UNIVERSITY OF TWENTE

Bachelorthese

Influences of media images on healthy female's body-self unity experience

Christoph Muck

Supervision: Christina Bode and Erik Taal

6/24/2009

Influences of media images on healthy female's body-self unity experience

Christoph Muck

Supervision: Christina Bode en Erik Taal

University of Twente, Drienerlolaan 5, 7522 NB Enschede, The Netherlands

24 June 2009

Abstract

This study examined the effects of media images of models performing a difficult body movement on young, healthy female's body-self unity experience. According to van der Heij (2007), body-self unity consists of alienation and harmony of the body and self. Female participants (N = 44) were randomly selected into three group conditions. In the first two conditions, they were exposed to several media images of models performing a difficult Yoga body movement and either answered statements about the body functionality or the attractiveness of the model. The last condition was a control group in which respondents were shown images of accessories and answered statements about the usefulness of these accessories. Using the Body Experience Questionnaire as an indicator of body-self unity, women who were exposed to the media images of models showed significantly greater discrepancies between themselves and their bodies as indicated by body-self alienation. However, no differences between the groups were found on body-self harmony. These results suggest that exposure to certain media images can have negative influences on individual's experience of body-self unity, in particular body-self alienation.

Keywords: Body-self unity; Media influences; Body functionality

Introduction

Body Self-Unity

Since Descartes has emphasized over three hundred years ago that intelligence and rationality are established in the mind leaving the body as a passive machine controlled by the mind, the body has often been thought of as separate from the mind (Hudak, McKeever, & Wright, 2007; Cunningham, 2000). According to Wagner (1983), this separation of mind and body has left the question of a mind-body entity. To shed more light on this relationship the concept of embodiment has been postulated as the human experience of simultaneously having and being a body (Hudak, McKeever, & Wright, 2007). This definition views the body as more dynamic and meaningful rather than a passive machine dissimilar from the mind or self. Also, the sense of one's body is closely linked to the sense of self and has a major impact on individual's psychological identity (Longo, Schüür, Kammers, Tsakiris, & Haggard, 2007). Thus, a person's body and self seem to form an interwoven body-self unity. As Corbin (2003) put it *"The self becomes what it is through the body"* (p. 258). Thomas (2000) argued that while healthy individuals show a lack of consciousness of their bodies, patients who experience chronic pain focus their attention mainly on their body. An inner conflict can arise when a person's body cannot be fully controlled by the individual's volition, which can ultimately lead to a body-self separation (Corbin, 2003). Gadow (1980) has been one of the first lead advocates of a definition of body-self unity and distinguished four different levels of body-self unity:

I - Primary immediacy. Individuals in this state have no conscious experience of a distinction between body and self. Since the body experience is taken for granted there are no problems with the body.

II – Disrupted immediacy. A discrepancy or tension between body and self is experienced in this state. The former unconsciousness of the body vanishes resulting into a sensible awareness of a conflict between body and self.

III – Cultivated immediacy. The body is consciously experienced, but there is no discrepancy or conflict between individual's body and self, because individuals have managed a new sense of body-self unity.

IV – Aesthetic immediacy. The self is no longer the master of the body. The body has its own meaning and purposes.

Gadow suggested that the first three levels can be experienced by healthy individuals as well as patients, whereas the last level can only come to know by illness or aging.

Van der Heij (2007) distinguished body-self unity into alienation and harmony. The former indicates discrepancies between body and self, while the latter refers to an intact body-self unity. Van der Heij demonstrated that body-self unity has more impact on the self-esteem of patients with a rheumatic disease than the mere physical aspect of the disease, which leads us to the question: Can healthy individuals also experience discrepancies between body and self?

Culture and media influences on body image

The Western society has influenced and urged a stringent body size ideal during the last decades. Women need to strive for an ultra-thin body, while men are forced to attain a V-shaped and muscular body (Willinge, Touyz, & Charles, 2006). In addition, idealized female media models often are underweight (Dittmar, 2007), while male models show an unattainable muscularity (Barlett, Vowels, & Saucier, 2008). Not surprisingly, this idealization of thin females and muscular men in Western society has been suggested to influence the body images and self-perceptions of women (Groesz, Levine, & Murnen, 2002) and men (Barlett, Vowels, & Saucier, 2008). For many women the only way to achieve an ideal thin body image is by severe restriction of food intake (Grogan & Wainwright, 1996). The use of anabolic-androgenic steroids has also been mentioned to compensate for body dissatisfaction in men (Johnson, McCreary, & Mills, 2007). Obviously, both eating-disorders and the use of steroids have detrimental consequences for individual's physical health.

The mass media has been postulated as one major factor influencing people's body images. In fact, Clark and Tiggemann (2006) have found that even 9-12 year olds body satisfaction is negatively affected by media and peer influences. Many studies have shown that even a brief exposure to media images of thin models lead to less body satisfaction, psychological well-being and general self-esteem in women in the short term (e.g. Groesz, Levine, & Murnen, 2002), whereas a recent meta-analysis of Barlett, Vowels, & Saucier (2008) has indicated that men also felt worse about their own bodies after exposure to media images of idealized muscular male models. On the contrary, a study by Johnson, McCreary, & Mills (2007) did not show significant effects on body images of men after exposure to muscular media images. However, they showed that men indicated increased levels of general anxiety and hostility towads women when they saw objectified images of females. Even music videos and video games have been shown to negatively influence body-esteem and body satisfaction of men and women (Bell, Lawton, & Dittmar, 2007; Barlett & Harris, 2008). Especially adolescents are more prone to the high media exposure and female adolescents are more often dissatisfied with their body images than older women (Durkin & Paxton, 2002).

Causes of negative body image

What factors can account for these negative relationships between idealized cultural standards of body image and individuals own body perceptions? According to Objectification theory (Fredrickson & Roberts, 1997), women in Western culture do not look at their bodies from a first-person perspective focusing on unobservable attributes, such as *"What am I capable of?"*. Instead, they view their bodies from a third-person perspective as an outstanding observer valuing only their observable body attributes (e.g. *"How do I look?"*). In addition, women seem to internalize thin body image ideals and compare themselves with media models (Durkin & Paxton, 2002). These two factors (internalization of ideal body images and social comparison) may seem to moderate the effects of body satisfaction after exposure to thin media models, because not all women are equally affected by the images (Dittmar, 2005). Indeed, some women even reported increased perceptions of body satisfaction after exposure to media images of thin models (Bell, Lawton, & Dittmar, 2007). Thus, individual differences can be expected, because not every woman has internalized the ideal body image at the same level. Also, not every woman engages into social comparison with an ultra-thin model. However, young females may be more prone to negative experiences of body-self unity due to media influences, because they engage into social comparison more often and have internalized the ideal body image much stronger than older women .

Research has found evidence that perceptions of the physical self are strongly related to global self-concept (Welk & Eklund, 2005). Brehm, Kassin, & Fein (2005) define self-concept as the total sum of *"an individual's beliefs about his or her own personal attributes"* (p. 56). Until now, most research on the influence of media images on individual's body image has focused its attention on the effects of self-esteem, body satisfaction and other psychological variables, such as anxiety. Self-esteem refers to an affective component of the self consisting of negative and positive self-evaluations (Brehm, Kassin, & Fein, 2005) within the context of experiences and the environment (Lau, Cheung, & Ransdell, 2008). Body dissatisfaction is a salient discrepancy between a person's perceived body and their ideal body (Bell, Lawton, & Dittmar, 2007). However, it seems likely that besides self-esteem and body satisfaction other individual aspects are also affected by the stringent cultural body standard of Western society.

Influences on body-self unity experience

The concept of body-self unity is sparsely investigated and until now no research has investigated the effects of media images on individual's body-self unity experience. Also, most studies have only examined the effects of body-self unity on patients, where there is likely to be a discrepancy between body and self. Hudak, Hogg-Johnson, Bombarier, McKeever, & Wright (2004) examined the effects of body-self unity on patient's satisfaction with a certain treatment outcome. They found that satisfaction with a treatment outcome was significantly higher when there is no tension between individual's affected body part and their sense of self. Thus, when there is no alienation of body-self unity. As already mentioned, Gadow (1980) suggested several different levels of body-self unity. Moreover, she claimed that the first three levels can either be experienced by healthy and unhealthy individuals. It is therefore reasonable to investigate the effects of media images on healthy individual's experience of body-self unity.

In their meta-analyis Groesz, Levine & Murnen (2002) provided evidence of the negative impact of exposure to media images of thin models on body satisfaction of women.

Individuals may compare themselves with the thin models which can affect the relationship between body and self, because they feel a discrepancy between themselves and the thin models. This would be a confirmation of the Objectification theory (Fredrickson & Roberts, 1997), which states that females view their bodies from a third-person perspective instead of focusing on their unobservable attributes. However, Gadow (1980) assumed that healthy individuals can also experience a discrepancy between their bodies and selves in the so-called *disrupted immediacy level*. Thus, their focus would not be from a third-person perspective but on their own conscious and internal attributes of their body. This leads us to the question:

How can media images influence individual's perception of body-self unity?

Festinger's Social Comparison theory (1954) states that individuals evaluate their own abilities and opinions by comparing themselves to others. In addition, Schutz, Paxton, & Wertheim (2002) have found that adolescent girls compare their bodies most frequently with peers and fashion models. For most girls comparisons with thin and attractive media models would indicate an upward social comparison creating inferiority, because of the ultra-thinness of the model, which might lead to negative self-evaluations of the body (Collins, 1996). These negative self-evaluations may also have an effect on individual's body-self unity leading into a conflict between their own body and self. Furthermore, as research on patients has indicated (e.g. Hudak, Hogg-Johnson, Bombarier, McKeever, & Wright, 2004), discrepancies between the body and self seem to be closely related to body functionality. Hence, we assume that media images of models displaying a high body flexibility (as an indicator of body functionality) will result into an upward social comparison, because most women are not able to show such a high flexibilty. This upward social comparison will ultimately lead to negative self-evaluations. Consequently, their body-self unity might be affected resulting into a conflict between body and self.

According to Gadow (1980), healthy individuals can also experience discrepancies between their bodies and selves. In addition, they do not view their bodies from a third perspective but focus on their own internal attributes. Therefore, we assume that models displaying high body functionality will influence individual's body-self unity more than model's attractiveness because the concept of body-self unity is more closely related to internal attributes of the body than attractiveness.

We will select young and healthy female individuals in this study for the following reasons: Although a recent meta-analysis of Barlett, Vowels & Saucier (2008) has provided evidence that male subjects are also prone to negative media effects on body satisfaction, these impacts are evidently less than in female subjects (Ata, Ludden, & Lally, 2007). Men do not seem to internalize the cultural body standards to the same degree as women and they tend not to compare themselves less with male models (Clay, Vignoles, & Dittmar, 2005). Additionally, McKinley (2006) has found that older women had a decline in body shame and an increment in body esteem in comparison to younger women. Consequently, it seems likely that there are also differences in body-self unity in different stages of age. Furthermore, we will not select individuals with an illness, because we assume that there are differences between healthy and ill individual's body-self unity perceptions. Moreover, due to our methodological setting, in particular limitations in sample size, it would be very difficult to examine both female and male respondents in different age groups. Nevertheless, future research should attempt to include both male and female subjects in different age groups to indicate possible gender and ageing differences.

Hypothesis

Using the Body Experience Questionnaire (BEQ, Van der Heij, 2007) as a measure of body-self unity, two experimental groups, the functionality group and attractiveness group, will be exposed to media images of models. The results will be compared to a third group, which acted as a control group. The BEQ has two subscales, which measure body-self alienation and body-self harmony.

First, assuming that both experimental conditions will be negatively influenced by the media images of models, the functionality group and attractiveness group will score higher on the alienation subscale than the control group. Thus, both groups will have more discrepancies between their bodies and selves than the control group. Second, the functionality group will score higher on the alienation subscale than the attractiveness group, because we assume that body functionality is more closely related to the concept of body-self unity than attractiveness. Third, the functionality group and attractiveness group will score lower on the harmony subscale than the control group. Therefore, both experimental groups will indicate a lower integrity of body-self unity. Finally, the functionality group will score lower on the harmony subscale than the attractiveness group. Again, body functionality seems to be more closely related to the concept of body-self unity than attractiveness and hence will influence participant's integrity of body-self unity more negatively than the attractiveness group.

Methods

Participants

An initial sample of 45 German women was drawn using Snowball Sampling. The author asked several women within his personal environment to participate in the study, which resulted into a response rate of 100 %. In the beginning of the experiment, each of the subjects had to draw a piece of paper out of a box, which contained 45 pieces at the beginning. Each piece was either labeled with a one, two or three, respectively. Therefore, each subject could be selected at random to one of the three conditions. All respondents were physically and psychologically healthy and therefore were not considered to bias the results because of their

current health status. However, one respondent was dropped out of the initial sample, because she did not meet the criterion of being physical healthy, which resulted into a final sample of 44 females between 21 and 29 years (M = 22.8). 75 % of them were students (M = 22.2), while 25 % had finished an apprenticeship (M = 24.4).

Study design

Respondents took part in one of three group conditions. In the first experimental condition, the functionality group, subjects were exposed to media images of models performing a difficult Yoga body movement and subsequently were asked to rate five different statements about the body functionality of the models. In the second experimental condition, the attractiveness group, subjects were exposed to the same media images as in the functionality group, but they had to rate five statements about the attractiveness of the models. In the third condition, the control group, subjects were exposed to media images of accessories and were asked to rate five statements about the usefulness of the accessories. Assuming that images of accessories have no influence on individual's experience of body-self unity, the third group will yield a baseline measure of healthy individual's body-self unity. We can therefore compare all groups with each other. Subsequently, all groups had to answer the Body Experience Questionnaire, which was designed to measure individual's body-self unity experience.

Materials

Cover story (Appendix A). A cover story was administered so that participants were not primed with specific expectations about the experiment. The cover study told the subjects that the aim of the study was to measure the effects of attention to certain media topics.

Images (Appendix B). Stimuli consisted of a series of ten images of models and accessories. Images of models performing a difficult Yoga body movement (e.g. a model doing the splits while she is still standing on one leg) comprised the stimuli for the functionality group and attractiveness group. The basis for selection was that pictures depicted the current standard of attractiveness, which means that participants could identify with the models. It was further important that the body movements were not feasible for most women. The images did not contain any objects besides the model so that the respondents were not distracted by anything. Images of accessories (e.g. a wristwatch, necklace, ear rings etc.) were used as stimuli for the control group. No people appeared on these images, in order to make sure that participants could not compare themselves with any other people. All images were printed in color on a full page sized 21 x 29.7 cm.

Questionnaire (Appendix C). Body-self unity was assessed with the German translation of the Body Experience Questionnaire (Van der Heij, 2007), which consists of ten items and is scored on a 4-point Likert scale, from "strongly disagree" to "strongly agree". The Body Experience Questionnaire consists of two subscales. The first subscale measures alienation of body-self unity and has six items (e.g. "My body is a burden to me."), whereas the second subscale measures harmony and has four items (e.g. "My body feels familiar to me."). High scores on the alienation subscale indicate discrepancies between one's body and self, whereas high scores on the harmony subscale show intact body-self unity. The Body Experience Questionnaire showed a satisfactory internal consistency (Cronbach's alpha for alienation subscale = .72; Cronbach's alpha for harmony subscale = .69). In particular, the alienation subscale showed good internal reliabilty. However, the harmony subscale did not meet the cutting point for a sufficient value of Cronbach's alpha of .70 (Kaplan & Saccuzzo, 2005). Nevertheless, taking into account that the harmony scale consisted of four items, the scale reliability was considered satisfactory for a scale with few items. A total score for each subscale was calculated by summing the scores for the items. The total scores were used for data analyses. Total scores for the alienation subscale can range from 6 to 24 and for the harmony subscale from 4 to 16.

Experimental manipulation (Appendix D). Respondents had to rate each image on five different statements on a 4-point Likert scale from "strongly disagree" to "strongly agree". Each group had different statements in order to set for the experimental manipulation. The functionality group had to rate statements about the model's body functionality (e.g. "In my opinion, this body movement is difficult to perform."), the attractiveness group about the attractiveness of the model (e.g. "In my opinion, this model is very attractive.") and the control group rated statements about the usefulness of the accessories (e.g. "In my opinion, this article is not very useful.").

Manipulation check (Appendix E). Using the semantic differential scaling method two items were given at the end of the experiment to measure whether the experimental manipulation had a significant effect. Participants had to rate the body functionality ("high body functionality" vs. "low body functionality") and the attractiveness ("high attractiveness" vs. "low attractiveness") of a model on two separate 10-point items, respectively. The model had the same characteristics as had the models of the functionality group and attractiveness group so that it was possible to compare all groups together. Assuming that the functionality group and attractiveness group will be primed with model's body functionality and attractiveness respectively, the following hypotheses were set for the manipulation check: First, the functionality and attractiveness group will rate the model higher on the body functionality item than the control group. Second, the functionality group will rate the model higher on the body functionality item than the attractiveness group. Third, the attractiveness and functionality group will rate the model higher on the attractiveness item than the control group. Finally, the attractiveness group will rate the model higher on the attractiveness item than the functionality group.

Procedure

The author individually administered each experiment, which required approximately 10-15 minutes. Respondents were assured of anonymity and their right to withdraw from the study at any time. In the beginning of the experiment, subjects had to report their age, occupation status and if they had any present physical or psychological problems. If they had no current physical or psychological health problems they were included into the final sample. Then, they were given the cover story so that they were not primed with specific information about the intrinsic aim of the study. The experiment was introduced as an investigation into how to measure the effects of attention to certain media topics.
Following the delivery of the cover story, participants were told that they would see different media images one after another and that they should try to concentrate on the image for 30 seconds. Hereafter, each group of subjects responded to five different statements according to their group condition while the media image was still in their visual field. Thus, the functionality group, the attractiveness group and the control group answered different statements for each image. This procedure was repeated for ten media images. The ratings of the statements were not analyzed any further, because their mere function was to assure that the subjects focused their attention on different aspects of the media images. In other words, it was not the rating of the statements what was important, but the procedure itself by influencing participant's cognition. Then, all participants were asked to complete the German translation of the Body Experience Questionnaire. Differences in the BEQ scores between the three groups were the main outcome of this study.
Hereafter, unknown to the participants, we inserted a manipulation check measure in order to see whether our experimental manipulation (different statements in all groups) had a significant effect on the subjects. Therefore, we presented a new image of a model, which had the same characteristics as had the previous images of the functionality group and attractiveness group to all three groups. Subsequently, all subjects had to rate a body functionality and an attractiveness scale which related to the new media image of the model.

Given that respondents had to be deceived about the true purpose of the experiment, they were fully debriefed afterwards and given the opportunity to discuss their experiences during the experiment. None of their responses indicated that they had guessed the true purpose of the study. However, their opinions yielded several points which were included into the discussion.

Data analysis

This was an experimental design with information-processing of the media image (functionality, attractiveness and control) as a three level factor. The analyses were performed using SPSS 16 for Windows.

Analysis of normality. The Kolmogorov-Smirnov test was conducted to see whether the data is normally distributed and homogeneity of variances was tested to clarify if the variances were equally distributed. These analyses were conducted for both the manipulation check and the Body Experience Questionnaire.

Manipulation check. Assuming that the data are normally distributed, analyses were performed whether the experimental manipulation had a significant effect on the functionality and attractiveness items using a one-way ANOVA and planned contrasts for specific hypothesis testing. The first contrast compared the two experimental groups with the control group, whereas the second contrast compared the two experimental groups with each other.

Experiment. Sum scores for the subscales of the Body Experience Questionnaire were used to asses differences between the three groups. Assuming that the data are normally distributed, group differences were tested with a one-way ANOVA. Specific hypothesis testing was conducted with planned contrasts. The first contrast compared the two experimental groups with the control group, whereas the second contrast compared the two experimental groups with each other. Therefore, it was possible to reveal which group differences were important for the outcome.

Results

Analysis of normality and homogeneity of variances

Manipulation check. Using the Kolmogorov-Smirnov test, both items of the manipulation check were significantly normally distributed ($p > .05$). Also, homogeneity of variances further indicated that both items met the criterion for equal variances ($p > .05$). Thus, a one-way independent ANOVA was used to analyze the data further.

Experiment. The Kolmogorov-Smirnov test revealed that both subscales of the BEQ were significantly normally distributed ($p \geq .05$). Further, analysis of homogeneity of variances revealed that both scales met the criterion for equal variances ($p > .05$). Therefore, a one-way independent ANOVA was used to analyze the data further.

Main analysis of manipulation check

Body functionality item. Table 1 contains the means and F-values for both manipulation check items. Contrary to the expectations, no significant group differences on the body functionality item were found, $F(2,41) = 1.721$, $p > .05$. Further, although there was a weak trend such that the functionality group rated the model lower than the other groups, this was against the expectation, because it was assumed that the functionality group would rate the model higher on this item. However, several t-tests were additionally conducted in order to see if the body functionality item revealed a significant result. As we

Table 1
Means for manipulation check

		Funct.		Attr.		Contr.		F-value
	N	*M*	*SD*	*M*	*SD*	*M*	*SD*	
Manipulation Check								
Body Funct.	44	7.3	1.2	8.0	1.0	8.1	1.3	1.721
Attractiveness	44	5.3	2.0	5.5	1.7	7.3	1.8	5.357*

Note. *N* = Amount of respondents, *Funct.* = Functionality group, *Attr.* = Attractiveness group, *Contr.* = Control group, *M* = Mean, *SD* = Standard deviation, **p* < .05

Table 2
Means for body-self unity

		Funct.		Attr.		Contr.		F-value
	N	*M*	*SD*	*M*	*SD*	*M*	*SD*	
Body-self unity								
Alienation	44	9.2	2.0	9.5	2.8	7.5	1.8	3.333*
Harmony	44	13.5	1.7	13.0	1.5	13.1	1.6	.573

Note. *N* = Amount of respondents, *Funct.* = Functionality group, *Attr.* = Attractiveness group, *Contr.* = Control group, *M* = Mean, *SD* = Standard deviation, **p* < .05

previously expected, there were no significant differences between the attractiveness group and control group, $t(27) = .153$, $p > .05$. However, in contrast to the hypothesis, the functionality group and control group did not differ significantly, $t(28) = 1.562$, $p > .05$. In addition, the functionality group and the attractiveness group also did not differ significantly, $t(27) = 1.615$, $p > .05$. According to these results, the experimental manipulation had not yielded the expected effect.

Attractiveness item. As hypothesized, there were significant group differences on the attractiveness scale, $F(2,41) = 5.357$, $p < .05$. Planned contrast one further revealed that the two experimental groups differed significantly from the control group, $t(41) = -3.259$, $p < .05$, whereas planned contrast two indicated no significant differences between the functionality and attractiveness group, $t(41) = -.243$, $p > .05$. However, the direction of the ratings was against the expectation, because it was assumed that the experimental groups would rate the model higher than the control group. Despite the fact that the attractiveness item did not yield the expected results, the author did not consider the experimental manipulation to have no effect on the respondents. Possible explanations are discussed later.

Main analyses of body-self unity

Sum score means for both subscales for each of the three groups are presented in Table 2. Contrary to the expectations, there were no significant differences between the groups on the harmony subscale, $F(2,41) = .573$, $p > .05$. However, the groups differed significantly on the alienation subscale, $F(2,41) = 3.332$, $p < .05$. As indicated by the means, the functionality and attractiveness group seemed to score higher on the alienation subscale, whereas there were no group differences on the harmony subscale. Therefore, planned contrasts were only analyzed for the alienation subscale.

Planned contrasts for the alienation subscale

Contrast one. Contrast one compared the two experimental groups with the control group and found a significant difference between the groups, $t(41) = 2.563$, $p < 0.05$ (one-tailed). This confirmed the assumption that on the alienation subscale the functionality group and attractiveness group scored higher than the control group and therefore had greater discrepancies between their bodies and selves.

Contrast two. No significant differences between the functionality group and attractiveness group were found on the alienation subscale, $t(41) = .362$, $p = 0.360$. Contrary to the hypothesis, both experimental groups were equally affected by the media images no matter on which aspects they focused on.

Discussion

The current study is the first to highlight the importance of media influences on healthy individual's body-self unity experience. Although not all hypotheses were verified, the present study showed that exposure to certain media images can have negative influences on individual's body-self unity, such that individuals exposed to media images of models performing a difficult Yoga body movement showed higher discrepancies between their bodies and selves than a control group. This effect was shown on the alienation subscale, which measured discrepancies between the body and self. Thus, the first hypothesis of the experiment, which stated that the functionality group and attractiveness group will score higher on the alienation subscale than the control group, was verified. However, the results of the alienation subscale need to be interpreted with caution. The total scores for the experimental groups were about 9, which could have been as high as 24. Therefore, the current results are not as high as in an earlier study of body-self alienation (Van der Heij, 2007), which revealed alienation scores of about 12. Nevertheless, the earlier study measured alienation on patients, whereas the current study measured alienation on healthy individuals, where there are likely to be differences.
According to Gadow (1980), individuals focus on their own internal attributes of their body, while Objectification theory (Fredrickson & Roberts, 1997) assumes that individuals, in particular women, view their bodies from an outstanding third-person perspective. It was expected that the functionality group would score higher on the alienation subscale than the attractiveness group, because the concept of body-self unity is more closely related to internal

attributes of the body. Consequently, this would be a confirmation of Gadow's assumption. This addresses the second hypothesis, which stated that the functionality group will score higher on the alienation subscale than the attractiveness group. However, both experimental groups were equally affected by the media images of the models, which means that it was not per se important whether they focused their attention on body functionality or attractiveness. An explanation for this effect is that although the experiment was constructed to focus participant's attention to certain aspects of the media image, this does not necessarily mean that the subjects had not concentrated on other aspects of the image as well. In other words, it is reasonable to assume that the attractiveness group also focused on the body functionality of the model and that the functionality group focused on the attractiveness of the model as well. Hence, both groups were influenced by the media images on the same levels. According to these results, a further explanation is that both Objectification theory (Fredrickson & Roberts, 1997) and Gadow's assumption (1980) can be confirmed. Thus, women do not only view their body from a third-person perspective, but also focus on their internal attributes at the same time as well.

The third hypothesis stated that the functionality group and attractiveness group will score lower on the harmony subscale than the control group, whereas the fourth hypothesis stated that the functionality group will score lower on the harmony subscale than the attractiveness group. Contrary to the expectations, no differences on the harmony scale were found. A possible explanation for these results is that harmony is a more stable factor of body-self unity than alienation. Whereas alienation can easily be manipulated via an experimental design, harmony seems to be a more constant factor of the individual. Van der Heij (2007) did a research on the effects of alienation and harmony of body-self unity on patients with rheumatoid arthritis and found that alienation correlated with illness aspects, whereas harmony correlated with psychological aspects. Therefore, assuming that the current sample was physiologically and psychologically healthy, it is possible that physiological aspects of the participants were more affected through the experiment than psychological aspects.

According to the study results, more attention should be paid to the negative influences of the media, in particular on the prevention of negative media impacts on body-self unity. This can be achieved for example by educating young people about the adverse effects of media on body experiences, more specifically body-self unity. In addition, skills to resist peer pressure can be developed by interventions. Although this may seem an unattainable approach, Thompson & Heinberg (1999) have developed a media intervention programme focusing on psychoeducational information. More specifically, they taught young students about the negative effects of the mass media and, among other facts, how easily images of models can be manipulated using new technology. This intervention has proved successful in comparison to a control group.

However, the results of the current study need to be interpreted in the context of several limitations. First, the manipulation check did not yield the expected group differences, which means that it cannot be assumed that the experimental manipulation actually altered the respondent's cognition. Despite the fact that the hypothesis for the manipulation check was not verified, the author assumes that the experiment had a significant influence on the participants, because the means indicate specific trends in the attractiveness manipulation. In addition, another possible explanation is that the two items of the manipulation check were not sensitive enough to measure an effect of the experimental manipulation. Second, the direction of the ratings on the manipulation check items was contrary to the expectations. It was assumed that both experimental groups were primed with specific expectations about the last image, which was shown to all groups. The attractiveness group would have focused more on the attractiveness and therefore rated the model higher on this item. A possible explanation why this did not happen is that subjects in the attractiveness group were more critical towards the last model after viewing several images of models. In other words, the attractiveness group was indeed altered in their information-processing, but they were much more critical after viewing ten images and therefore rated the last model lower than the other groups. This can also explain why both experimental groups rated the last model lower on the attractiveness manipulation item than the control group. Third, the sample of subjects was not completely appropriate. The sample size was relatively small, which may have limited the statistical power of some analyses. However, for the manipulation check this would not have changed the direction of the results. In addition, the sample was not representative of the population. Due to methodological limitations, the study included young female participants, because they are most vulnerable to media effects on body perceptions. It would be interesting to investigate the effects of the experiment with both male and female old respondents in different age groups. Furthermore, the sample selection was far away from true selection, because the author asked several women in his own personal environment to participate. Thus, a selection bias was probably a limiting factor in this study, because women with higher SES (socio economic status) were preferred. Fourth, several biases could have resulted from the experimental setting. It is possible that women may feel uncomfortable with a male experimenter while answering statements such as "I would like to have a different body". Also, social desirability was another biasing factor, because many items of the Body Experience Questionnaire asked participants about personal evaluations of themselves. These problems could be resolved using a computer to administer the experiment. Thus, no other person would be present in the room and consequently results may have been different, because social desirability is more often a concern in face-to-face interactions. Fifth, the Body Experience Questionnaire has only been used in studies with patients with rheumatoid arthritis. Consequently, it is possible that the items do not fit well for a sample of healthy individuals. Sixth, perhaps another

experimental manipulation would have yielded higher effects. In this study, the experimental manipulation was implicitly administered, because participants were not directly told on which aspects they should focus their attention. However, it is also reasonable to deliver the manipulation more explicitly, for example by telling the respondents directly that they should try to compare themselves with the models and whether they can perform such a body movement. Finally, using other stimuli than printed images of models could have revealed higher effect. For example, short films or music videos of artists performing difficult body movements.

In summary, the central aim of the study was to explore the influences of media images on individual's body-self unity experience. The current study supported the hypothesis that media influences can have negative effects on individual's body-self unity perception. In particular, participants exposed to media images of models showed alienation of their bodies and selves, whereas harmony of their bodies and selves was intact.

Future research should attempt to investigate more specifically what factors can account for this phenomenon. Also, future studies could benefit from including a wide sample and other stimuli.

References

Ata, R. N., Ludden, A. B., & Lally, M. M. (2007). The effects of gender and family, friend, and media influences on eating behaviors and body image during adolescence. *Journal of Youth and Adolescence , 36*, 1024-1037.

Barlett, C. P., & Harris, R. J. (2008). The impact of body emphasizing video games on body image concersn in men and women. *Sex Roles , 59*, 586-601.

Barlett, C. P., Vowels, C. L., & Saucier, D. A. (2008). Meta-analysis of the effects of media images on men's body-image concerns. *Journal of Social and Clinical Psychology , 27* (3), 279-310.

Bell, B. T., Lawton, R., & Dittmar, H. (2007). The impact of thin models in music videos on adolescent girls' body dissatisfaction. *Body Image , 4*, 137-145.

Brehm, S. S., Kassin, S., & Fein, S. (2005). *Social Psychology.* Boston: Hougthon Mifflin.

Clark, L., & Tiggemann, M. (2006). Appearance culture in nine- to 12 year-old girls: Media and peer influences on body dissatisfaction. *Social Development , 14* (4), 628-643.

Clay, D., Vignoles, V. L., & Dittmar, H. (2005). Body image and self-esteem among adolescent girls: Testing the influence of sociocultural factors. *Journal of Research on Adolescence , 15* (4), 451-477.

Collins, R. L. (1996). For better or worse: The impact of upward social comparison on self-evaluations. *Psychological Bulletin , 119*, 51-69.

Corbin, J. M. (2003). The body in health and illness. *Qualitative Health Research , 13* (2), 256-267.

Cunningham, S. (2000). *What is a mind? An integrative introduction to the philosophy of mind.* Indianapolis: Hackett.

Dittmar, H. (2007). Consumer culture, identity and well-being: The search for the good life and the body perfect. In R. Brown, *European Monographs in Social Psychology Series.* London: Psychologyl Press.

Dittmar, H. (2005). Vulnerabiluty factors and processes linking sociocultural pressures and body dissatisfaction. *Journal of Social and Clinical Psychology , 24* (8), 1081-1087.

Durkin, S. J., & Paxton, S. J. (2002). Predictors of vulnerability to reduced body image satisfaction and psychological wellbeing in response to exposure to idealized female media images in adolescent girls. *Journal of Psychosomatic Research , 53*, 995-1005.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations , 7*, 117-140.

Field, A. (2009). *Discovering statistics using SPSS* (3rd Edition Ausg.). London: Sage Publications Ltd.

Fredrickson, B. L., & Roberts, T. A. (1997). Objectification theory: Toward umderstanding women's lived experiences and mental health risks. *Psychology of Women Quarterly , 21*, 173-206.

Gadow, S. (1980). Body and self: A dialectic. *The Journal of Medicine and Philosophy , 5* (3), 172-185.

Groesz, L. M., Levine, M. P., & Murnen, S. K. (2002). The effect of experimental presentation of thin media images on body satisfaction: A meta-analytic review. *International Journal of Eating Disorders , 31*, 1-16.

Grogan, S., & Wainwright, N. (1996). Growing up in the culture of slenderness. *Women's Studies International Forum , 19* (6), 665-673.

Hudak, P. L., Hogg-Johnson, S., Bombarier, C., McKeever, P. D., & Wright, J. G. (2004). Testing a new theory of patient satisfaction with treatment outcome. *Medical Care , 42* (8), 726-739.

Hudak, P. L., McKeever, P., & Wright, J. G. (2007). Unstable embodiments: A phenomenological interpretation of patient satisfaction with treatment outcome. *Journal of Medical Humanities , 28*, 31-44.

Johnson, P. J., McCreary, D. R., & Mills, J. S. (2007). Effects of Exposure to Objectified Male and Female Media

Images on Men's Psychological Well-Being. *Psychology of Men & Masculinity , 8* (2), 95-102.

Kaplan, R. M., & Saccuzzo, D. P. (2005). *Psychological Testing - Principles, apllications and issues* (6th Edition Ausg.). Belmont: Thomson Wadsworth.

Lau, P. W., Cheung, M. W., & Ransdell, L. B. (2008). A structural equation model of the relationship between body perception and self-esteem: Global physical self-concept as the mediator. *Psychology of sport and exercise , 9*, 493-509.

Longo, M. R., Schüür, F., Kammers, M. P., Tsakiris, M., & Haggard, P. (2007). What is embodiment? A psychometric approach. *Cognition , 107*, 978-998.

McKinley, N. M. (1998). Gender differences in undergraduate' body esteem: The mediating effects of objectified body consciousness and actual/ideal weight discrepancy. *Sex roles , 39*, 113-123.

McKinley, N. M. (2006). The Developmental and Cultural Contexts of Objectified Body Consciousness: A Longitudinal Analysis of Two Cohorts of Women. *Developmental Psychology , 42* (4), 679-687.

Schutz, H. k., Paxton, S. J., & Wertheim, E. H. (2002). Investigation of body comparison among adolescent girls. *Journal of Applied Social Psychology , 32*, 1906-1937.

Thomas, S. P. (2000). A phenomenological study of chronic pain. *Western Journal of Nursing Research , 22* (6), 683-705.

Thompson, J. K., & Heinberg, L. J. (1999). The media's influence on body image disturbance and eating disorders: We've reviled them, now can we rehabilitate them? *Journal of Social Issues , 55* (2), 339-353.

Van der Heij, A. (2007). Reuma: Een strijd met of een strijd tegen het eigen lichaam. *Masterthesis University Twente* .

Wagner, S. J. (1983). Descarte's argument for mind-body distinctness. *Philosophy and phenomenological resarch , 63* (4), 499-517.

Welk, G. J., & Eklund, B. (2005). Validation of the children and youth physical self perceptions profile for young children. *Psychology of Sport & Exercise , 6*, 51-65.

Willinge, A., Touyz, S., & Charles, M. (2006). How do body-dissatisfied and body-satisfied males and females judge the size of thin female celebrities. *International Journal of Eating Disorders , 39*, 576-582.

Appendix

A – Cover story

English version

"This experiment will take about 15 minutes.

There has been a great deal of research into the effects of different advertisements and how individuals perceive organizations intended messages. However, the impact of concentration and personal involvement on advertisements has been rarely observed. It is now widely accepted that individual's levels of concentration affect their information-processing capabilities. One reason to account for this is the fact that individuals have only a limited amount of attention and they need to select different aspects on every situation to concentrate on. Therefore, other aspects which have not been selected are not recognized as well. The aim of this study is to investigate the effects of selected attention to certain media images in relation to whether people are personally involved into the topic of the image. In this experiment you will see different media images one after another and directly answer several statements about the specific image.

Thank you for your participation."

German version

„Dieses Experiment dauert ungefähr 15 Minuten.

In den letzten Jahren wurden bereits viele Studien durchgeführt, die die unterschiedlichen Effekte von Werbung untersuchten und herausfanden, wie Personen die eigentlichen Intentionen der Werbung aufnehmen. Jedoch wurde bisher der Einfluss von Konzentration und persönlichem Interesse auf Werbung wenig beachtet. Es ist bewiesen, dass individuelle Konzentrationsunterschiede die Verarbeitung von Informationen stark beeinflussen. Ein Grund hierfür ist die begrenzte Menge an Bewusstseinsvermögen beim Menschen, welches dazu führt, dass Menschen in jeder Situation nur bestimmte Aspekte auswählen. Sie können sich deswegen nicht auf alle Elemente gleichermaßen fokussieren. Daher werden Aspekte, die vorher nicht bewusst ausgewählt worden sind, nicht so gut wieder erkannt. Diese Untersuchung hat das Ziel, die verschiedenen Effekte im Hinblick auf Konzentrationsunterschiede und persönlichem Interesse von Werbung zu erforschen. Das Experiment ist so aufgebaut, dass Sie verschiedene Werbebilder nacheinander sehen und direkt im Anschluss verschiedene Aussagen zu dem jeweiligen Bild bewerten sollen.

Vielen Dank für Ihre Mitarbeit."

B – Media images

Experimental conditions (Functionality group and Attractiveness group)

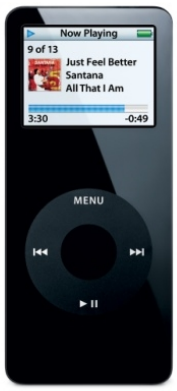









Control condition (Control group)



C – Body Experience Questionnaire

English version (Alienation subscale in italics)

Statements	Strongly disagree	Moderately disagree	Moderately agree	Strongly agree
1. I reflect on what is good for my body.				
2. My body is a burden to me.				
3. It feels as if my body doesn't belong to me.				
4. I don't feel complete.				
5. My body lets me know what is good for me.				
6. My body is unpredictable				
7. I feel betrayed by my body.				
8. I would like to have a different body.				
9. I am sensible to my body.				
10. My body feels familiar to me.				

German version (Alienation subscale in italics)

Aussagen	Stimme überhaupt nicht zu	Stimme eher nicht zu	Stimme eher zu	Stimme vollkommen zu
1. Ich denke darüber nach was gut für meinen Körper ist.				
2. Mein Körper fällt mir zu Last.				
3. Es fühlt sich so an, als ob mein Körper nicht zu mir gehört.				
4. Ich fühle mich nicht ganz.				
5. Mein Körper lässt mich wissen was gut für mich ist.				
6. Mein Körper ist unberechenbar.				
7. Ich fühle mich durch meinen Körper verraten.				
8. Ich würde gerne einen anderen Körper haben.				
9. Ich spüre meinen Körper gut.				
10. Mein Körper fühlt sich vertraut an.				

D – Experimental manipulation

Functionality group statements – English version

Statements	Strongly disagree	Moderately disagree	Moderately agree	Strongly agree
1. Most people are not able to do this body movement.				
2. In general, you need a lot of practice to do this body movement.				
3. In my opinion, this body movement is difficult to perform.				
4. I could easily perform this body movement.				
5. I like this body movement.				

German version

Aussagen	Stimme überhaupt nicht zu	Stimme eher nicht zu	Stimme eher zu	Stimme vollkommen zu
1. Die meisten Menschen können so eine Körperbewegung nicht durchführen.				
2. Generell braucht man sehr viel Übung, um diese Körperbewegung durchzuführen.				
3. Meiner Meinung nach ist diese Körperbewegung schwer durchzuführen.				
4. Ich könnte ohne weiteres meinen Körper in diese Position bringen.				
5. Ich mag diese Körperbewegung.				

Attractiveness group statements – English version

Statements	Strongly disagree	Moderately disagree	Moderately agree	Strongly agree
1. Most people will find this model very attractive.				
2. In general, it is difficult to be as attractive as this model.				
3. In my opinion, this model is very attractive.				
4. I am as attractive as this model.				
5. I like this model.				

German version

Aussagen	Stimme überhaupt nicht zu	Stimme eher nicht zu	Stimme eher zu	Stimme vollkommen zu
1. Die meisten Menschen finden dass dieses Model sehr attraktiv ist.				
2. Es ist im Allgemeinen schwer so attraktiv zu sein, wie dieses Model.				
3. Meiner Meinung nach ist dieses Model sehr attraktiv.				
4. Ich selbst bin genau so attraktiv wie dieses Model.				
5. Ich mag dieses Model.				

Control group statements – English version

Statements	Strongly disagree	Moderately disagree	Moderately agree	Strongly agree
1. Most people will like this article.				
2. In general, this article is useful.				
3. In my opinion, this article is not very useful.				
4. I could easily afford this article.				
5. I like this article.				

German version

Aussagen	Stimme überhaupt nicht zu	Stimme eher nicht zu	Stimme eher zu	Stimme vollkommen zu
1. Die meisten Menschen mögen diesen Artikel.				
2. Generell ist dieser Artikel sehr nützlich.				
3. Für mich ist dieser Artikel nicht nützlich.				
4. Ich könnte diesen Artikel ohne weiteres kaufen.				
5. Ich mag diese Artikel.				

E – Manipulation check

Items - English version

"Please answer the following statements. According to your opinion, set your mark there where you think the model's characteristics are met."

High functionality ☐☐☐☐☐☐☐☐☐☐ No functionality

High attractiveness ☐☐☐☐☐☐☐☐☐☐ No attractiveness

Items - German version

"Bewerten Sie nun die folgenden zwei Eigenschaften des vorherigen Models. Kreuzen Sie dort an, wo Sie glauben, dass diese Eigenschaft auf das Model zutrifft."

Hohe Körperfunktionalität ☐☐☐☐☐☐☐☐☐☐ Geringe Körperfunktionalität

Hohe Attraktivität ☐☐☐☐☐☐☐☐☐☐ Geringe Attraktivität

Media Image of manipulation check