

## **‘Influences on self-perception: an analysis of factors across age groups’.**

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### **Introduction**

Research has indicated that body image is a multifaceted construct with the main focus being upon young females. There has been much evidence that the effect of socio-cultural attitudes coerce young women to conform to media ideals and this in turn has led to an increase in eating disorders (Halliwell & Dittmar 2003). Therefore, as participants are mainly derived from student populations, this is restrictive as such a sample provides a concentrated age range, with little or no account of ethnicity, socio-economic position and educational level (Tiggemann 2004) all of which could impact. Despite there being little research examining the association between age and body satisfaction (Halliwell & Dittmar 2003), studies that have been conducted have found body dissatisfaction to be a constant feature throughout the life span (Cash & Henry 1995). Allaz, Bernstein, Rouget, Archinard and Morabia (1998) discovered that the rates of dieting to be very high among older women. This finding supports Bennett and Stevens (1996) who sampled different age groups and found no significant difference in disorder eating behaviours, “it appears similar patterns of dieting behaviour occur for both older and younger women” (p 38). As a person’s age increases, typically so does their weight. Other factors with increasing age are less supple skin, thinning hair and wrinkles, (Tiggemann 2004) so it is fair to assume that poor image and body satisfaction is not just the prerogative of the younger generation.

Stevens and Tiggemann (1998) found that “women of all ages rated their current figure as significantly larger than their ideal figure, indicating the presence of body dissatisfaction across the life span” (p 94). They also concluded that the level of dissatisfaction did not vary with age or status; however the older women rated their ideal figure as larger than would be perceived as attractive to men. Other studies provide a possible reason for this. Thompson, van den Berg, Roehrig, Guarda & Heinberg (2004) suggest that an awareness of the importance of appearance does not indicate internalization or conformity. Tiggemann (2004) suggests that older women have greater “cognitive control” regarding their body than younger cohorts. Such control could be due to the different expectations and relative experience across the lifespan.

This notion is supported by Fredrickson and Roberts (1997) who postulated the ‘Self-Objectification Theory’ and suggested that as women age they become less associated with sexual objectification and this freedom allows them to relinquish the corresponding social pressures. They also report that females who do objectify themselves in line with social pressures, feel shame and anxiety if they do not live up to this expected perfection. Nichter and Nichter (1991) found that the adolescent girl’s ‘ideal’ was 5ft 7 in, 100lb, a size 5 with long blonde hair and blue eyes. These statistics give a Body Mass Index (BMI) of 15.61 which is well below the healthy minimum of

20.00. In a meta-analysis, Groesz, Levine and Murnen (2001) found that body image was significantly more negative for young participants “who are vulnerable to activation of a thinness schema” (p 1). This suggests that internalization has a major and detrimental effect on body satisfaction and therefore could encourage negative associated behaviours.

Social pressures include the role of the media in portraying the ‘ideal image’ as well as the influences of peers, family and health care practitioners (Groesz, Levine & Murnen 2001). A wealth of research has been undertaken in respect of media portrayal and influence which has indicated that sustained exposure to ‘thin ideal’ images from TV and magazines is correlated with higher levels of body dissatisfaction, and in some cases, eating disorder behaviours (Grabe, Ward & Hyde 2008), (Tucci & Peters 2008), (Stice & Shaw 2002). It appears that less studies have evaluated the influence of family and peers (Cash 2005), however where research has been conducted, there is an indication that peer pressure and domestic attitudes can also underpin the ‘thin ideal’ (Thompson & Stice 2001), (Grabe, Ward & Hyde 2008). McKinley and Hyde (1996) found that people’s feelings are generally unsympathetic towards weight and shape as this is perceived to be more controllable than other aspects of physical appearance. This suggests a consistent message being driven from a variety of sources.

A major concern is that feelings of body dissatisfaction are increasing (Cash & Henry 1995), (Tiggemann 2004) and this ultimately can cause other psychological disturbances such as eating disorder behaviours and low self esteem (Ridolph & Vander Wall 2008). Research has indicated that body dissatisfaction has now reached ‘normative levels’ (Ridolph & Vander Wall 2008), (Grabe, Ward & Hyde 2008). However, recent research is indicating that intervention can have preventative impact on women who have previously been in a high-internalization category, (Yamamiya, Cash, Melynck, Posavac & Posavac (2005). Taking into account the increase in women reporting body dissatisfaction, the multifaceted aspect of body image and the apparent lack of comparative analysis, this study takes account of four factors across two age groups. These four factors are, media pressures, internalization, eating disorder symptomology and body satisfaction. For the purposes of this study, body satisfaction is referred to in narrowest terms relating to weight and shape and does not take into account general appearance. The experimental hypotheses are that self perception is a multifaceted construct affected by images of other women and that older women will perceive themselves similarly to younger women.

## Method

### Participants

An opportunity sample of participants was selected, N=116. These were placed into two groups based on their age. Group 1 (N=69) was considered the younger group with an age range of 18 to 25 years, of which 35 undertook the thin ideal condition and 34 took part in the plus size condition. Group 1 mean age = 20.42, SD = 1.95. Group 2 (N= 47) was considered the older group aged between 35 and 45 years, of which 24 undertook the thin ideal condition and 23 took part in the plus size condition. Group 2 mean age = 37.81, SD = 3.98. This study aimed to examine the attitudes of women, therefore the participant population was entirely female.

### Materials

A group of researchers constructed a pilot questionnaire (appendix G) by selecting some questions from current studies and by devising some statements of their own. Questions were taken from the Eating Disorder Diagnostic Scale (EDDS), (Stice, Telch & Rizvi 2000), The Socio-Cultural Attitudes Towards Appearance Scale 3 (SATAQ3), (Thompson, van den Berg, Roehrig, Guarda & Heinberg 2004). The thin ideal images and plus size images were taken from a study examining media influences on body satisfaction in a female student sample (Tucci & Peters 2008). The research team then produced further statements so that the questionnaire contained 25 statements in total that reflected media pressures, internalization, eating disorder symptomology and body satisfaction. Of these 25 questions, 6 negative and 19 were positive. The statements were then typed into a questionnaire format and a 5 point Likert scale (1952) was devised so that participants could mark how strongly they agreed or disagreed with the statement. The five levels of agreement ranged from strongly disagree, disagree, neither disagree or agree, agree, or strongly agree. Two sets of images were used for each condition. The first were comprised of images that are considered the 'thin ideal' (appendix E) and are beneath a UK size 10. The second set of images were comprised of plus size models (appendix F) who are above a UK size 16. A participant information sheet (appendix C) and consent form (appendix D) were given to participants. A debriefing sheet (appendix I) was given to the participant upon completion of the questionnaire.

The questionnaire was distributed to a small group of participants N=31 for the purpose of running a pilot study. Following on from the first questionnaire, a reliability analysis was conducted to test how strongly the statements reflected what the research team wanted to measure. This reliability analysis resulted in 4 statements being excluded from the original questionnaire. Initial Criteria for weakness was assessed by questions with low inter-item correlation. Following this, items with a corrected item total correlation below 0.5 were then considered for elimination. The final criteria for elimination took into account the value of Cronbach's alpha  $\alpha$  should the item be deleted.

The following table details which statements were removed and the reasons for their omission.

Table 1 illustrating the statements (items) that were removed following reliability 1 analysis and the reasons for their omission

Question Number	Reason
4 – “I felt pressure from TV and magazines to exercise”	1
8 – “I can relate myself to people I see in magazines”	1 and 2
13 – “I feel pressure from TV and magazines to be thin”	2 and 3
19 – “I have noticed the shape of other people and felt that my own shape compared favourably”	3

Reasons for exclusion

1 = low inter-item correlation,

2 = Corrected item total correlation below 0.5

3 = Cronbach’s Alpha  $\alpha$  increased if item deleted

### Design

A 2x2 between subjects design was used to test the prediction that self perception is a multifaceted construct and that older people may have the same attitude towards media pressure, eating disorder symptomology and body satisfaction and internalize these issues consistent with younger cohorts. This design will compare and examine the attitudes of the two groups; older and younger women. The experiment contained two IVs. The first was group membership based on the ages of the participants, group 1 being younger and group 2 being older. The second was the condition of whether the participants viewed images of the thin ideal (condition 1) or plus size women (condition 2). There were four DVs in total; media pressures, internalization, eating disorder symptomology and body satisfaction. The participants were to spend three minutes looking through the images that they had been given before completing the questionnaire. Anonymity of the participants was tightly controlled; the only information required was their date of birth to identify which group they belonged to and a signature to confirm that they had read and understood the participant information sheet and were willing to take part.

## Procedure

A questionnaire was devised that consisted of 25 statements relating to attitudes about media pressure, internalization, eating disorder symptomology and body satisfaction. These were a combination of 6 negative statements and 19 positive statements. A 5 point Likert scale was added below each statement to indicate a preference. The questionnaire was then distributed to 31 people for the purposes of a pilot study. Age was not a factor for the purpose of the pilot. Once all the questionnaires had been returned the results were input into SPSS and a reliability analysis was conducted. The research team then recoded the negative items on the scale to ensure that all the statements were measuring the same thing on the same scale. Items were removed from the scale for reasons of low inter-item correlation, corrected item total correlation below 0.5 and the effect of the item on Cronbach's Alpha  $\alpha$ . This left 21 statements which then became the final questionnaire (appendix H) which was then distributed to 116 participants along with images of either thin ideal or plus size women. A second reliability analysis was conducted on 116 returned questionnaires. Further reliability analyses were conducted upon each of the four factors to ascertain if these were all acceptable as individual scales of measurement. Following this, all four factors were then collapsed into individual DVs for SPSS input. A Multiple Analysis of Variance (MANOVA) was conducted on SPSS to see if the results obtained were significant so as to support the experimental hypotheses. A further statistical analysis of between subject effects was carried out to ascertain if there was any interaction between the factors of age and condition.

## Results

### Reliability analysis 1

A questionnaire of 25 items was distributed to 31 people and the results from those questions were entered into SPSS. Initial results showed that the questionnaire had good internal validity and consistency. A reliability analysis was conducted to assess if questions could be removed to further strengthen the internal validity and consistency.

Table 2 shows Summary Item Statistics at Reliability Analysis 1

	Mean	Minimum	Maximum	Variance	No of Items
Item Means	3.347	2.548	3.968	.142	25
<b>Inter-Item Correlation</b>	<b>.396</b>	<b>-.413</b>	<b>.835</b>	<b>.053</b>	<b>25</b>

Table 2 shows the summary item statistics after running the reliability analysis. This table indicates the average scores of participants, the number of items and the strength of the correlation. An inter-item correlation of 0.6 and above would show that the questionnaire has uni-dimensionality. The summary item statistics in the table above show an inter-item correlation of .396 which demonstrates that the questionnaire is multi-dimensional. The internal consistency reliability (Cronbach's alpha  $\alpha$ ) was shown to be 0.936 in respect of 25 items which indicates that the scale had good internal validity.

### Reliability analysis 2

A further reliability test was conducted to examine the internal validity and reliability of the questions based on the answers to 21 items. The reliability analysis showed that the questionnaire had good internal validity and consistency.

Table 3 shows Summary Item Statistics at Reliability 2

	Mean	Minimum	Maximum	Variance	No of Items
Item Means	3.164	2.319	3.966	.143	<b>21</b>
<b>Inter-Item Correlation</b>	<b>.466</b>	<b>.160</b>	<b>.831</b>	<b>0.14</b>	<b>21</b>

Table 3 shows the summary item statistics after running the second reliability analysis. The table details the average scores of participants which is consistent with the first reliability analysis. The inter-item correlation shows 0.466 which demonstrates that the questionnaire is multi-dimensional. The Cronbach's alpha  $\alpha$  after the second reliability analysis was shown to be 0.948 in respect of 21 items which indicates the scale was internally consistent and reliable.

Further reliability analyses (Cronbach's alpha  $\alpha$ ) were conducted upon each of the four factors to ascertain if these were all acceptable as scales of measurement. These were demonstrated as, Media Pressures  $\alpha$ = .835, Internalization  $\alpha$ = .897, Eating Disorder Symptomology  $\alpha$ =.784 and Body Satisfaction  $\alpha$ = .909. These results demonstrate that the four factors were all reliable and consistent as independent scales.

Body satisfaction scores were input in reverse order into SPSS, therefore for the purposes of discussing the results, a significant result in terms of body satisfaction indicates a high level of dissatisfaction.

### Criterion

The experimental hypothesis stated that self perception is a multifaceted construct affected by images of other women and that older women will perceive themselves similarly to younger women. In order to test this, a Multiple Analysis of Variance (MANOVA) was conducted on SPSS to explore the relationship between the four factors and the two IVs; age and condition.

A Levenes test of equality of variance was conducted on the four factors and was found to be non-significant in each case; media pressure [F(3,112)= 1.471,  $p < .226$ ]; internalization [F(3,112)= .126,  $p < .945$ ]; eating disorder symptomology [F(3,112)= .307,  $p < .821$ ] and body satisfaction [F(3,112)= .210,  $p < .889$ ].

A significant difference was found between the two conditions on all four DVs; media pressures [F(1,116)= 15.18,  $p < .001$ ]; internalization [F(1,116)= 8.66,  $p < .004$ ], eating disorder symptomology [F(1,116)= 9.33,  $p < .003$ ] and body satisfaction [F(1,116)= 10.3,  $p < .002$ ]. This supports the first experimental hypothesis that both groups were affected by viewing the thin ideal images across the four factors.

A non-significant difference was found between the two groups for three of the factors; media pressures [F(1,116)= 2.38,  $p < .126$ ], eating disorder symptomology [F(1,116)= .501,  $p < .480$ ] and body satisfaction [F(1,116)= 1.27,  $p < .262$ ]. This indicates that both groups were equally affected regardless of age and supports the second experimental hypothesis.

A significant difference was found between both groups in respect of internalization [F(1,116)= 4.43,  $p < .037$ ]. The descriptive statistics from the MANOVA show Group 1 internalization: mean=3.304, SD=.933 and Group 2 internalization: mean=2.941, SD=.957. This demonstrates that younger women internalize more so than older women.

The test for interaction effects between the two IVs, group and condition, showed no significant effect; media pressures [(F1,116)=.298,  $p < .586$ ], internalization [(F1,116)=.784,  $p < .378$ ], eating disorder symptomology [(F1,116)=.952,  $p < .331$ ] and body satisfaction [(F1,116)=.299,  $p < .586$ ].

## **Findings & Conclusion**

This study found that women of both age groups did assess themselves negatively after exposure to the 'thin ideal' across the four factors measured. Therefore, all participants in the 'thin ideal' condition scored higher media pressure, internalization, eating disorder symptomology and body satisfaction. The scores for both groups in the plus size condition were significantly smaller across all four factors. This supports present research that states negative body image will be greater following exposure to thin media images as opposed to plus size images (Groesz, Levine & Murnen 2001). These findings support the first experimental hypothesis that both groups would be affected more so after viewing 'thin ideal' images across all four factors. There appeared no significant differences between the age groups in relation to three of the four factors, media pressures, eating disorder symptomology and body satisfaction. This does support the second hypothesis in that older women do perceive themselves similarly to younger women. However a significant difference was reported for internalization between the two groups demonstrating that younger women had a tendency to internalize the images more so than their older cohorts who did not.

The findings of this study suggest that both younger and older women record similar responses in relation to media pressures, eating disorder symptomology and body satisfaction in relation to their self perception. This supports the findings by Bennett & Stevens (1996) who reported similar eating and dieting behaviours across age groups and Stevens & Tiggemann (1998) who found that women of all ages experienced body dissatisfaction in rating their current figure much larger than their ideal figure. This study has also supported previous research that states many factors have an impact upon body image (Halliwell & Dittmar 2003), (Cash 2005).

This study did draw out a disparity regarding internalization between the two groups. There could be a tangible reason for this in the way that older women cognitively manage their image concept which has been suggested by Tiggemann (2004). It may be beneficial to examine what these cognitive strategies might be in order to ascertain if any aspect could be used as an intervention measure for younger females. Webster and Tiggemann (2003) found that as age increases, so do cognitive strategies such as realistic expectations and re-appraisal. This could foster a 'positive psychology' where women may acknowledge social pressures and may engage in some associated behaviours, but do not internalize and therefore accept their situation (Cash 2005).

Bearman, Stice and Chase (2003) undertook a review of intervention strategies and concluded some degree of success in using such methods. Support for intervention strategies was found by Yamamiya, Cash, Melynck, Posavac & Posavac (2005) who reported that women who scored low on internalization were relatively immune to a body image impact following brief exposure to thin and beautiful media ideals when accompanied by information regarding artificial beauty and genetic realities, "adverse effect of the media exposure was significantly reduced among high internalization women when they were given media literacy information" (p 78). This illustrates that preventative action could yield some benefit.

The difference in internalization appears to be the prominent result here and could perhaps be the key to intervention and prevention of detrimental behaviours associated with negative body image. Yamamiya et al (2005) also used a dissonance induction in parallel with the media literacy information. They found that the media literacy information had the greater impact, however they did concede that the dissonance measure was weak and had a stronger induction process taken place, this may have yielded less internalization comparative to or greater than the media literacy. Further research into a dissonance induction approach may offer another useful preventative measure.

The aim of the study was to determine if there was any difference between age groups of female participants in respect of media pressure, internalization, eating disorder symptomology and body satisfaction. Significant differences were found in respect of the two conditions and no significant difference between the two age groups in respect of three of the four factors. These findings appear consistent with current research.

This study did not take account of cultural factors and it may be helpful to examine other variables such as socio-economic status, educational levels and ethnicity. Such factors have a bearing on behaviours and the support that is available to people.

A further limitation with this study is that internalization is dependent upon what is important to the individual and the media can be seen as arbitrary. It would be pertinent to examine if the participant feels that the media is a useful and reliable source of fashion and health information and if they value the role of the media in providing this.

On occasion, participants who undertook this study commented that the likert scale did not accurately reflect the response they wanted to give. As opposed to responses such as agree or disagree, it may have been more useful to respond with 'sometimes', 'always' or 'never'. These responses may have given a greater degree of accuracy. This study has provided a small snapshot comparing two groups at one time and could therefore be seen as limited. Longitudinal studies would be a more beneficial way of extracting information and marking any changes or consistencies over time. Such an approach would require indepth and consistent experimentation but could provide for more robust theories and preventative measures. Taking into account that an increase in negative self perception has been reported (Cash & Henry 1995), further research could be conducted into whether family and peer pressure impact upon those who experience negative body image to ascertain how deeply embedded the 'thin ideal' has become in our culture.

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