed			-,911	25,180

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
interference	Equal variances assumed	,350	-115,96897	122,34464
	Equal variances not assumed	,371	-115,96897	127,30838

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
interference	Equal variances assumed	-364,34180	132,40386
	Equal variances not assumed	-378,07037	146,13243

Independent Samples Test non-sexualized advertisements

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
interference	Equal variances assumed	,000	,984	,363	35
	Equal variances not assumed			,360	32,890

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
interference	Equal variances assumed	,719	39,63729	109,23916
	Equal variances not assumed	,721	39,63729	110,03235

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
interference	Equal variances assumed	-182,13000	261,40459
	Equal variances not assumed	-184,25365	263,52824