Psychology
of Woman Journal

A Causal Model of Physical Appearance Perfectionism and Women's Body Image Concern: The Mediating Role of Appearance-Based Comparisons on Instagram

Fatemeh Alidosti[1*], Zahra Soghraei Khader[2], Mahdieh Bakhtiari[3]

Abstract

The present study investigated the relationship between physical appearance perfectionism and body image concern with the mediation of appearance-based comparisons on Instagram. This study was a type of primary research done by correlation method. In this research, the statistical population was women aged 18 and over who used Instagram, and the sample size included 324 people who were selected in an accessible manner. The questionnaires used in this research were: The physical Appearance Perfectionism Questionnaire by Young and Stoeber (2012) and Body Image Concern Questionnaire by Littleton et al. In order to analyze the research data, the results obtained from the Pearson correlation coefficients showed a positive and significant relationship between the research variables. Also, the path analysis method results showed that after correcting and removing the non-significant path of the hope-to-perfection component to body image concern in the initial model, the final model was confirmed with a perfect fit ($\chi 2/df=3.23$, RSMEA=0.08, GFI=1, AGFI=0.95, CFI=1). Overall, it can be concluded that appearance-based comparisons on Instagram have significantly mediated the relationship between physical appearance perfectionism and body image concern.

Keywords: *Physical appearance perfectionism, appearance-based comparisons on Instagram, body image concerns*

1. **Corresponding author:** Assistant Professor, Department of Psychology, Faculty of Humanities, Khayyam University, Mashhad, Iran.
2. Master of General Psychology, Khayyam University, Mashhad, Iran.
3. Master of General Psychology, Khayyam University, Mashhad, Iran.

Introduction

Today's society attaches great importance to the appearance of people because a perfect appearance is a symbol of success, happiness, love, and admiration of others. A look at the hierarchy of social values shows that beauty is one of the important social values and one of the ways to be beautiful is to interfere with one's own body or in other words, body management or appearance management. Therefore, a person tries to bring the natural shape of his body closer to the socially acceptable shape as far as possible (Heidari Cheroude & Kermani, 2011). As a result, many people try to look great, and many others worry about their physical appearance (Young & Stoeber, 2012).

One of the psychological concepts that people are concerned about is body image (Younesi & Salajegheh, 2001). It is defined as thoughts and feelings in relation to appearance (Grogan, 2016) and is a multifaceted structure that is related to a person's perceptions and beliefs, including thoughts, feelings, and behaviors regarding a person's body shape and appearance (Kash, 2012). Also, this concept has two perceptual dimensions: a person's belief about how much his appearance measures his competence. The dimension is an attitude with two components: orientation and evaluation. Orientation is the degree of importance that a person attaches to his appearance, and it is an assessment of the degree of satisfaction of a person with his body and appearance (Cash, 2002).

In different societies, women are more sensitive than men towards the body and its mental image (Cash, 1997). Concerns about body image in women usually focus on specific physical characteristics, the most common studies of which include dissatisfaction with body weight and shape (Feuzner et al., 2007, cited in Danesh and Faruzandeh, 2018). However, there is another range of concerns, such as about facial features, skin appearance, muscularity, fitness, and physical strength in relation to body image in women (Smolak, 2004, quoted by Danesh and Faruzandeh, 2018).

Most researchers believe that perfectionism involves high performance standards associated with tendencies to overcritically evaluate one's behavior (Frost et al., 1990). Perfectionism is a multidimensional concept characterized by striving for perfection and setting very high standards for performance, along with concern for mistakes and fear of negative evaluations (Frost et al., 1990; Hewitt & Felt, 1991). It appears in both adaptive and maladaptive forms (Slaney et al., 2001) and affects all areas of a person's life (Hewitt & Flett, 1991). Physical appearance is one of the main areas in which many people show perfectionistic tendencies (Young & Stoeber, 2012). In order to understand individual differences in perfectionism related to physical appearance, the concept of physical appearance perfectionism has been proposed. Appearance perfectionism is a form of perfectionism that includes two main components: concern about imperfection and hope for perfection.

Concern for imperfection describes a person's tendency to hold to high standards. Failure to meet these standards leads to depression, and the worry of being criticized leads to social anxiety. These people need the approval of others to feel good and care a lot about others seeing them as great. Worrying about defects is positively correlated with the following. Aspects of maladaptive perfectionism concerns (worry about deficiencies, socially prescribed

perfectionism); Concerns related to physical appearance (social appearance anxiety, body image disorder, overlapping symptoms related to body image); Body control behaviors (restricted food). It also has a negative correlation with the following items. Positive perception of one's appearance (self-esteem, appearance satisfaction, satisfaction with body parts). In contrast, the perfectionism dimension includes self-standardization, self-criticism, and compulsive self-evaluation, defined as a person's setting high standards for themselves and striving for perfection (Young & Stoeber, 2012; Sepikort et al., 2020). Hope for perfection showed a positive correlation with aspects of positive perfectionism (striving for high goals, self-oriented perfectionism), positive perfectionism, and impression management behaviors (creating a positive impression on others through clothing, hairstyle, and makeup).

Perfectionism is also related to social comparison (Shatz, Paxten, & Wertheim, 2002). According to Festinger (1954), people are intrinsically motivated to evaluate their progress and position in different aspects of life. Moreover, in the absence of objective criteria, they compare themselves to others to know where they stand. Festinger distinguished between upward and downward social comparisons. Upward comparisons occur when people compare themselves to someone better than themselves, which usually produces negative consequences (Gibbons, 1986; Lemire & Smith, 1985). Downward comparisons are when people compare themselves to someone worse than themselves and usually have positive consequences (Gibbons & Gerrard, 1989; Marsh & Parker, 1984; Wills, 1981). Individuals can also make lateral comparisons, in which they compare themselves to others who are similar to them in a particular domain (Harris, Ansell, & Lyons, 2008). Lateral comparisons, like downward comparisons, generally have positive effects (Wheeler & Miyake, 1992). Appearance comparisons are an important socio-cultural factor that affects women's body image. These comparisons can occur in various ways, including social media, which sometimes leads to body dissatisfaction (Tigman & Slater, 2013). The research conducted by Brown and Tigman (2016) shows that exposure to images of social media influencers with an ideal and attractive bodies can damage a person's body image. Brazier (2017) states that the media can influence body image and make people believe that the ideal body is real.

Among social media, Instagram is one of the fastest and most popular programs (Perin & Anderson, 2019) and is among the five most used social media in the world (Ikhsan, 2020). Instagram is a social network service that is used for sharing videos and photos, it currently has more than one billion monthly active users (Statista, 2019) and 200 million people use it daily (Statista, 2019). According to Bayer et al. (2012), digital media in the form of social media sites such as Instagram are popular for providing images related to Appearance. Past research on Instagram exposure has generally examined how ideal images affect women and has failed to examine how personality traits make certain subgroups of women more vulnerable to the effects of Instagram abuse than others. Women with high trait perfectionism may be particularly vulnerable to the effects of abusive social media exposure on self-esteem (Shafran, Cooper, & Fairburn, 2002). On the other hand, McComb and Mills (2021) conducted a study

titled "Young Women's Body Image Following Upward Comparisons with Instagram Models: The Role of Physical Appearance Perfectionism and Cognitive Emotion Regulation" on 142 female undergraduate students. The results of their research showed that appearance comparisons with models lead to a decrease in self-confidence and an increase in dissatisfaction with weight and dissatisfaction with appearance, and a high level of perfectionism characteristic of physical appearance predicted lower self-confidence and an increase in dissatisfaction with weight and dissatisfaction with appearance. Also, in another study, Simon et al. (2022) examined the mediating role of physical appearance perfectionism in the relationship between Instagram addiction and self-esteem. Data were collected from 902 undergraduate students from Philippine universities, and analyzes showed that appearance perfectionism (concern with imperfections) significantly mediated the relationship between Instagram addiction and body esteem even after controlling for the effect of gender. This confirms the importance of studying how individual difference variables such as physical appearance perfectionism can explain why social media significantly impacts how people perceive their bodies. Etterson et al. (2022) also conducted a study to investigate whether perfectionism is a vulnerability factor for psychological distress among adolescent girls in the context of social comparison focused on appearance and social media use. The sample consisted of 135 adolescent girls selected from a high school in England. The research showed that self-critical perfectionism predicted depression symptoms positively and body appreciation negatively. It also interacted

with appearance-focused upward social comparison to predict more depressive symptoms and lower body esteem. The findings also showed that self-critical perfectionism might be an important vulnerability factor for adolescent girls following appearance-focused social comparison when using social media. In Iran, Hashemi and Jamshidi (2019) studied the relationship between perfectionism and depression in girls volunteering for cosmetic surgery. The participants in this research included 360 girls aged 20-40 who volunteered for cosmetic surgery (breast and nose) in North Tehran and had been referred to a cosmetic clinic in 2018. The findings showed an inverse relationship between perfectionism and depression with body image; the higher the perfectionism and depression in the subjects, the weaker their body image. Also, there is a direct relationship between perfectionism and depression. As a result, perfectionism and depression variables can predict body image, and the perfectionism variable has a greater contribution in predicting girls' body image due to the larger beta value.

As the background of the research shows, the use of social media, especially Instagram, has increased attention to the body in contemporary societies, which is confirmed by the increasing statistics of cosmetic surgeries and the consumption of cosmetics in Iran. In the process of the image that people have of their bodies, the media, including social networks, play a decisive role because people's idea of an ideal body often relies on media images. Therefore, suppose the increasing number of users of social networks and especially the Instagram platform in Iran, where many are women who are more involved in appearance comparisons and worried about their body

image than men. Moreover, studies have yet to be conducted on the frequency and consequences of appearance comparisons in different fields of women's daily life (Fardoli, Pinks, and Vartinin, 2017). Thus, the current study seeks to examine whether appearance-based comparisons on Instagram mediate the relationship between physical appearance perfectionism and women's body image concerns.

Method

The current research was a type of fundamental study that was conducted by correlational method and path analysis method. The statistical population included women aged 18 and over who use Instagram. According to Camery's belief (cited by Homan, 2002) that a sample of 300 people is good in path analysis research, in the present study, 324 people were considered as a sample and were selected as available. In order to implement, due to the spread of the corona virus and the existence of restrictions in the society, an electronic questionnaire was designed by Google Form and its link was provided to the people in the virtual social networks Telegram, WhatsApp and Instagram, so that if they are satisfied, they can complete the questionnaire. To analyze the data, descriptive statistics indicators (mean, percentage, frequency, standard deviation) and Pearson correlation test were used in Spss22 software. Also, to check the conceptual model of the research, the path analysis method was used in LISREL 8.80 software.

Materials

Body Image Concern Scale. The body image concern questionnaire was designed in 2005 by Littleton, Axom, and Pury, which includes 19 items with two dimensions of dissatisfaction with appearance (12 items) and interference with one's social

functioning (7 items), which are on a five-option Likert scale from 1 (never) to 5 (always) are scored. Littleton et al. (2005) checked the reliability of this questionnaire using the internal consistency method and obtained Cronbach's alpha coefficient of 0.93. Also, Cronbach's alpha coefficient of the first and second factors was reported as 0.92 and 0.76, respectively, and the correlation coefficient between the two factors was 0.69. In Iran, Basaknejad and Ghafari (2006) reported the validity of this test based on internal consistency using Cronbach's alpha method of 95%. Inteziri and Alavizadeh (2013) also reported the internal consistency of this test to be 89% using Cronbach's alpha method.

Physical Appearance Perfectionism Scale. The Physical Appearance Perfectionism Scale (PAPS) was presented by Young and Stoeber (2012), which has two components: hope for perfection and worry about imperfection, and has a total of 12 items: worry about imperfection has seven items and hope for perfection has five items. They are graded on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alpha coefficients for the scale's total score are 0.83, concern about imperfection is 0.85, and hope for perfection is 0.80. Also, the scale's total score has high time stability, which was checked through the retest method. The findings show that this scale is a reliable and valid tool for evaluating the positive and negative aspects of physical appearance perfectionism. In the present study, Cronbach's alpha was obtained for the total score of the scale of 0.90, for the component of worry about defects of 0.89, and for the component of hope for perfection, it was 0.89, which indicates the reliability of this questionnaire.

Appearance-based comparisons on Instagram. Fardouly, Pinkus, and Vartanian (2015) used three questions to measure appearance-based comparisons. 1- When using Instagram, I compare my physical appearance with the physical appearance of others. 2- When using Instagram, I compare how I dress with others. 3- When using Instagram, I sometimes compare my poses with other people's poses. However, since these questions did not cover all aspects of this variable, the checklist of comparisons based on Appearance on Instagram designed by Sadeghzadeh et al. (2019) was used to measure. Cronbach's alpha of this questionnaire was 0.92, which indicates its reliability. Also, to check the validity, the correlation between each item with the total score was calculated, and the average of these coefficients was 0.76. In the present

study, Cronbach's alpha was calculated, and the value was 0.92, indicating this questionnaire's reliability.

Findings

Among the women participating in the research, the age group of 18 to 28 years had the highest frequency with a frequency of 59% and the age group of 48 years and above with a frequency of 4.6% had the lowest frequency. Also, 63.9% of the participants were single and 36.1% were married. In addition, the highest frequency of using Instagram was 1 to 3 hours per day, with a frequency of 42.9%, and the lowest frequency was related to using Instagram for more than 5 hours per day, with a frequency of 9%. Following the results of table 1, the descriptive statistics of the sub-scales of the research variables of women are presented.

Table 1. Descriptive indexes

Variable	sub scale	Mean	Standard deviation	Skewness	Kurtosis
Body image concern	Dissatisfaction Appearance	21/36	8/02	0/96	0/79
	Interference with performance	18/03	6/25	0/61	-0/01
	Total body image concern score	39/40	13/37	0/71	0/14
Physical appearance perfectionism	Worry about defects	13/97	6/06	0/92	0/26
	Hope for perfection	16/85	4/75	-0/59	0/53
	Total score of physical appearance perfectionism	30/83	9/37	0/22	-0/19
Appearance-based comparisons on Instagram		25/05	8/87	0/26	-0/37

The correlation coefficients between the components of physical appearance perfectionism and body image concern were in the range of 0.43 to 0.83 and with comparisons based on appearance on Instagram in the range of 0.45 to 0.53. Also, these coefficients between appearance-based

comparisons on Instagram and concern about body image ranged from 0.52 to 0.68.

To answer the research question and examine the mediating role of appearance-based comparisons on Instagram in the relationship between physical appearance perfectionism and concern about women's body image, a model was drawn based on theoretical and

experimental background, in which the components of physical appearance perfectionism That is, hope for perfection and concern about defects are exogenous variables, appearance-based comparisons on Instagram are mediating variables, and concern about women's body image are endogenous variables.

Before checking the fit of the model, the main assumptions for the path analysis were checked, which are: normality of data, absence of collinearity and independence of errors. In order to check the normality of the scores of the research variables, skewness and kurtosis indices were used, which are not more than 2 and 10, respectively, which means that the variables are normal. Variance inflation and tolerance factor statistics were used to check the absence of multiple collinearity. According to the results, the variance inflation for predictor variables was not greater than 10 and all the tolerance values for these variables were between zero and one. Therefore, there is no multiple collinearities between predictor variables, and this assumption is maintained. Durbin-Watson test was used to check the independence of errors, and since this value was less than 4, the assumption of independence of errors is established for the above variables. The results of the above investigations indicate that the important statistical assumptions are in place and therefore, the use of path analysis is unimpeded. Therefore, the initial proposed model was implemented in Lisrel software and the path coefficients were obtained in the following.

After running the model, considering that the value of the t-test for the direct path coefficient of the "hope for perfection" component to "worry about body image" was not significant (t = 1.80). Modifications were made in this model and after removing the non-significant path, the model's fit was checked again. Finally, the research model was confirmed, and its general fit indicators can be seen in the table below.

A lower value of the ratio (χ2/df), as long as it is not less than 1.00, indicates a better fit for the model (Homan, 2017). The goodness of fit index (GFI) for comparing the squared residuals predicted with real data (Vieira, 2017) and its adjusted index (AGFI) must have values equal to or greater than 0.90 in order to accept the model in question. (Homan, 2017). The comparative fit index (CFI) also shows the better fit of the model compared to the initial model (Vieira, 2017), for which a value equal to or greater than 0.95 is acceptable, and if it is equal to or greater than 0.97, it is a sign It is one of the most appropriate model fit (Sharmele-Engel et al., 2003). Finally, the root means square error of approximation (RMSEA) index shows the fit of the population covariance matrix by considering the degrees of freedom (Vieira, 2017). The optimal value is between 0.05 and 0.08, and values higher than 0.1 are not acceptable for fitting the model (Sharmele-Engel et al., 2003).

As a result, considering the mentioned cases and according to the obtained values listed in Table 2, the corrected model has good general fit indices and is confirmed. Along with the model fit indices, the path coefficient and the corresponding t value are also important for each of the causal paths of the model.

Table 2. The goodness of fit indices of the verified model

Index	χ^2	df	χ^2/df	GFI	AGFI	CFI	RMSEA
Value	3/23	1	3/23	1	0/95	1	0/08

According to this model, the coefficient of the direct path of hope to perfection to appearance-based comparisons on Instagram is equal to 0.33, which is a positive and moderate coefficient and is statistically significant (t = 6.15). The coefficient of the direct path of concern about defects to appearance-based comparisons on Instagram is equal to 0.29, which is a positive and moderate coefficient and is statistically significant (t = 5.29). The coefficient of the direct path of worrying about defects to worrying about body image is equal to 0.67, which is a positive and high coefficient and is statistically significant (t = 21.71). Also, the coefficient of the direct path of comparisons based on appearance on Instagram to concern about body image is equal to 0.34, which is a positive and moderate coefficient and is statistically significant (t = 10.94). In addition, the indirect path coefficient of concern about defects to body image concern is equal to 0.098, the indirect path coefficient of hope for perfection to body image concern is equal to 0.11, and the total path coefficient of

concern about defects to body image concern is equal to 768. / is 0. According to these results, it can be said that appearance-based comparisons on Instagram play a significant mediating role for the relationship between physical appearance perfectionism and concern about women's body image (P<0.05).

An Independent t-test was used to examine this section's first and second questions, and the ANOVA test was used for the third question. Before implementing them, important statistical assumptions must be checked first. The first assumption is the normality of the data which was checked earlier and the results indicated that the data were normal (P<0.05) and therefore, this assumption was met. The second assumption is homogeneity of variances, which was examined using Levene's test, and due to its non-significance (P<0.05), this assumption has also been met.

The first question. Is there a significant difference between people who exercise and people who do not exercise in the amount of each research variable?

Table 3. Comparison of people who exercise and people who do not exercise in research variables

Variable	Do exercise		Do not exercise		t	df	Sig.
	Mean	**Standard deviation**	**Mean**	**Standard deviation**			
Physical appearance perfectionism	27/87	9/39	31/76	9/19	-3/22	322	0/001
Appearance-based comparisons on Instagram	23/68	9/43	25/47	8/66	-1/54	322	0/12
Body image concern	35/09	12/22	40/74	13/45	-3/28	322	0/001

According to the results of Table 3, there is a significant difference between the two groups of people who exercise and people who do not exercise in the variables of perfectionism, physical appearance and

concern about body image (P < 0.001). According to the descriptive indicators, this difference is significant in such a way that in both variables, the average scores of people who exercise are significantly lower than the

average scores of people who do not exercise.

The second question. Is there a significant difference between people who have had cosmetic surgery and those who have not in the amount of each research variable?

Table 4. Comparison of people who have undergone cosmetic surgery and people who have not undergone cosmetic surgery in research variables.

Variable	Had surgery		Did not have surgery		t	Df	Sig
	Mean	**Standard deviation**	**Mean**	**Standard deviation**			
Physical appearance perfectionism	29/91	9/00	30/94	9/43	-0/60	322	0/54
Appearance-based comparisons on Instagram	27/02	8/07	24/82	8/94	1/37	322	0/17
Body image concern	41/05	12/26	39/20	13/50	0/76	322	0/44

According to Table 4, there was no significant difference between the two groups in any of the research variables, i.e., physical appearance perfectionism, appearance-based comparisons on Instagram, and body image concern (P<0.05).

The third question. Is there a significant difference between people with different levels of using Instagram in the amount of each research variable?

Table 5. Comparison of people with different levels of using Instagram in research variables

Variable	Source	Sum of squares	df	Mean square	**F**	Sig
Physical appearance perfectionism	Between groups	505/89	3	168/63	1/93	0/12
	Within group	27912/43	320	87/22		
	Total	28418/33	323			
Appearance-based comparisons on Instagram	Between groups	1918/22	3	639/41	8/70	0/001
	Within group	23515/88	320	73/48		
	Total	25434/10	323			
Body image concern	Between groups	3029/80	3	1009/93	5/90	0/001
	Within group	54718/04	320	170/99		
	Total	57747/84	323			

According to the results of Table 5, there was a significant difference between the two groups in the amount of comparisons based on Appearance on Instagram and concern about body image (P < 0.001). In contrast, no significant difference was observed between the groups in the level of physical appearance perfectionism (P<0.05). Tukey's post hoc test was used in comparisons based on Appearance on Instagram to compare the groups' pairs and check which group pair has a significant difference. The results showed that there is a significant difference between a couple of the groups of using less than 1 hour and the use between 1 and 3 hours (P<0.01) and also between a couple of the group of using less than 1 hour and the use of more than 5 hours (P>0.001). Based on the descriptive indicators, this significant difference is such that the average amount of

comparisons based on Appearance on Instagram in the group of people using less than 1 hour is significantly lower than the average in the other two groups.

The results of this test also showed a significant difference between the couples of the group using between 3 and 5 hours and using more than 5 hours in the number of comparisons based on Appearance on Instagram (P<0.05). Based on the descriptive indicators, this significant difference is such that the average amount of comparisons based on Appearance on Instagram in the group of people using between 3 and 5 hours is significantly lower than the average in the group of people using more than 5 hours.
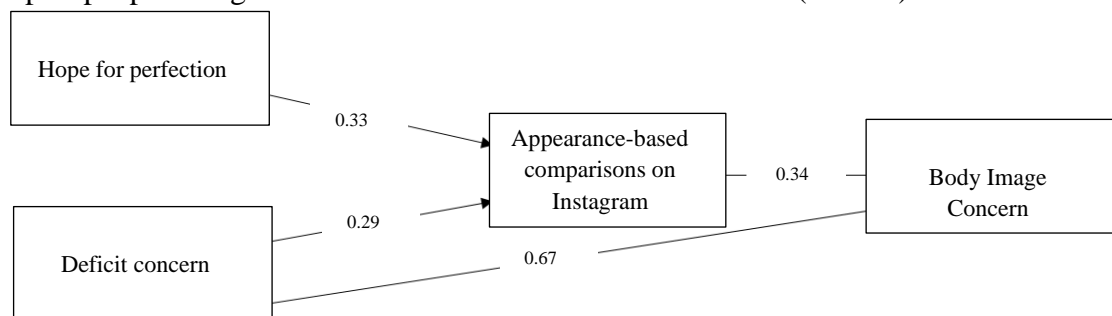
In the variable of concern about body image, in order to compare the pairs of groups and check which pair of groups there is a significant difference, Tukey's post hoc test was used, the results of which showed that there is a significant difference between the pairs of groups in the amount of concern about body image. (P<0.001). Based on the descriptive indicators, this difference is significant in such a way that the average level of concern about body image in the group of people who use less than 1 hour is significantly lower than the average in the other two groups. However, no significant difference was observed among other groups in this variable (P<0.05).

Figure 1. Final Model

body image concern, which includes inconsistency between reality and unrealistic expectations for a particular appearance and in the behavioral dimension of body image, which includes situations in which a person is judged (Thompson et al., 1999). People experience more body image anxiety when they see the difference between their actual appearance and the high standards they set for themselves. In general, perfectionism is characterized by striving for perfection and high-performance standards, concern about mistakes, and fear of negative evaluation (Hewitt & Flett, 1991). Physical appearance is also one of the aspects in which people have perfectionistic tendencies (Young & Stoeber, 2012). The desire to be perfect and worry about the evaluation and criticism of others causes perfectionists to set high criteria and standards for themselves in the

Discussion

In the first findings of the research, the Pearson correlation coefficient results showed a significant relationship between physical appearance perfectionism and concern about women's body image. Therefore, the first hypothesis of the research has been confirmed and with the increase in physical appearance perfectionism scores, women's body image concern increase and vice versa. The obtained results are in line with the research of Sepicourt et al. (2020), McComb and Mills (2021), Sarvani and Shirazi (2018), Hashemi and Jamshidi (2019), Ahmadi Golsefidi et al. (2021). In explaining this finding, people with appearance perfectionism set high appearance standards and criteria for themselves. In this way, both in the cognitive dimension of

are consistent with the research of Sadeghzadeh et al. (2018), Salamon (2017), Hendricks et al. (2017), Fardouly and Vartanian (2015). Since Instagram is based on visual images and the ability to edit makes people publish perfect pictures of themselves, it causes a person to compare himself with these pictures and to worry about his body image (Radke, 2021). These findings support Festinger's social comparison theory (1954). According to this theory, humans have an inherent motivation to evaluate their opinions and abilities and compare them with the opinions and abilities of others, and visual social networks such as Instagram provide the possibility of increasing social comparison through their online display (Frampyton & Farkes, 2018). This is reflected in the personal appearance of users (Hendricks et al., 2017). Due to the presence of ideal body images on Instagram, women can make social comparisons with peers, celebrities, and models (Verdwin et al., 2020). Such comparisons lead to upward appearance comparisons (Marrison et al., 2004). Social comparison theory states that upward comparison leads to perceived negative contrast between self and ideal appearance and, in turn, causes dissatisfaction with appearance (Festinger, 1954). These results are consistent with past studies showing that exposure to and social comparison to ideal body types on Instagram is associated with poorer body image and lower self-esteem among young women (Brown & Tigman, 2016; Ferdouly & Holland, 2018). The investigation and the results of the research question showed that appearance-based comparisons on Instagram play a mediating role in the relationship between physical appearance perfectionism and women's body image concerns. In such a way that the hope for perfection component had an effect on women's body image concern indirectly and through the effect on appearance-based comparisons on Instagram. Both directly and indirectly through appearance-based comparisons on Instagram, concern about imperfection

field of body and body image. This leads to more focus and sensitivity towards weight and appearance and increased concern about body image.

In the second research finding, Pearson's correlation coefficient results showed a significant relationship between physical appearance perfectionism and appearance-based comparisons on Instagram. Therefore, the second hypothesis of the research has also been confirmed, and with the increase in physical appearance perfectionism, comparisons based on Instagram also increase and vice versa. The obtained results are in line with the research of McComb and Mills (2021), Sadat et al. (2017), Ko et al. (2019), Etterson et al. (2022). In explaining this finding, perfectionist people feel a gap between their real self and their ideal self by comparing themselves with the ideal and desirable models and images of the society in the virtual space. This causes high sensitivities and competition regarding body beauty and can lead to unnecessary surgeries, anorexia and bulimia (Nahid, 2019). The more perfectionist women are, the more they internalize thinness as a beauty ideal. Also, the sociocultural theory states that the media uses advertisements to popularize thinness and equate it with attractiveness, happiness, success, and social status (Gilbert & Thompson, 1996). At the same time, obesity is associated with negative consequences such as laziness, ugliness and disability (Rosblom, 1994). Perfectionists believe they must perform perfectly and experience dissatisfaction when their performance is perceived as less than perfect (Courtney et al., 2008). Therefore, perfectionists are more likely to engage in social comparison (Fairburn et al., 1998).

According to the research findings, the third hypothesis has been confirmed. Pearson's correlation coefficient results showed a significant relationship between appearance-based comparisons on Instagram and concern about women's body image, and with the increase of appearance-based comparisons on Instagram, concern about body image increases. These results

Instagram, they are more involved in appearance-based comparisons. Also, by observing the difference between their appearance and these images, their concern and dissatisfaction with their body image increases.

In general, the findings obtained from the present study indicated that appearance-based comparisons on Instagram play a mediating role in the relationship between appearance perfectionism and body image concern in women. Therefore, women with the personality characteristic of high physical appearance perfectionism set high standards on their appearance and are sensitive about the judgment and evaluation of others about their body. When faced with ideal images on Instagram and comparing themselves with them, these people are more involved in appearance-based comparisons on Instagram than other women, and as a result, they experience more dissatisfaction. In general, it can be said that personality plays an important role in women's exposure to ideal images on Instagram, how they perceive the body, and the type of social comparisons involved. The findings of this research showed that observing and comparing oneself with attractive models in social media leads to an increase in dissatisfaction with women's appearance. Considering that 60% of Instagram users visit this platform every day and this is strongly related to social comparison, it sometimes causes a decrease in self-confidence and dissatisfaction with appearance.

The side findings also showed that there is a significant difference between the two groups of people who exercise and people who do not exercise in the variables of perfectionism, physical appearance and concern about body image. In both variables, the average scores of sports people are significantly lower than the average scores of non-sports people. Also, there was no significant difference between the people who had cosmetic surgery and the people who did not have cosmetic surgery in any of the research variables. Suppose the relationship between different

affected body image concern. In explaining these findings, it can be said that the use of Instagram in the world is growing rapidly. Instead of assuming that the posted content may not accurately reflect one's personal experience, its users tend to accept edited photos and videos as people's real lives. This makes people vulnerable to social comparison (Loup et al., 2015). Social comparison theory states that people have an innate motivation to evaluate their opinions and abilities by comparing themselves with others (Festinger, 1954). One recognizes that individual differences in people's tendency to compare themselves with others can affect vulnerability to sociocultural pressures (Thompson, 1990). Perfectionism is one of the individual differences that cause vulnerability to social comparison, and people with high perfectionism may be more vulnerable to the negative effects of social media exposure on self-esteem (Shafran et al., 2002).

Since perfectionism has specific domainus and physical appearance is one of the areas in which people show perfectionistic tendencies (Young & Stoeber, 2012), comparison of appearance is an important cultural-social factor that affects women's body image (Ferdouly et al. colleagues, 2017). These comparisons can occur in various ways, including social media, and lead to body dissatisfaction (Tigman & Slutter, 2013). According to Chi (2017), these people change themselves, not because they are not satisfied with their appearance, but because they want to look better than others or at least look similar to others based on social comparison. In this regard, the results of Sepikort et al.'s (2020) research showed that concern about defects describes people's desire for high standards. If one does not meet these standards, will suffer from depression, and if he is criticized by others, will suffer from social anxiety. In general, it can be said that if people have high physical appearance perfectionism, due to the high standards they consider for their appearance, when faced with ideal and attractive images on

of its users' activity is dedicated to publishing and reviewing ideal body images (Hendrix et al., 2017). Seeing more and more of these ideal images will naturally increase the likelihood of a person engaging in appearance-based comparisons. However, such comparisons, according to the researches of Salamon and Brown (2019) and Fardouly and Varantanian (2015), lead to the experience of a disturbed body image and the person is more dissatisfied with his body image. In other words, the more time people spend on Instagram, the more they are immersed in this space and less connected to the outside world. So, of course, more time is affected by advertisements and the hidden content of messages, as a result, it makes a person compare himself with them, receive their attitudes and beliefs, and replace their values with his own (Mishio, 2016). One of the limitations of the research was that its results cannot be generalized to the age group of teenagers. Domestic research on physical appearance perfectionism is scant. The physical appearance perfectionism tool has not been used in Iran and it was used in this research and only its validity was checked with Cronbach's alpha. The research proposals of the present study, in future researches, the effect of these variables on men and related consequences such as the effort to become muscular can be investigated in order to determine how the perfectionism of physical appearance and the use of Instagram affect mental health of men. Research can also be done on teenagers. Moreover, according to the findings of this research, necessary measures and training can be done through experts, and public education programs through virtual space to increase body image satisfaction. Providing programs that have a preventive and intervention aspect, such as holding workshops by experts and specialists in life skills, especially awareness of the body's weaknesses and strengths and coping with them, greatly reduces dissatisfaction and concern about body image.

Ethics

levels of Instagram use and other research variables, namely physical appearance perfectionism, appearance-based comparisons on Instagram, and body image concern. The findings showed that there is a significant difference between people with different levels of Instagram use only in the two variables of appearance-based comparisons on Instagram and concern about body image, but no significant difference was observed in the level of physical appearance perfectionism. In explaining these findings, it can be said that people who exercise experience more satisfaction with appearance than people who don't exercise (Spikourt et al., 2020), have more self-confidence, and have a more positive perception of their body. On the other hand, people with physical appearance perfectionism set high standards for their appearance (Young & Stoeber, 2012), they always seek satisfaction with their appearance, and exercising is one of these ways for them. Considering that today, the last human achievement to increase physical attractiveness is cosmetic surgery. In this research, this variable was examined laterally, but its relationship with none of the research variables was not significant, which is inconsistent with the research results of Hasani et al. (2019). It can be inferred that a person may have had a cosmetic surgery but does not have the characteristic of physical appearance perfectionism, but people who request nose surgery may have the characteristic of physical appearance perfectionism.

Also, the results showed that people who use Instagram for more than 5 hours got the highest average in comparisons based on appearance, and people who use Instagram for less than one hour had the lowest average in comparisons based on Appearance on Instagram. Regarding the body image concern variable, people who used Instagram for less than an hour had less body image concern. These findings are in line with the research of Hendricks et al. (2017) and Fardoli and Vartanin (2015). A prominent feature of Instagram is that most

cosmetic surgery candidates: understanding their motivation for cosmetic surgery. *Aesthetic plastic surgery*, *34*(3), 340-349.

Courtney, E. A., Gamboz, J., & Johnson, J. G. (2008). Problematic eating behaviors in adolescents with low self-esteem and elevated depressive symptoms. *Eating behaviors*, *9*(4), 408-414.

Danesh, S., & Forozandeh, E. (2018). Five major factors of personality and body image in applicants for cosmetic surgery in Isfahan city. Journal of Cognitive Psychology and Psychiatry. 5 (1): 115-128

Etherson, M. E., Curran, T., Smith, M. M., Sherry, S. B., & Hill, A. P. (2022). Perfectionism as a vulnerability following appearance-focussed social comparison: A multi-wave study with female adolescents. *Personality and Individual Differences*, *186*, 111355.

Fairburn, C. G., Doll, H. A., Welch, S. L., Hay, P. J., Davies, B. A., & O'Connor, M. E. (1998). Risk factors for binge eating disorder: a community-based, case-control study. *Archives of general psychiatry*, *55*(5), 425-432.

Fardouly, J., Pinkus, R. T., & Vartanian, L. R. (2017). The impact of appearance comparisons made through social media, traditional media, and in person in women's everyday lives. *Body image*, *20*, 31-39.

Festinger, L. (1954). A theory of social comparison processes. *Human relations*, *7*(2), 117-140.

Feusner, J. D., Townsend, J., Bystritsky, A., & Bookheimer, S. (2007). Visual information processing of faces in body dysmorphic disorder. *Archives of general psychiatry*, *64*(12), 1417-1425.

Frampton, J. R., & Fox, J. (2018). Social media's role in romantic partners' retroactive jealousy: Social comparison, uncertainty, and information seeking. *Social Media+ Society*, *4*(3), 2056305118800317*e*

Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive therapy and research*, *14*(5), 449-468

Gibbons, F. X. (1986). Social comparison and depression: Company's effect on misery. *Journal of personality and social psychology*, *51*(1), 140

Gibbons, F. X., & Gerrard, M. (1989). Effects of upward and downward social comparison on mood states. *Journal of Social and Clinical Psychology*, *8*(1), 14-31.

Gilbert, S., & Thompson, J. K. (1996). Feminist explanations of the development of eating

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

Acknowledgement

Conflict of Interest
According to the authors, this article has no financial sponsor or conflict of interest.

References

Ahmadi Golsefidi, E., Asadi, J., Abdullahzadeh, H., & Khajevand Khoshali, A. (2021). Modeling girls' body image concerns based on perfectionism with the mediation of basic psychological needs, Islamic Research Journal of Women and Family, 9(24), 115-97.

Alavi, S. (2020). The relationship between the amount of use of social networks with fear of body image and perceived social support, Roish Psychology Journal, 9(5), 63-70.

Bair, C. E., Kelly, N. R., Serdar, K. L., & Mazzeo, S. E. (2012). Does the Internet function like magazines? An exploration of image-focused media, eating pathology, and body dissatisfaction. *Eating behaviors*, *13*(4), 398-401.

Brazier, Y. (2017). What is body image? MedicalNewsToday. https://www.medicalnewstoday.com/ articles/249190#1

Brown, Z., & Tiggemann, M. (2016). Attractive celebrity and peer images on Instagram: Effect on women's mood and body image. *Body image*, *19*, 37-43.

Cash, T. F. (1997). *The body image workbook: An 8-step program for learning to like your looks*. New Harbinger Publications, In

Cash, T. F. (2002). Body image: Cognitive behavioral perspectives on body image. *Body images: a handbook of theory, research, and clinical practice*, 38-46.

Cash, T. F. (2012). *Encyclopedia of body image and human appearance*. Academic Press.

ÇEPİKKURT, F., AYAZ, Y. S., ADA, E. N., & KALE, E. K. Investigation of Physical Appearance Perfectionism and Social-Physical Anxiety In College Students. *International Journal of Recreation and Sports Science*, *4*(1), 55-64.

Chen, H. C., Karri, V., Yu, R. L., Chung, K. P., Lu, Y. T., & Yang, M. C. (2010). Psychological profile of Taiwanese female

physical appearance perfectionism and cognitive emotion regulation. *Body Image*, *38*, 49-62.

Morrison, T. G., Kalin, R., & Morrison, M. A. (2004). BODY-IMAGE EVALUATION AND BODY-IMAGE AMONG ADOLESCENTS: A TEST OF SOCIOCULTURAL AND SOCIAL COMPARISON THEORIES. *Adolescence*, *39*(155).

Perrin, A., & Anderson, M. (2019). Share of US adults using social media, including Facebook, is mostly unchanged since 2018. *Pew Research Center*, *10*.

Radecke, W. B. (2021). *Instagram Self-Experience: an Examination of Instagram, Self-Esteem, Social Comparison, and Self-Presentation* (Doctoral dissertation, Medaille College).

Rothblum, E. D. (1994). "I'll die for the revolution but don't ask me not to diet": Feminism and the continuing stigmatization of obesity.

Saadat, S. H., Shahyad, S., Pakdaman, S., & Shokri, O. (2017). Prediction of social comparison based on perfectionism, self-concept clarity, and self-esteem. *Iranian Red Crescent Medical Journal*, *19*(4), 8.

Sadegh Zadeh, M., Zarei, Z., & Khormai, F. (2019). Prediction of dissatisfaction with the body image of female students based on personality dimensions, Women's Social-Psychological Studies Quarterly, (2) 17. 125-99.

Salomon, I., & Brown, C. S. (2019). The selfie generation: Examining the relationship between social media use and early adolescent body image. *The Journal of Early Adolescence*, *39*(4), 539-560.

Saravani, S., & Shirazi, M. (2018). The role of obsessive beliefs and perfectionism in the body image of third grade female high school students in Zahedan, Journal of Educational Psychology Studies, 15(30). 186-167.

Schutz, H. K., Paxton, S. J., & Wertheim, E. H. (2002). Investigation of body comparison among adolescent girls 1. *Journal of Applied Social Psychology*, *32*(9), 1906-1937.

Shafran, R., Cooper, Z., & Fairburn, C. G. (2002). Clinical perfectionism: A cognitive–behavioural analysis. *Behaviour research and therapy*, *40*(7), 773-791.

Simon, P. D., Cu, S. M. O., De Jesus, K. E. M., Go, N. T. S., Lim, K. T. F., & Say, C. L. C. (2022). Worried about being imperfect? The mediating effect of physical appearance perfectionism between Instagram addiction and body esteem. *Personality and Individual Differences*, *186*, 111346.

disorders: Common themes, research findings, and methodological issues. *Clinical Psychology: Science and Practice*, *3*(3), 183

Grogan, S. (2016). *Body image: Understanding body dissatisfaction in men, women and children*. Routledge

Harris, M. M., Anseel, F., & Lievens, F. (2008). Keeping up with the Joneses: A field study of the relationships among upward, lateral, and downward comparisons and pay level satisfaction. *Journal of Applied Psychology*, *93*(3), 665.

Hasani, F., Fathololoomi, A., Najafi, E., & Askari, Z. (2021). Examining the role of physical appearance perfectionism, unconditional self-acceptance and quality of life in the demand for rhinoplasty. Research in medicine. 45 (1):63-60

Hashemi, S., & Jamshidi, M. (2019). The relationship between perfectionism and depression with body image in girls volunteering for cosmetic surgery, Skin and Beauty Quarterly, 10(1), 11-3.

Hewitt, P. L., & Flett, G. 1.(1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology*, *60*, 456-470.

Heydari Cherudeh, M., & Kermani, M. (2010). The relationship between aesthetic beliefs and the mental image of the body and how to manage appearance in young people, Iranian Journal of Social Studies, 4(4), 30.

Homan, H. (2018). Modeling structural equations using Lisrel software. Tehran: Organization for Studying and Compiling Humanities Books of Universities (Samt).

Ikhsan, M. (2020). Survei: 5 Media Sosial Paling Populer Di Dunia. *CNN Indonesia*, 1.

Ko, S. Y., Wei, M., Park, H. J., & Wang, K. (2019). Appearance comparison, appearance self-schema, perfectionism, and body esteem among Korean college students. *The Counseling Psychologist*, *47*(3), 358-383.

Lemyre, L., & Smith, P. M. (1985). Intergroup discrimination and self-esteem in the minimal group paradigm. *Journal of Personality and Social Psychology*, *49*(3), 660.

Marsh, H. W., & Parker, J. W. (1984). Determinants of student self-concept: Is it better to be a relatively large fish in a small pond even if you don't learn to swim as well?. *Journal of personality and social psychology*, *47*(1), 213

McComb, S. E., & Mills, J. S. (2021). Young women's body image following upwards comparison to Instagram models: The role of

social networking sites. *Current opinion in psychology*, *36*, 32-37.

Vieira, A. L. (2018). Conversational linear structural relations in practice (Lisrel training with Simplice approach). Translation: Fatemeh Arfa and Hossein Karsheki. Tehran: Avai Noor.

Wheeler, L., & Miyake, K. (1992). Social comparison in everyday life. *Journal of personality and social psychology*, *62*(5), 760.

Wills, T. A. (1981). Downward comparison principles in social psychology. *Psychological bulletin*, *90*(2), 245

Yang, H., & Stoeber, J. (2012). The physical appearance perfectionism scale: Development and preliminary validation. *Journal of Psychopathology and Behavioral Assessment*, *34*(1), 69-83.

Younesi, S. J., & Salagegheh, A. (2001). Body image in fertile and infertile women. *Journal of Reproduction & Infertility*, *2*(4).

Slaney, R. B., Rice, K. G., Mobley, M., Trippi, J., & Ashby, J. S. (2001). The revised almost perfect scale. *Measurement and evaluation in counseling and development*, *34*(3), 130-145.

Smolak, L. (2004). Body image in children and adolescents: where do we go from here?. *Body image*, *1*(1), 15-28.

Statista. (2019). Number of monthly active Instagram users from January 2013 to June2018 (in millions) Retrieved from.

Thompson, J. K., Heinberg, L. J., Altabe, M., & Tantleff-Dunn, S. (1999). Exacting beauty: Theory, assessment, and treatment of body image disturbance. American Psychological Association

Tiggemann, M., & Slater, A. (2013). NetGirls: The Internet, Facebook, and body image concern in adolescent girls. *International Journal of Eating Disorders*, *46*(6), 630-633.

Verduyn, P., Gugushvili, N., Massar, K., Täht, K., & Kross, E. (2020). Social comparison on