

Exploring the Relationships Among Peer Influence, Media Influence, Self-esteem, and Body Image Perception

Wing Yi Tsang

Abstract Body image is one of the important concerns among teenagers. They may pursue socially acceptable and favorable body figure in order to get recognition from others and therefore, enhance self-esteem. This study explored the determinants in affecting the body image perception among youngsters in Hong Kong. The research question is: What are the factors affecting people's perception of body image? It was hypothesized that peer influence, media influence, and self-esteem influenced the university students' body image evaluation. A survey was distributed and successfully collected from 250 undergraduate students. The results showed the peer influence had a direct, significant, and negative relationship with body image perception ($\beta = -0.340$, $p < 0.01$), and self-esteem had a direct, significant, and positive relationship with body image perception ($\beta = 0.339$, $p < 0.001$). However, media influence had no significant relationship with body image perception among the university students ($p > 0.05$). The variance explained body image perception by the model with R^2 was 0.261. The implications of these findings were discussed.

Keywords Body image · Perception · University students · Peer influence · Media influence · Self-esteem

1 Introduction

Perception of body image is an ongoing process during lifetime, especially in adolescence. People may pursue socially acceptable and favorable body figure in order to get recognition from others and therefore, enhance self-esteem. In order to achieve the “ideal” body shape, some of them carry out healthy methods such as exercising and dieting. However, some of them may undergo a risk to have cosmetic surgeries as to correct unattractive body and facial features. According to a

W.Y. Tsang (✉)

Department of Journalism and Communication, Online Communication Research Centre,
Hong Kong Shue Yan University, Hong Kong, China
e-mail: wingyitsang920@yahoo.com.hk

statistic conducted by Zuckerman (2014), over 236,000 cosmetic procedures were performed on patients between 13 and 19 in the U.S., in which more than 75,000 were surgical procedures such as nose reshaping, breast implantation, breast lifts, liposuction, and tummy tucks. The numbers demonstrated that teenagers pay lots of concern to their body image.

Pressure on youngsters to conform the beauty standards increase the difficulty to figure out what constitutes a “normal” appearance and when the desire to improve one’s appearance is questionable or even crosses the moral conduct. Therefore, the objective of this study is to explore the reasons that encourage people to have positive or negative perception of body image. We set the following research question: What are the factors affecting people’s perception of body image?

The rest of this paper include a literature review of the researches on body image and identify the factors that influence people’s evaluation of body image. Then, method used, including background, subjects, measurement items, and data collection. Findings reported the data analysis of survey results. Implications are given at the end.

2 Literature Review and Hypotheses Development

2.1 *Body Image*

Body image as the picture of one’s body which is formed in their mind, the way in which the body appears to themselves (Schilder 1935). It is a concept which involves feelings, attitudes, and perceptions that people have about their own body, and is influenced by the adoption of social standards (Rodriguez Aguilar et al. 2010). Sheldon (2010) said youngsters are now living in an environment which looks are of utmost importance and pressure to achieve the ideals of attractiveness is high. Gender can be one of the reasons in affecting people’s perception of body image. Body dissatisfaction is typically characterized as an issue faced predominantly by females. Usmiani and Daniluk (1997) found that women experience higher pressure than men to conform to societal norms in regard to their appearance, including the shape and size of their bodies. Moreover, a research conducted by Muth and Cash (1997) showed that compared to men, females have more negative body image evaluations, stronger investments in their looks, and more frequent body image dysphoria. Meanwhile, Carlson Jones (2001) claimed that same-sex peers and celebrities are the targets of social comparisons for physical attributes and primarily associate with body dissatisfaction. In general, there are some factors that would affect people’s perception of their body shape. Pressure from peers, family, and traditional media can be considered as the factors. According to Musaiger and Al-Mannai (2013), Pressure from friends and parents, in addition to the media, have a significant impact in managing attitudes toward body image among teenagers. Positive appearance-related comments are associated positively with self-objectification (Slater and Tiggemann 2015). Thus, the higher pressure from

peers, family, and media, the more negative perception of body shape. Apart from that, self-esteem links with feelings about one's appearance. Clay et al. (2005) examined that self-esteem declines substantially with pessimistic changes in body image during middle adolescence. Therefore, the higher the self-esteem, the more positive evaluation of body image.

Therefore, from the above literature review, we recognized several potential factors that affect how people think about their body image, including gender, peers and family support, media, and self-esteem. Major factors identified in this study are going to discuss and explain in the following paragraphs.

2.2 Peer Influence

Physical comparison between friends was an important factor of developing body image and shape dissatisfaction (Sides-Moore and Tochkov 2011). According to Snapp et al. (2012), high familial support; low levels of perceived sociocultural pressure from family, friends, and media regarding the importance of achieving a thin and beautiful ideal; positive physical self-concept, which link with a more positive body image. Normally, girls are supposed to have more appearance conversations. However, Carlson Jones and Crawford (2006) proposed that boys suffer more from appearance pressure and teasing. Also, men talk with friends about muscle building at a rate greater than girls discuss about dieting. Besides, some people may argue that family influence is more significant than peers' on body perception. Still, Sheldon (2013) refuted that peer pressure is unavoidable and most often negative, especially for girls, which badly influences how college students evaluate their bodies. Sheldon (2010) also pointed out high verbal or behavioral pressure from peers urges teenagers to compare themselves to the models in fashion magazines and on TV. These acts may even increase the media influence on perception of body image indirectly.

From these, we argue that peers contribute to influence teenagers' attitudes of body image, which may either be a positive or negative perception. Not only girls, boys are also confined to peer pressure of body image. When a person receives negative appearance comment from friends, he/she may build a negative body image, and vice versa. Then, we hypothesize.

H1 The higher peer pressure, including verbal and behavioral, that an individual receives, the more negative his/her body image is perceived.

2.3 Media Influence

Media is the most influential in affecting perception of body image (Vartanian et al. 2001). The promotion of "perfect" body shape on media pressurizes the teenagers to

conform to those “ideal” standards, which may create negative feelings to individuals about their appearance. Guðnadóttir and Garðarsdóttir (2014) said the exposure to media images of ideal body shape pursuit thinness among women and muscularity among men. Moreover, Yamamiyaa et al. (2005) claimed that the exposure to thin and beautiful models in media images adversely affected people’s body evaluation with high level of internalization. The more exposure to those media materials, the greater negative impact in body image perception, if one cannot fit the standard. Besides, Musaiger and Al-Mannai (2013) said the use of Internet and reading women’s magazines have a prominent impact in asking girls to lose weight. Also, they discovered that the media is 2–3 times influential on obese girls than nonobese girls. It reveals that media has different level of influence toward teenagers, even the same sex, in appearance evaluation. As women are supposed to pay more attention to their body image than men, most of the previous researches had just focused on how media affects females. It urges men to think the media just have mild impact on their behaviors. However, the media do have a significant influence on how they perceive their body image (Kennedy 2000). Cramblitt and Pritchard (2013) indicated that the more time men spend on media, especially in sports and health scope, higher their drive for muscularity and greater concern on body image. Despite traditional media, Kim and Chock (2015) discovered that the usage of social media affects people’s attitudes toward body image. The more frequent use of social media, the greater determination in driving for thinness and muscularity among youngsters. They also suggested viewing and commenting on peer’s profiles are significantly linked with the drive for thinness of female users. As media materials are powerful in affecting people’s evaluation of body image, Clay et al. (2005) promoted to deconstruct the internalization of body image by viewing advertising and media images. Nevertheless, Yamamiyaa et al. (2005) discovered that not all media users are equally susceptible to these effects. Media-literacy psychoeducation prior to the media exposure avoids this adverse effect.

Media is powerful enough in altering one’s body image evaluation. However, it carries different level of influence toward teenagers, even on same sex, in appearance evaluation. Therefore, it is hypothesized that

H2 The longer exposure to media materials, especially beauty, fashion and health-related images, the more negative body image perception if one cannot fulfill the “ideal” standard.

2.4 *Self-esteem*

Self-esteem is significantly associated with body image measures (Mendelson et al. 1996). Abell and Richards (1996) stated that body image and self-esteem are closely related to younger populations and have a greater impact on them. The level of self-esteem of women is generated from the whole body shape and image, whereas men’s self-esteem is originated from muscularity (Grossbard et al. 2009). People

who have negative appearance evaluation and low self-esteem are linked with dissatisfaction with body shape and size. In contrast, people with high self-esteem, positive mood and body satisfaction are more favorable irrespective of their levels of appearance evaluation (Thøgersen-Ntoumani et al. 2011). They demonstrate the self-esteem and perception of body image are mutually related. Moreover, physical fitness plays a crucial role in affecting one's self-esteem toward body image. Lowery et al. (2005) said the more positive physical fitness is positively associated with self-esteem and body image. On the other hand, those who suffered from undesirable body shape may have low self-esteem that is harmful to one's growth. In addition, being bullied because of body shape may spoil one's self-esteem. Grilo et al. (1994) claimed that those who are being teased about weight or size while growing up might have a risk of developing negative body image and low self-esteem. Links between body shape and self-evaluation explain how body dissatisfaction impacts on self-esteem and mood in eating disorders. People with negative self-esteem and body image increase the risk of eating disorder symptoms (Blechert et al. 2011). It shows that low self-esteem due to negative body image perception may lead to disastrous effect.

Self-esteem is closely related to the perception of body image, particularly among teens, the stage in which recognition from others is important. People who have negative appearance evaluation and low self-esteem are associated with dissatisfaction of body shape. Then, we propose the following hypothesis.

H3 The lower level in self-esteem of an individual, the more negative his/her body image is perceived.

3 Methodology

3.1 Background

The concept of body image was first formulated as an important psychological phenomenon by a German writer, Schilder, in his monograph *The Image and Appearance of the Human Body*, which was published in 1935. "The picture of our own body which we form in our mind, that is to say the way in which the body appears to ourselves," he said. Nowadays, many teenagers may undergo cosmetic surgery in order to beautify themselves to become more attractive and enhance their body image.

3.2 Subjects

An online survey instrument to collect respondents' perception of their body image was distributed to 300 undergraduate students of age ranged from 18 to 25. In the end, 250

(83.33%) were completed and returned. This sample was chosen because undergraduate students were primarily concern how others perceive them through appearance.

3.3 Measurement Items

In the first part of the questionnaire, the subjects were asked to provide their demographic data, like sex and age. In the second part, more opinion was asked. For peer influence (PI), three items were adapted from *Perceived Sociocultural Pressure Scale* (Goodman 2005), measured by a 5-point scale, ranged from 1 (*none*) to 5 (*a lot*). For media influence (MI), six items were adapted from *Sociocultural Attitudes toward Appearance Scale* (Heinberg et al. 2004). For self-esteem (SE), three items were adapted from Rosenberg Self-Esteem Scale (Rosenberg 1965), measured by a 5-point Likert scale, and ranged from 1 (*definitely disagree*) to 5 (*definitely agree*).

3.4 Data Collection

The questionnaire was set and distributed to 300 undergraduate students via Google online questionnaire platform. Email invitations were sent through researchers' personal network. The respondents came from different universities in Hong Kong with different years of study.

4 Findings

4.1 Descriptive Statistics of Respondents and Variables

The 250 subjects in the sample included 68 male (27.2%) and 182 female (72.8%), with a mean age of 21.064 years old. They came from different years of study in four different universities in Hong Kong. Half of the respondents have fair body image perception, whereas 52 (20.8%) and 54 (21.6%) of them have positive and negative view of body image, respectively, in which only 16 females had positive body image perception and 42 of them had negative view toward body image. The descriptive statistics of the variables were shown in the below table (see Table 1).

Table 1 Descriptive statistics of constructs ($N = 250$)

	Min	Max	<i>M</i>	SD	Alpha
<i>Body image perception</i>					
BI1	1	7	3.60	1.431	0.744
BI2	1	7	4.46	1.371	
BI3	1	7	3.73	1.542	
<i>Peer influence (PI)</i>					
PI1	1	7	3.69	2.061	0.808
PI2	1	7	3.54	2.077	
PI3	1	7	3.12	1.869	
<i>Media influence (MI)</i>					
MI1	1	7	5.17	1.655	0.942
MI2	1	7	4.55	1.736	
MI3	1	7	4.30	1.952	
MI4	1	7	4.07	1.966	
MI5	1	7	4.07	1.962	
MI6	1	7	4.72	1.869	
<i>Self-esteem (SE)</i>					
SE1	1	4	2.90	0.665	0.744
SE2	1	4	3.10	0.545	
SE3	1	4	2.92	0.813	

4.2 Instrument Validation

Internal consistency was tested by reliability Cronbach's α -value where values greater than 0.7 is considered reliable (Nunnally and Bernstein 1994). The alpha values for body image, peer influence, media influence, and self-esteem were 0.744, 0.808, 0.942, and 0.744, respectively. As all the values were over 0.7, therefore, the instrument was considered reliable and exhibited internal consistency. Three components were extracted by Principal Components, Varimax Rotation factor analysis. The Eigen values were 7.332, 1.664, and 1.167 where the percentage of total variance explained was 72.59%. The constructs exhibited convergent validity if "the items that are indicators of a specific construct converge or share a high proportion of variance in common" (Hair et al. 2010).

As a good rule of thumb, the standardized factor loading estimates should be 0.5 or higher, and ideally 0.7 or higher (Hair et al. 2010, p. 709). From the table, all factor loadings are greater than 0.7, showing an acceptable value for convergent validity of the instrument. At the same time, the constructs were all distinct without any significant cross-loadings, which exhibited discriminant validity (Table 2). Therefore, the instrument was both reliable and valid. Summed mean score were computed for each construct and for regression analysis of their relationship test (Table 3).

Table 2 Factor analysis

	Component		
	1	2	3
PI1		0.758	
PI2		0.809	
PI3		0.756	
MI1	0.705		
MI2	0.839		
MI3	0.856		
MI4	0.827		
MI5	0.746		
MI6	0.807		
SE1			0.797
SE2			0.749
SE3			0.810
Eigen values	7.332	1.664	1.167
% of variance (%)	52.37	11.89	8.34

Table 3 Descriptive statistics of summed mean scores

Constructs	Min	Max	<i>M</i>	SD
BI	1	7	3.93	1.179
PI	1	7	3.45	1.704
MI	1	7	4.36	1.586
SE	1	4	2.97	0.557

4.3 Summary of Model Testing Results

In this study, there were three factors, direct path analysis toward dependent without any indirect effects in the model, therefore, the usage of linear regression is enough and appropriate to test the model for the direct effects on body image perception. For the model of body image perception, it was significant ($p < 0.001$) and the R^2 was 0.261. That means, the model explained 26.1% of the variance.

For H1, it was supported. We found that the path was significant and the standardized coefficient was -0.340 (unstandardized coefficients -0.130 , std. error 0.044 , $p < 0.01$) for the peer influence (PI) toward body image perception (BI). That means, for every standardized unit of peer influence increased, there would be 0.340 standardized unit of body image perception decreased. The higher peer pressure that an individual received, the more negative his body image was. For H2, it was not supported ($p = 0.103 > 0.05$). There was no significant relationship between media influence and body image perception. It revealed that the longer exposure to media materials did not lead to more negative body image perception if one cannot fulfill the “ideal” standard. For H3, it was supported. We found that the path was significant and the standardized coefficient was 0.339 (unstandardized

Table 4 Linear regression model testing results

	Model summary				ANOVA	
	<i>R</i>	<i>R</i> ²	Adjusted <i>R</i> ²	SE of estimate	<i>F.</i>	Sig.
Body image perception	0.511	0.261	0.229	0.5780	8.112	0.000

Table 5 Summary of path coefficients

Factor	Unstandardized coefficients		Standardized coefficients	<i>t</i>	Sig.
	B	SE	Beta		
PI	-0.130	0.044	-0.340	-2.992	0.003
MI	0.074	0.045	0.180	1.642	0.103
SE	0.396	0.107	0.339	3.705	0.000

coefficients -0.396, std. error 0.107, $p < 0.001$). That means, for every standardized unit of self-esteem increased, there would be 0.339 standardized unit of body image perception increased. The higher the level in self-esteem of an individual, the more positive he/she in perceiving the body image (Tables 4 and 5).

5 Discussion

This study aims to explore the reasons that encourage people to have positive or negative perception of body image. The research question: What are the factors affecting people’s perception of body image?

5.1 Body Image Perception

Body image is a concept that involves feelings, attitudes, and perceptions that people have about their body, and is affected by the adoption of social standards (Rodriguez Aguilar et al. 2010). In this study, most of the respondents had fair body image perception. However, more female respondents had negative perception than male toward body image. The model of body image perception (BI) was significant ($p < 0.001$). As mentioned before, body dissatisfaction is typically characterized as an issue faced predominantly by females who pay more attention and investment to their appearance and body shape than male do. Moreover, according to the latest population statistic by HKSAR in mid-2015, the sex ratio is 855 male per 1000 female. Due to the imbalance sex ratio, female have to maintain an “ideal” body shape and good appearance as to attract male. Moreover, since the Hong Kong

society pays less concern in male's body shape than female, so they are suffer less pressure in managing a good body shape. As a result, male respondents may have more positive attitude in body image perception.

5.2 Peer Influence and Body Image Perception

Physical comparison between friends is an important source of developing body image and shape dissatisfaction. Thus, the model of peer influence (PI) was significant ($p < 0.01$) in this research. Peers always stick together when they are in campus or even out-of-campus. In fact, body image is one of the topics that they usually discuss during interaction. Therefore, teenagers are reachable to receive comments about appearance evaluation among friends. It demonstrates that peer pressure is unavoidable, and most often negative, which badly influences how university students perceive their bodies. Moreover, peer is influential in socialization process. Since no one want to be isolated from friends, youngsters may try to have a good body image in order to gain recognition from peers. However, being teased by friends leads to negative body image perception. From that, pressurization occurs among peers toward body image evaluation.

5.3 Media Influence and Body Image Perception

Media is always depicted as the most influential source in affecting people's body image (Vartanian et al. 2001). The promotion of "perfect" body shape on media pressurizes teenagers to conform to those "ideal" standard, which may create negative feelings to individuals about their appearance. However, the model of media influence (MI) was not significant ($p > 0.05$) in this research, and should be rejected. It showed that the media do not closely affect university students' body image perception. The influence of media, especially traditional media, is decreasing gradually to teenagers. As they are experienced in media exposure, so their media- literacy psychoeducation helps them to avoid the adverse effect from media. In addition, universities students are supposed to fully develop their critical thinking in reading media materials, therefore, media are less influential to them in affecting their body image perception. Some of them may even doubt of the authenticity of any materials presented in the media. As a result, not all media users are equally susceptible to the negative effects brought by the media.

5.4 *Self-esteem and Body Image Perception*

Body image is closely related to young populations and has a great impact on them. Most of the youngsters generate self-esteem from personal or others' body image perception. In this research, the model of self-esteem (SE) was significant ($p < 0.001$) and supported. Positive self-esteem is linked with one's positive appearance evaluation or praises by others because of body shape or appearance. Nevertheless, people who have undesirable body size and negative appearance evaluation may link with low self-esteem. In addition, someone who is bullied or teased by others because of body shape, he may feel isolated and unconfident, thus low self-esteem. They demonstrate the self-esteem and perception of body image are mutually related.

After the data analysis, we confirmed the relationship between peer, media, self-esteem, and body perception, which have answered the research question. It is important in a media study to examine individual psychological beliefs and attitude that affect people behavior. This study contributes to understand what influence people's body perception.

5.5 *Limitations and Future Studies*

There were a number of limitations in this study, and they offer opportunities for future research. As it was not a random sampling in selecting respondents of questionnaire, so the data should be collected with a more rigorous sampling in the future studies. Moreover, the generalizability was limited in this study since it was conducted in only four universities in Hong Kong. Furthermore, this study was not globally applicable as it had been carried in Hong Kong, and only reflected the situation in Hong Kong. Therefore, future studies were required in order to compensate those limitations.

6 Conclusion

The most important finding of body image perception is that the media influence does not significantly correlated to the body image perception among the university students in Hong Kong. Typically, media are expected to have strong impact to teenagers. However, the university students are no longer be cultivated by the exposure to media materials of "ideal" body shape. Media-literacy and critical thinking avoid them from being influenced by the adverse effects of media in perceiving their body image. As a result, the model of media influence is rejected in this study. However, the other two factors: peer influence and self-esteem are significantly related to teenagers' body evaluation. They suggest that the higher

peer pressure that an individual receive, the more negative his body image is. Also, the lower level in self-esteem, the more negative in perceiving the body image. In addition, future studies are required to compensate the limitations in this study.

Appendix

Measurement items used in the study

Construct	Measurement items
<i>Peer influence (PI)</i> (Goodman 2005)	
	PI 1: I've felt pressure from my friends to lose weight
	PI 2: I've felt pressure from people I've dated to lose weight
	PI 3: Peers at school tease me about my weight or body shape
<i>Media influence (MI)</i> (Heinberg et al. 2004)	
	MI 1: Media are an important source of information about fashion and "being attractive"
	MI 2: I compare my body to the bodies of people who are on TV
	MI 3: I compare my appearance to the "model" appear on social media
	MI 4: I've felt pressure from media and social media to be thin
	MI 5: I've felt pressure from media and social media to have a perfect body
	MI 6: Pictures on social networking are an important source of information about fashion and "being attractive"
<i>Self-esteem (SE)</i> (Rosenberg 1965)	
	SE 1: I feel that I have a number of good qualities
	SE 2: I am able to do things as well as most other people
	SE 3: I take a positive attitude toward myself

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