

# **Psychometric Properties of the Icelandic Translation of the Body Appreciation Scale-2**

Anna Elísa Karlsdóttir  
Þóra Gréta Pálmarsdóttir

Lokaverkefni til BS-gráðu í Sálfræði  
Leiðbeinendur: Sigrún Daníelsdóttir og Ragna Benedikta Garðarsdóttir

Sálfræðideild  
Heilbrigðisvísindasvið Háskóla Íslands  
Júní 2016

Ritgerð þessi er lokaverkefni til BS-gráðu í Sálfræði og er óheimilt að afrita ritgerðina á nokkurn hátt nema með leyfi rétthafa.

© Anna Elísa Karlsdóttir og Þóra Gréta Pálmarsdóttir 2016

Prentun: Háskólaprent

Reykjavík, Ísland 2016

### **Abstract**

The Body Appreciation Scale-2 is a measure of positive body image, which is a growing field of study in modern society. In this study, the psychometric properties of the Icelandic version of the Body Appreciation Scale-2 were examined in a sample of 905 people. Exploratory factor analysis of the BAS-2 revealed a one factor structure and factor loadings similar to previous research. Predictive and construct validity were tested via correlations between the BAS-2 and six other related measures. Internal consistency of the Icelandic version BAS-2 was good,  $\alpha = 0.95$ . As hypothesized the BAS-2 was negatively correlated with internalization of appearance ideals and physical appearance comparison and positively correlated with appearance evaluation, self-esteem, well-being and body-food choice congruence. These results indicate that the Icelandic translation of the BAS-2 is an appropriate measure of positive body image in Iceland.

### **Acknowledgements**

We would like to thank our instructors Sigrún Daníelsdóttir and Ragna B. Garðarsdóttir for their guidance, support and good advice during the writing of this thesis. We would also like to thank those who proofread our thesis. We thank our families for their patience, encouragement and support during the whole process of the research and writing the thesis. Last, we would like to thank all of the participants who gave their time and responded to our survey.

## Table of Contents

Abstract .....	3
Acknowledgements .....	4
Table of Contents .....	5
Introduction .....	6
The importance of researching positive body image .....	6
Protective Functions of Positive Body Image .....	7
Positive body image and mental and physical well-being .....	8
Body Appreciation Scale.....	9
Aims of the Current Study .....	9
Method .....	11
Participants and procedure .....	11
Measures.....	11
Statistical Analysis .....	13
Results .....	13
Discussion .....	16
References .....	20

Research on positive body image has increased in recent years and brought increased understanding to the relationship between positive body image and various indices of mental well-being (Halliwell, 2013; Tylka & Wood-Barcalow, 2015; Wood-Barcalow, Tylka & Augustus-Horvath, 2010). There is no absolute definition of positive body image but research indicates that it consists of love and respect for the body, appreciating its unique beauty and functions, accepting the body despite differences from media-ideals and feeling confident and comfortable in one's own skin (Wood-Barcalow et al., 2010).

Body appreciation is a topic of positive psychology, and represents key characteristics of positive body image, such as accepting, holding favorable opinions of and respecting one's own body (Avalos, Tylka & Wood-Barcalow, 2005; Frisén & Holmqvist, 2010; Tylka & Wood-Barcalow, 2015). Positive psychology emphasizes that psychology is not mainly concerned with pathology and weakness, but is also the study of positive traits and personal strengths that contribute to well-being and health. Positive psychology, thus, is a study of psychological factors, such as positive body image, that contribute to and maintain quality of life. Researching the pathology and effects of negative body image does not reach all the important aspects of body image and thus it is an important addition to research positive body image (Avalos et al., 2005). According to previous research, increased positive body image is related to better quality of life. Positive body image has, for example, been found to explain more of the incremental variability in self-esteem than the absence of negative body image. This suggests that positive body image contains important factors beyond negative body image. (Swami, Stieger, Haubner & Voracek, 2008; Tiggemann, 2015).

### **The importance of researching positive body image**

A growing body of research suggest that positive body image has a great impact on quality of life, such as health, optimism and several other life outcomes (Cash & Fleming, 2002; Tiggemann, 2015). Body image has been shown to affect eating behavior, emotion and social interaction, thus a positive body image can greatly contribute to well-being (Cash & Fleming, 2002). Understanding the impact of a positive body image and how it can be enhanced or maintained can help researchers and clinicians develop interventions and preventive efforts to increase quality of life. For example, children and adolescents could be taught critical thinking about ideals and ways to interpret body image information to enhance their body image and prevent them from developing a more negative body image (Avalos et al., 2005; Wood-Barcalow et al., 2010). We live in a culture where thinness and muscularity are idealized and we are exposed to social pressures that push us toward conforming to this norm. The pressure

toward the thin/muscular ideal is at least one factor that contributes to problems in body image (Striegel-Moore & Bulik, 2007). The effects that body image has on people's lives underscores the importance of teaching people to evaluate media messages and images about the body in a critical way to enhance a positive body image (Lee et al., 2014). It is important to educate children about how the media works, and how thin ideals are used in media. This could teach children to view media and media-ideals in a critical way. They could be taught better ways to process ideals and define beauty, as well as being shown how the definition of beauty varies through time and between cultures (Holmqvist and Frisén, 2012).

### **Protective Functions of Positive Body Image**

According to Wood-Barcalow et al. (2010) a positive body image helps women filter information, such as media-ideals and appearance commentary, in a body protective manner. They point out that this filter is developed by being aware of media-ideals and objectification of women so that incoming information concerning body image and appearance is not unconsciously affecting women's feelings about themselves. This filter is not perfect and negative information regularly seeps through. When this happens, the body image is negatively affected, but when women, who have this positive filter, realize this they can readjust their filter to reframe the information in a positive way (Wood-Barcalow et al, 2010).

Research has indicated a relationship between positive social connections and positive body image. In a study by Wood-Barcalow et al (2010) women with a positive body image were asked about the effects friends and family had on their body image. Not only did these women seem to have social support, but they also avoided people who were occupied with weight and appearance-ideals. Their families did not emphasize the importance of looks and taught them that self-worth comes from something more important, such as personality. This supportive social environment helps women to be more critical and aware of ideals and objectification. This awareness in turn helps them develop a protective filter (Wood-Barcalow et al., 2010). Additionally, Alleva, Veldhuis and Martijn (2016) found that women who focus more on the functionality of their body experience more body appreciation and functionality satisfaction after viewing thin-ideals, compared to women who do not. This suggests that teaching women to focus on their body's functionality and appreciating how their bodies work could protect them from body dissatisfaction and promote a positive body image (Alleva et al., 2016). In a research by Halliwell (2013) thin-ideal internalization and body appreciation were measured in a group of women. She found that women who scored high on thin-ideal internalization and low on body appreciation reported more negative attitudes toward their

bodies after viewing commercials with thin models. In contrast, if their body appreciation was high, the commercials had less of a negative impact, even less than the control group that viewed commercials with no thin ideals. This study suggests that women with high body appreciation have a protective processing style when they view thin-ideal images and this processing style actually seems to enhance their body image when confronted with these ideals (Halliwell, 2013). Finally, in a qualitative study, where women with a positive body image were interviewed on media-ideals and beauty, many of the participants had their own definitions of beauty and were critical of media-ideals (Holmqvist & Frisén, 2012). They were aware of the negative effects of media-ideals, how unrealistic these ideals can be and emphasized that beauty is variable and subjective. These results suggest that critical thinking and awareness of media-ideals helps women maintain a positive body image and might protect them from internalizing unrealistic appearance ideals (Holmqvist & Frisén, 2012).

### **Positive body image and mental and physical well-being**

Increased positive body image is associated with good physical and mental health (Avalos et al., 2005; Gillen, 2015; Tylka & Wood-Barcalow, 2015). Gillen (2015) found that both men and women with a higher positive body image reported fewer symptoms of depression, were less likely to have unhealthy eating behaviors, had higher self-esteem (i.e. one's overall sense of worth as an individual) and showed protective behavior toward the body. This result was independent of people's BMI, which suggests that a positive body image has more influence than actual body size on physical and mental health (Gillen, 2015). Other research has found that body satisfaction has a positive relationship with psychological well-being and self-esteem, where a positive body image may lead to higher self-esteem, and therefore a general sense of increased well-being (Lee, Lee, Choi, Kim & Han, 2014). Body appreciation has also been associated with eating behavior, for example it has a positive relationship with nutrition intake and healthy food consumption, which has also been linked to well-being (Tylka & Kroon Van Diest, 2013). Further, Halliwell (2013), found that body appreciation has been negatively correlated with internalization of thin-ideals, and seems to act as a buffer toward the negative effects of thin-ideal internalization (Halliwell, 2013). Research also suggests that engaging less in social appearance comparison and less self-objectification could contribute to an increase in positive body image (Andrew, Tiggemann & Clark, 2015).

## **Body Appreciation Scale**

Research on positive body image suggests that it is important to have accurate, reproducible and reliable measures that quantify the many aspects of positive body image (Avalos et al., 2005; Tylka & Wood-Barcalow, 2015; Wood-Barcalow et al., 2010). The Body Appreciation Scale (BAS) was created for that purpose, and measures four aspects of positive body image. First, favorable opinions of one's own body; second, acceptance of the body; third, protection of the body by rejecting unrealistic media ideals, and fourth, respect for the body (Avalos et al., 2005). When researching the effects and predictors of body image development, the BAS can be a good tool to compare to other related measures. It can also be helpful in understanding what it is that contributes to and emerges from a positive body image (Avalos et al., 2005). Studies support the use of the BAS as a measurement on body image for both males and females (Swami et al., 2008; Tylka, 2013). Men have on average, higher levels of body appreciation than women (Swami et al., 2008; Tylka, 2013), perhaps because women seem to experience more external pressure to look a certain way.

The BAS-2 is a revised version of the original BAS (Avalos et al., 2005) by Tylka and Wood-Barcalow (2015). They took a pool of 19 items, including the original items, and conducted a factor analysis to see which items best fitted the scale. The final result was a 10 item scale, including 5 of the original items and 5 new or adjusted items. The purpose of this revision was to gender-neutralize the list and build it on a more current definition of positive body image, as the concept has been researched increasingly in the past decade. The BAS-2 has good internal reliability and construct validity as well as a unidimensional factor structure, indicating it has one comprehensive factor where all the items measure one construct, body appreciation (Tylka & Wood-Barcalow, 2015).

## **Aims of the Current Study**

The aim of this study was to conduct a psychometric evaluation of the Icelandic translation of the BAS-2 in a unisex sample. This is important for the use of this questionnaire in Iceland and establishes further support for the validity of the BAS-2 as a universal measure. For this purpose, we conducted a factor analysis on the BAS-2, as well as a reliability analysis. We also explored the construct validity and predictive validity of the BAS-2 by calculating its correlation with measures that have been related to positive body image in previous research.

Based on the previous studies we expect to find a unidimensional structure for the Icelandic version of the BAS-2, proving it to measure one construct. We expected good internal reliability, in accordance with previous research. Previous studies have found associations

between several aspects closely related to body image and body behavior, we hypothesized that body appreciation would have positive correlations with self-esteem, intuitive eating, appearance evaluation, and well-being. In addition, we hypothesized it would correlate negatively with media ideal-internalization and physical appearance comparison. These correlations were expected to be significant, indicating predictive validity as well as construct validity of the BAS-2.

## Method

### Participants and procedure

The sample used in this study was a convenience sample from the general public and consisted of 905 participants. The sample consisted of 742 women, 144 men and 3 who referred to their gender as “other”. The average age for the sample was 30.4 (SD = 12.7). Of those who provided information about weight and height (N = 649) the average BMI was 27.3 (SD = 7.4), ranging from 14.36 to 64.01, placing the average respondent within the overweight category.

The participants were presented with an online survey on QuestionPro. Participants were not asked about nationality, but the questionnaire was in Icelandic and was posted to Icelandic Facebook groups and profiles. At the beginning of the survey the participants were informed they were not required to answer particular items and that they could withdraw their participation at any point without fault. The questionnaire took about 4-10 minutes to answer and it was open online from February 28<sup>th</sup> to March 9<sup>th</sup> 2016. After that time the survey was closed and data were extracted for statistical analyses.

### Measures

Participants were presented with an online survey containing seven scales. In addition, they were asked for information on age, height, weight and gender. All seven scales were presented in random order for each participant, in the survey, to minimize context effects. All measures had good internal consistency as assessed by Cronbach’s alpha (Table 2).

*Body Appreciation.* The Body Appreciation Scale-2 (BAS-2; Tylka & Wood-Barcalow, 2015) was used to assess body appreciation. The scale consists of 10 positively worded items that provide a good measure of body appreciation. Items are rated on a 5-point Likert-type scale, ranging from “never” to “always”. This scale only measures positive attitudes and perspectives about the body where higher scores represent higher levels of body appreciation. The scale has been shown to have good internal reliability and construct validity in other languages (Avalos et al, 2005; Tylka & Wood-Barcalow, 2015). Sigrún Daniélsdóttir translated the BAS-2 from English to Icelandic in 2016. After the Icelandic translation the list was re-translated to English, and fit the original English version well.

*Self-esteem.* The Rosenberg Self-esteem scale (RSES; Rosenberg, 1965) is a widely used measure of self-esteem. RSES measures two 5-item facets of self-esteem, self-competence and self-liking, a total of 10-items. Items are rated on a 4-point Likert-type scale, where 1 represents “strongly disagree” and 4 represents “strongly agree”, omitting the midpoint. Higher scores on RSES represent higher self-esteem. The scale has been shown to have good reliability

and validity (Sinclair et al, 2010; Schaefer et al, 2015). Chronbach's alpha in this study was 0.92.

*Well-Being.* The Warwick Edinburgh Mental Well-being Scale (WEMWBS; Tennant et al., 2007) was used as a measurement of mental well-being. We used the short version of the scale, which consists of 7 items. Items are rated on a 5-point Likert-type scale, ranging from “never” to “always”. Higher scores on the list indicate higher levels of well-being. The list has been shown to have good validity and high correlations with other similar scales (Stewart-Brown et al., 2009; Tennant et al., 2007). Chronbach's alpha in this study was 0.88.

*Internalization of Appearance Ideals.* Two out of five subscales of the Sociocultural Attitudes Towards Appearance Questionnaire-4 (SATAQ-4; Schaefer et al., 2015) were used to measure internalization of appearance ideals, one scale measuring facets of thin/low body fat ideals and the other muscular/athletic ideals. These subscales consist of 5 items each, which are rated on a 5-point Likert-type scale, where 1 is “completely disagree” and 5 is “completely agree”. Higher scores on these subscales indicate more internalization of ideals. Scores from all subscales of the SATAQ-4 have been shown to have good reliability and validity with several related measures (Schaefer et al., 2015). The questions were translated from English to Icelandic by psychologists Sigrún Daníelsdóttir and Ragna B. Garðarsdóttir. Chronbach's alpha in this study was 0.91.

*Physical Appearance Comparison.* The Physical Appearance Comparison Scale (PACS; Thompson, Heinberg & Tantleff, 1991) was used to measure appearance comparison, i.e. the degree to which we compare ourselves to others in social situations. The scale consists of five items rated on a 5-point Likert-type scale, ranging from “never” to “always” where higher scores indicate more appearance comparison. In the current study we used only four items of the scale, removing the only negatively scored item, because it has been shown to reduce the scale's overall reliability. The scale has been shown to have good reliability and validity (Keery, van den Berg & Thompson, 2004). Chronbach's alpha in this study was 0.84.

*Eating behavior.* A 3-item subscale from the Intuitive Eating Scale-2 (IES-2; Tylka & Kroon Van Diest, 2013) was used to measure eating behavior. The scale, Body-Food Choice Congruence, measures whether people choose to eat foods that are good for their bodies' function and well-being. Items are rated on a 5-point Likert scale ranging from “strongly disagree” to “strongly agree”. Higher scores indicate healthier food consumption. All subscales on the IES-2 have been shown to have good reliability (Tylka & Kroon Van Diest, 2013). Chronbach's alpha in this study was 0.79.

*Appearance Evaluation.* The appearance evaluation subscale is a part of the Multiple Body-Self Relations Questionnaire (MBSRQ; Cash, 1990), a 69-item measure containing 10 subscales on cognitive-behavioral aspects of body image. Appearance evaluation is a 7-item subscale that measures overall satisfaction with one's appearance. Items are rated on a 5-point Likert-type scale, ranging from "strongly disagree" to "strongly agree". The list is gender-neutral and has been shown to have good psychometric properties (Brown, Cash & Mikulka, 1990; Untas, Koleck, Rasclé & Borteyrou, 2009). Chronbach's alpha in this study was 0.90.

### **Statistical Analysis**

Statistical analyses were done using SPSS. Participants who only responded to weight, height, gender and/or age, but answered none of the measures, were removed from the data set. Unrealistic numbers were excluded, such as weight over 300 kg and less than 20 kg, height over 300 cm and under 100 cm (6 participants). Not all of the participants responded to every measure, thus sample size for each measure differed.

Means and standard deviations were determined for each measure, along with a reliability analysis using Cronbach's alpha. To assess construct and predictive validity of the BAS-2, correlations were calculated between each measure.

KMO and Bartlett's tests were used to assess whether our data were suitable for factor analysis. Exploratory factor analysis with principle axis factoring was used to assess the factor structure of the BAS-2.

### **Results**

The significance of Bartlett's test of sphericity ( $p < 0,000$ ) and results from the KMO measure of sample adequacy ( $KMO = 0.958$ ) showed that data from our sample were appropriate for factor analysis (Field, 2013). We conducted an exploratory factor analysis with principle axis factoring. The BAS-2 was factor analyzed and the results revealed a clear one-factor structure, based on both Kaiser's criterion of eigenvalues over 1.0 and the scree plot. This factor explained 70.1% of the variance. Factor loadings ranged from 0.91 to 0.60 (Table 1). Item five, "I am attentive to my body's needs", had the lowest factor loading and item four, "I take a positive attitude towards my body", had the highest.

Table 1. Factor loadings for every item and percentage of total variance explained by the single factor.

Item	Factor loading
4. I take a positive attitude towards my body	.91
9. I am comfortable in my body	.88
6. I feel love for my body	.87
2. I feel good about my body	.87
7. I appreciate the different and unique characteristics of my body	.85
10. I feel like I am beautiful even if I am different from media images of attractive people (e.g. models, actresses/actors)	.84
3. I feel that my body has at least some good qualities	.81
8. My behavior reveals my positive attitude toward my body; for example, I walk holding my head high and smiling	.76
1. I respect my body	.76
5. I am attentive to my body's needs	.60
Percentage of total variance explained	70.1%
Extraction Method: Principal Axis Factoring.	

Descriptive statistics, means and standard deviations for the scales are presented in Table 2. The highest score for each scale is 5, except for Rosenberg's Self-esteem scale, where the high score is 4. Although each scale had very similar sample sizes, the fewest participants answered the Body-Food Choice Congruence Scale and most answered the Physical Appearance Comparison Scale.

Internal consistency for each measure was assessed by Cronbach's Alpha (Table 2). In each case, Cronbach's alpha is 0.79 or above, indicating that the items on each scale are measuring the same underlying construct.

Correlations between BAS-2 and physical appearance comparison on the one hand, and body-food choice congruence on the other, indicate the predictive validity of the BAS-2. Correlations between the BAS-2 and other subjective measures, i.e. self-esteem, appearance evaluation, internalization of ideals and well-being, support its construct validity (Table 2).

Table 2. Pearson's Correlations and descriptive statistics for each scale.

Measures	1	2	3	4	5	6	7
1 Body Appreciation (BAS-2)	-						
2 Well-being (WEMWBS)	.58***	-					
3 Appearance Evaluation (MBSRQ)	.82***	.41***	-				
4 Physical Appearance Comparison (PACS)	-.47***	-.31***	-.46***	-			
5 Ideal Internalization (SATAQ-4)	-.24***	-.21***	-.19***	.49***	-		
6 Self-esteem (RSES)	.69***	.74***	.58***	-.44***	-.29***	-	
7 Body-Food Choice Congruence (IES-2)	.40***	.27***	.34***	-.10*	.12***	.28***	-
$\alpha$	0.95	0.88	0.90	0.84	0.91	0.92	0.79
$M$	3.37	3.63	3.08	2.83	2.57	2.96	3.45
$SD$	0.89	0.69	0.92	0.93	0.92	0.62	0.83
$N$	778	753	753	787	761	742	739

\*  $p < 0.05$  (2-tailed); \*\*  $p < 0.01$  (2-tailed); \*\*\*  $p < 0.001$  (2-tailed)

## Discussion

The purpose of this study was to examine the psychometric properties of the Icelandic translation of the BAS-2. The data from our sample proved to be suitable for factor analysis, which revealed a unidimensional factor structure, as expected. As explained in more detail below, correlations were in accordance with the hypotheses set forth, supporting predictive and construct validity of the BAS-2. Internal consistency of the BAS-2 was 0.95, indicating that, in the Icelandic translation of the scale, all items measure the same latent construct.

Exploratory factor analysis with principle axis factoring showed a unidimensional factor structure, in accordance with previous research from different samples (Avalos et al., 2005; Swami et al., 2008; Tylka & Wood-Barcalow, 2015). Item loadings were similar to those found in previous studies (Tylka & Wood-Barcalow, 2015), which indicates that the Icelandic translation of the BAS-2 has good resemblance to the original version of the scale.

The BAS-2 was correlated with six other measures to assess its construct validity and predictive validity. The correlation between body appreciation, self-esteem, appearance evaluation, internalization of media ideals and well-being supports the scale's construct validity with all of these measures, except for media ideal internalization, showing strong correlations with the BAS-2. Predictive validity of the BAS-2 proved to be good, as the scale had moderately strong correlations with behavioral variables, i.e. eating behavior and appearance comparison. These correlations imply that body appreciation may predict behavior to some extent. These correlations are similar to those from previous research (Avalos et al., 2005; Wood-Barcalow & Tylka, 2015).

Body appreciation has been shown be positively correlated with self-esteem (Avalo et al., 2005; Gillen, 2015; Swami et al., 2008; Wood-Barcalow & Tylka, 2015). The current study shows similar results with a high positive correlation between self-esteem and body appreciation. Previous studies have shown that people with a more positive body image are more likely to have higher self-esteem and protective behavior toward the body (i.e. protecting the body from any physical harm or damage) (Gillen, 2015). It has been suggested that self-esteem, among other factors, buffers the negative effects of body dissatisfaction on women's overall values and goals in life as well as their feelings toward themselves. Higher self-esteem helps them focus on other aspects of their lives, such as internal strength and skills, and in turn they may be less focused on looks and appearance comparison (Brannan & Petrie, 2011).

Body appreciation correlated highly and positively with appearance evaluation, and the relationship between these two measures was the strongest in the current study, as in previous research (Tylka & Wood-Barcalow, 2015; Avalos et al., 2005). High appearance evaluation

means that you evaluate your appearance in a positive light (Avalos et al., 2005; Brown et al., 1990; Untas et al., 2009) and body appreciation means that you have positive attitudes about the whole body, it's function, looks, etc (Avalos et al., 2005; Tylka & Wood-Barcalow, 2015; Wood-Barcalow et al., 2010). Given this, it is clear that these constructs are very similar and thus, strongly related.

Surprisingly, body appreciation only had a weak negative correlation with internalization of ideals in the current study, unlike results from previous studies (Tylka & Wood-Barcalow, 2015). Internalizing media ideals has been found to have negative effects on body image, since it is unrealistic to attain these ideals (i.e. looking thin, muscular, etc) (Holmqvist & Frisén, 2012; Wood-Barcalow et al., 2010). Therefore, based on these findings, a correlation can be expected between body appreciation and ideal internalization (Holmqvist & Frisén, 2012; Wood-Barcalow et al., 2010). Tylka and Wood-Barcalow (2015) found higher correlations between the BAS-2 and internalizations than were found in this study. This difference could possibly be explained by the fact that this study used the SATAQ-4, whereas they used an older version of the SATAQ (SATAQ-3). Additionally, previous research has suggested that those who internalize appearance ideals do not necessarily have a negative body image, possibly because they have managed to meet the standards these ideals represent, which could explain our weak correlation to some extent (Halliwell, 2013).

Well-being and body appreciation correlated strongly and positively in the current study, which is in accordance with previous studies (Wood-Barcalow & Tylka, 2015). Brannan & Petrie (2011) found that psychological well-being seemed to act as a buffer on the negative effect body dissatisfaction has on women. This finding suggests the importance of developing body image interventions that focus on psychological well-being. Further, body appreciation and well-being are both topics of positive psychology, measuring positive attitudes and emotions. Thus, their relationship seems clear, as increased appreciation of one's body could contribute to their overall psychological well-being and vice versa (Lee et al., 2014; Wood-Barcalow & Tylka, 2015). Well-being might also increase if people focus on aspects of the self that are unrelated to looks, size or shape, such as skills and personality, and that focusing on these aspects increases well-being as well as body appreciation (Lee et al., 2014; Wood-Barcalow et al., 2010).

The correlation between body-food choice congruence and body appreciation was moderately strong and positive, indicating that body appreciation affects our tendency to eat foods that are good for our body (Tylka & Kroon Van Diest, 2013). Body appreciation has been shown to be the strongest predictor of intuitive eating and our results underpin those findings

to some extent (Andrew et al., 2015). This correlation was expected since people who appreciate their bodies seem more likely to treat it with respect and good, healthy food (Tylka & Kroon Van Diest, 2013).

Body appreciation had a moderately strong, negative correlation with physical appearance comparison in the current study and these results are in accordance with previous research (Schaefer & Thompson, 2014). Schaefer and Thompson (2014) also found that women who engaged in more appearance comparison seemed to have lower self-esteem and to be less satisfied with their bodies. These women also reported higher levels of appearance-related pressure, eating pathology and more tendency to internalize appearance ideals (Schaefer & Thompson, 2014). Additionally, Fardouly and Vartanian (2015) found a positive relationship between Facebook usage and body image concerns. This relationship was accounted for by appearance comparisons on Facebook, especially comparisons to distant peers, and to some extent, comparison to celebrities. It has been suggested by body image researchers that appearance comparison, especially upward comparison, increases thin-ideal internalization, which in turn can increase body dissatisfaction (Vartanian & Dey, 2013).

There are several limitations to the current study. First, the sample had a very low percentage of men. Another limitation was not including additional comparison measures, such as behavioral measures to further support predictive validity. Additional measures such as eating disorder symptomology and other clinical measures could have supported the scales validity further. Further, by mistake, a subscale of the Intuitive Eating Scale-2 (Unconditional permission to eat; 6 items) was not included in the online survey. Finally, in the current study, the most recent version of the SATAQ was used to measure ideal internalization, the SATAQ-4, which was developed in 2015 (Schaefer et al., 2015). Previous studies have used older versions of the SATAQ, for example Tylka & Wood-Barcalow's 2015 research on the BAS-2. This difference between the versions of the SATAQ could explain lower correlations between BAS-2 and ideal internalization in this study, compared to Tylka and Wood-Barcalow's research (2015).

In spite of these limitations, the sample size in the current study allows for adequate factor analysis and psychometric evaluation. Also the age gap is wide, so a relatively diverse sample could be expected. The results of the current study support the use of the Icelandic translation of the BAS-2 as a psychometrically sound measure of body appreciation. The scale showed good psychometric properties, a clear factor structure, and good reliability and validity. These results support the scale's use in psychological research and make it a valid and reliable

measurement to use in studies of positive body image in Iceland. This study has also added to the literature in supporting the use of the BAS-2 in more universal and diverse samples.

Future research in this field could include more behavioral variables to associate with body appreciation, to derive methods for establishing causality of body appreciation and other related variables; and to further understand the diverse facets that contribute to and preserve a positive body image and a healthy self-image. It is important to develop successful interventions to protect the body image and promote positive body behavior to enhance quality of life and well-being.

## References

- Alleva, J. M., Veldhuis, J., & Martijn, C. (2016). A pilot study investigating whether focusing on body functionality can protect women from the potential negative effects of viewing thin-ideal media images. *Body Image, 17*, 10-13.  
doi: <http://dx.doi.org/10.1016/j.bodyim.2016.01.007>
- Andrew, R., Tiggemann, M., & Clark, L. (2015). Predictors of Intuitive Eating in Adolescent Girls. *Journal of Adolescent Health, 56*, 209-214.  
doi: <http://dx.doi.org/10.1016/j.jadohealth.2014.09.005>
- Avalos, L., Tylka, T. L., & Wood-Barcalow, N. (2005). The Body Appreciation Scale: Development and psychometric evaluation. *Body Image, 2*, 285-297.  
doi: <http://dx.doi.org/10.1016/j.bodyim.2005.06.002>
- Benton, C., & Karazsia, B. T. (2015). The effect of thin and muscular images on women's body satisfaction. *Body Image, 13*, 22-27.  
doi: <http://dx.doi.org/10.1016/j.bodyim.2014.11.001>
- Brannan, M. E., & Petrie, T. A. (2011). Psychological well-being and the body dissatisfaction–bulimic symptomatology relationship: An examination of moderators. *Eating Behaviors, 12*, 233-241. doi: <http://dx.doi.org/10.1016/j.eatbeh.2011.06.002>
- Brown, T. A., Cash, T. F., & Mikulka, P. J. (1990). Attitudinal Body-Image Assessment: Factor Analysis of the Body-Self Relations Questionnaire. *Journal of Personality Assessment, 55*, 135-144.
- Cash, T. F. (1990). *The Multidimensional Body-Self Relations Questionnaire*. Unpublished test manual, Old Dominion University, Norfolk, VA. (Available on request from author).

- Cash, T. F., & Fleming, E. C. (2002). The impact of body image experiences: Development of the body image quality of life inventory. *International Journal of Eating Disorders*, 31, 455-460. doi: 10.1002/eat.10033
- Fardouly, J., & Vartanian, L. R. (2015). Negative comparisons about one's appearance mediate the relationship between Facebook usage and body image concerns. *Body Image*, 12, 82-88. doi: <http://dx.doi.org/10.1016/j.bodyim.2014.10.004>
- Field, A. (2013). *Discovering Statistics using IBM SPSS Statistics*. London: Sage Publication.
- Frisén, A., & Holmqvist, K. (2010) What characterizes early adolescents with positive body image? A qualitative investigation of Swedish girls and boys. *Body Image*, 7, 205-212. doi:10.1016/j.bodyim.2010.04.001
- Gillen, M. M. (2015). Associations between positive body image and indicators of men's and women's mental and physical health. *Body Image*, 13, 67-74. doi: <http://dx.doi.org/10.1016/j.bodyim.2015.01.002>
- Halliwel, E. (2013). The impact of thin idealized media images on body satisfaction: Does body appreciation protect women from negative effects?. *Body Image*, 10, 509-514. doi: <http://dx.doi.org/10.1016/j.bodyim.2013.07.004>
- Holmqvist, K., & Frisén, A. (2012). "I bet they aren't that perfect in reality:" Appearance ideals viewed from the perspective of adolescents with a positive body image. *Body Image*, 9, 388-395. doi: <http://dx.doi.org/10.1016/j.bodyim.2012.03.007>
- Lee, H.-R., Lee, H. E., Choi, J., Kim, J. H., & Han, H. L. (2014) Social Media Use, Body Image, and Psychological Well-Being: A Cross-Cultural Comparison of Korea and the United States. *Journal of Health Communication*, 19, 1343-1358. doi: 10.1080/10810730.2014.904022
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

- Schaefer, L. M., Burke, N. L., Thompson, J. K., Dedrick, R. F., Heinberg, L. J., Calogero, R. M. et al. (2015). Development and validation of the sociocultural attitudes toward appearance questionnaire-4 (SATAQ-4). *Psychological Assessment*, 27, 54-67.
- Schaefer, L. M., & Thompson, J. K. (2014). The development and validation of the Physical Appearance Comparison Scale-Revised (PACS-R). *Eating Behaviors*, 15, 209-217.  
doi: <http://dx.doi.org/10.1016/j.eatbeh.2014.01.001>
- Sinclair, S. J., Blais, M. A., Gansler, D. A., Sandberg, E. Bistis, K. & LoCicero, A. (2010). Psychometric Properties of the Rosenberg Self-Esteem Scale: Overall and Across Demographic Groups Living Within the United States. *Evaluation & the Health Professions*, 33, 56-80. doi: 10.1177/0163278709356187
- Stewart-Brown, S., Tennant, A., Tennant, R., Platt, S., Parkinson, J., & Weich, S. (2009) Internal Construct Validity of the Warwick Edinburgh Mental Well-being Scale (WEMWBS): a Rasch analysis using data from the Scottish Health Education Population Survey. *Health and Quality of Life Outcomes*, 7. doi: 10.1186/1477-7525-7-15
- Striegel-Moore, R. H., & Bulik, C. M. (2007). Risk Factors for Eating Disorders. *American Psychologist* 62, 181-198. doi: 1037/0003-066X.62.3.181
- Swami, V., Stieger, S., Haubner, T., & Voracek, M. (2008). German translation and psychometric evaluation of the Body Appreciation Scale. *Body Image*, 5, 122-127.  
doi: <http://dx.doi.org/10.1016/j.bodyim.2007.10.002>
- Tiggemann, M. (2015). Considerations of positive body image across various social identities and special populations. *Body Image*, 14, 168-176.  
doi: <http://dx.doi.org/10.1016/j.bodyim.2015.03.002>
- Thompson, J.K., Heinberg, L., & Tantleff, S. (1991). The Physical Appearance Comparison Scale (PACS). *The Behavior Therapist*, 14, 174.

- Tylka, T. L. (2013). Evidence for the Body Appreciation Scale's measurement equivalence/invariance between U.S. college women and men. *Body Image, 10*, 415-418. doi: <http://dx.doi.org/10.1016/j.bodyim.2013.02.006>
- Tylka, T., & Kroon Van Diest, A. M. (2013). Intuitive Eating Scale-2: Item Refinement and Psychometric Evaluation With College Women and Men. *Journal of Counseling Psychology, 60*, 137-153.
- Tylka, T. L., & Wood-Barcalow, N. L. (2015). The Body Appreciation Scale-2: Item refinement and psychometric evaluation. *Body Image, 12*, 53-67.  
doi: <http://dx.doi.org/10.1016/j.bodyim.2014.09.006>
- Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., Parkinson, J., Secker, J., & Stewart-Brown, S. (2007). The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): development and UK validation. *Health and Quality of Life Outcomes, 5*, 1-13. doi: 10.1186/1477-7525-5-63
- Untas, A., Koleck, M., Rasclé, N., & Borteyrou, X. (2009). Psychometric Properties of the French Version of the Body Self Relations Questionnaire-Appearance Scales. *Psychological Reports, 105*, 461-471. doi: 10.2466/PRO.105.2.461-471.
- Vartanian, L. R., & Dey, S. (2013). Self-concept clarity, thin-ideal internalization, and appearance-related social comparison as predictors of body dissatisfaction. *Body Image, 10*, 495-500. doi: <http://dx.doi.org/10.1016/j.bodyim.2013.05.004>
- Wood-Barcalow, N. L., Tylka, T. L., & Augustus-Horvath, C. L. (2010). "But I Like My Body": Positive body image characteristics and a holistic model for young-adult women. *Body Image, 7*, 106-116.  
doi: <http://dx.doi.org/10.1016/j.bodyim.2010.01.001>