Psychological Topics, 33 (2024), 1, 115-132

Original Scientific Paper

UDC: 159.923.31.072-055.2:004.738.5

https://doi.org/10.31820/pt.33.1.6

Tripartite Influence Model: Effects of Media Pressure on Appearance Satisfaction in the Sample of Young Croatian Women

Ana Žulec Ivanković¹, Marina Merkaš¹, and Tamara Martinac Dorčić²

¹Department of Psychology, Catholic University of Croatia, Zagreb, Croatia ² Department of Psychology, Faculty of Humanities and Social Sciences, Rijeka, Croatia

Abstract

The effects of media on body image have been heavily investigated through the years. Recent research has shifted its focus to social media content and other behaviors on social media that can affect body and appearance satisfaction. This study aimed to test the contribution of media pressure to appearance satisfaction according to the prepositions of the Tripartite Influence Model on a sample of young Croatian women. A sample of 308 college students (average age 21.6) completed the BE-Appearance subscale of the Body Esteem Scale for Adolescents and Adults (Mendelson et al., 2001), Physical Appearance Comparison Scale (Thompson et al., 1991), and Sociocultural Attitudes Towards Appearance Questionnaire (Schafer et al., 2015). Path analysis showed that media pressure positively contributes to both appearance comparison with people on Instagram and beauty ideals internalization and negatively contributes to appearance satisfaction in young women. Results also indicate a significant negative indirect contribution of media pressure to appearance satisfaction through appearance comparison and beauty ideals internalization. Findings suggest a strong relationship between media pressure and appearance satisfaction and are discussed in the context of further investigation of media content that could be harmful to appearance satisfaction in young women.

Keywords: tripartite influence model, appearance satisfaction, media pressure, beauty ideals internalization, appearance comparison, social media

Introduction

The influence of different factors on changes in the body image of young women has been widely investigated in many longitudinal and experimental studies (e.g., Fardouly et al., 2017; Fuller-Tyszkiewicz et al., 2019; Saiphoo & Want, 2018).

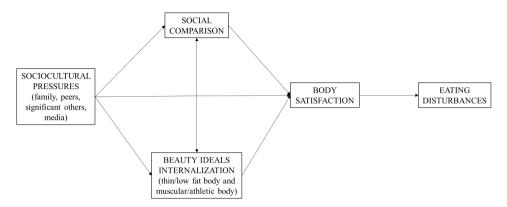
Ana Žulec Ivanković 🗈 https://orcid.org/0000-0001-9609-7131 Marina Merkaš D https://orcid.org/0000-0003-1769-7273 Tamara Martinac Dorčić b https://orcid.org/0000-0002-3844-8500

Ana Žulec Ivanković, Department of Psychology, Catholic University of Croatia, Ilica 242, 10000 Zagreb, Croatia. E-mail: azulec@unicath.hr

As body image is an important part of general self-image, examination of these influences is very important, especially now in the age of social media. Body image is defined as one's cognitive and emotional evaluation of their body and literature distinguishes two aspects of body image - body satisfaction (i.e., satisfaction with body parts, such as the chest, thighs, buttocks, etc.), and appearance satisfaction (e.g., Aime et al., 2020; Fuller-Tyszkiewicz et al., 2019). Appearance satisfaction is defined in the literature as satisfaction with outside appearance and it is highly related to body satisfaction (e.g., Choukas-Bradley et al., 2021; Fuller-Tyszkiewicz et al., 2019). Researchers suggest that appearance satisfaction can be measured as a traitlike component of one's body image (i.e., something that is relatively stable) or as a state-like characteristic that can fluctuate in shorter periods (e.g., during the day or between days) (e.g., McComb & Mills, 2020; Rogers et al., 2017). These changes in appearance satisfaction, whether they are short- or long-term, are mostly under the influence of different individual and contextual factors. These factors are best described by the Tripartite Influence Model (TIM; Thompson et al., 1999; van den Berg et al., 2002), which consists of two main components: sociocultural pressures and the internalization of beauty ideals. The main idea of this model is that sociocultural pressures encourage individuals to internalize beauty ideals, which then results in lower body image and pose as a risk factor for eating disturbances, as seen in Figure 1 (Roberts et al., 2022; Thompson et al., 1999; van den Berg et al., 2002). In the model, internalization of beauty ideals refers to accepting ideas that thin/lowfat and muscular/athletic bodies are ideals and standards of beauty, while sociocultural pressures refer to four outside pressures to accept these ideals, i.e. pressure from family, peers, significant others, and media (Roberts et al., 2022; Thompson et al., 1999; van den Berg et al., 2002). In other words, TIM proposes that more pressure from, for example, peers to be thin and muscular will eventually lead to accepting that idea as true and, consequently, lead to lower body image.

TIM was profoundly examined in different samples (e.g., Choukas-Bradley et al., 2021; Fuller-Tyszkiewicz et al., 2019), and it was shown that there is an additional step in this process, which happens almost parallelly with the internalization of beauty ideals. This step is social comparison, specifically, a comparison of one's body and appearance with others. Previous research has shown that sociocultural pressures can also be linked to appearance comparison, which might result in lower body image, but that appearance comparison and internalization of ideals are highly correlated (e.g., Aniulis et al., 2021; Fuller-Tyszkiewicz et al., 2019; Jarman et al., 2021). In that context, there is still no clear evidence if beauty ideals internalization is predicted by appearance comparison or vice versa. Nevertheless, social comparison is one important step that has been added to the TIM which helped in better describing a path from sociocultural pressures to body and appearance satisfaction, and body image in general (e.g., Aniulis et al., 2021; Fuller-Tyszkiewicz et al., 2021; Fuller-Tyszkiewicz et al., 2019; Jarman et al., 2019; Jarman et al., 2021). Figure 1. shows the relationships assumed in the TIM.

Figure 1



Relationships Among Variables in the Tripartite Influence Model

As stated earlier, TIM assumes that sociocultural pressures come from four sources: family, peers, significant others, and the media (Roberts et al., 2022; Thompson et al., 1999; van den Berg et al., 2002). Even though all of these sources can contribute to changes in appearance satisfaction and body image, probably the most dominant one is the media, especially social media in the 21st century (e.g., McComb & Mills, 2021; Roberts et al., 2022; Rogers et al., 2017; Tiggemann et al., 2020). Recent research has shown that social media is largely spread and used among children, adolescents, and youth, with TikTok and Instagram being the main social media platforms used today (e.g., Anixiadis et al., 2019; Beyens et al., 2021; Christensen et al., 2021; Tiggemann et al., 2020). This is very important to state, as these two social media platforms are image- and/or video-based, which means children and youth are constantly exposed to different content, mostly pictures and videos of people, which are most often strongly edited and photoshopped. Research in Croatia that focused on smartphone use in adolescents and youth has confirmed previously known results, and the results indicate high use of social media in all age groups, with more prevalent use of social media in girls and young women (e.g., Keresteš & Štulhofer, 2020; Stojčić et al., 2020; Vejmelka & Matković, 2021; Viskić et al., 2021; Žulec et al., 2023).

Research has confirmed the prepositions of the TIM by focusing only on pressures from the media, or more specifically, social media (e.g., McComb & Mills, 2021; Roberts et al., 2022; Tiggemann et al., 2020). In other words, research showed that pressure to conform to beauty ideals experienced on social media leads to worse appearance satisfaction and body image through the internalization of beauty ideals and appearance comparison. Research that focused on media pressure in general or media pressure from different media sources (e.g., television, social media, beauty magazines) is in line with previously mentioned relationships between media pressure and body and/or appearance satisfaction (e.g., Roberts et al., 2022; Rogers

et al., 2017; Schmuck et al., 2019). So, regardless of the type of media, its pressure leads to the internalization of beauty ideals of thin/low-fat and muscular/athletic bodies and comparison with them, both lowering appearance and body satisfaction. It is important to note that media pressure and media in general are two distinct terms. Media in general refers to the type of used media (i.e., TV, social media, magazines, etc.), while media pressure is pressure experienced during the usage of some type of media and usually comes from some highly influential person shown in the media (e.g., Roberts et al., 2022; Thompson et al., 1999; Valkenburg & Peter, 2013). For example, social media is the type of media where a person can experience both peer pressure and media pressure to internalize beauty ideals. Even though previous research has focused on media pressure which was presented by celebrities and influencers (e.g., Rogers et al., 2017; Tiggemann et al., 2020), content posted by peers and family also might affect individuals to internalize beauty ideals and compare themselves with them.

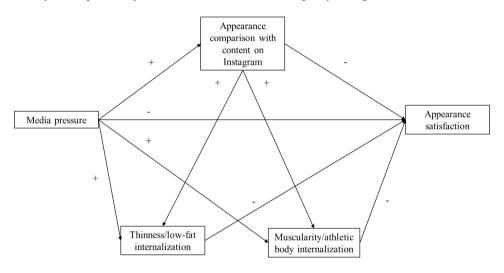
Previous research has shown that much of the (social) media content is focused on beauty ideals and beauty standards that are presented to children and youth daily (e.g., McComb & Mills, 2021; Roberts et al., 2022; Tiggemann et al., 2020). Constant exposure to such content might result in lower mood, lower life satisfaction, and lower body and appearance satisfaction, results that have been confirmed for both younger adolescents and late adolescents and young adults, and mostly girls and women (e.g., Fardouly et al., 2017; McComb & Mills, 2021; Roberts et al., 2022; Tiggemann et al., 2020). Even though middle adolescence is the most sensitive developmental stage for body image, late adolescence (i.e., 19, 20, and 21 years of age) is still very important for the definition of one's body image (e.g., Jackson & Goossens, 2006; Maes et al., 2021; Steinberg, 2014). At that age, people start their college education or have their first work experience, meet new people, and start more serious romantic relationships, but they are also more skilled and autonomous in searching (social) media for the content of their interests. It is possible that in this period both traditional (i.e., television and magazines) and social media strongly impinge on the internalization of beauty ideals and appearance comparison, with both affecting one's appearance satisfaction and body image. Much research (e.g., Fardouly et al., 2017; McComb & Mills, 2021; Tiggemann et al., 2020) has been conducted on this population, confirming the propositions of TIM, but confirmation of this model, or parts of the model, is rare in Croatia (e.g., Anić et al., 2021; Pokrajac-Bulian et al., 2008; Rukavina & Pokrajac-Bulian, 2006). With that in mind, we decided to examine a part of the Tripartite Influence Model on a sample of young Croatian women.

More specifically, we aimed to determine how media pressure contributes to the internalization of beauty ideals of thinness/low-fat and muscular/athletic body, appearance comparison with people on Instagram, and appearance satisfaction of young women in Croatia, a model that is shown in Figure 2. We hypothesized that experienced media pressure by young women will positively contribute to their

appearance comparison and internalization of both thin/low-fat and muscular/athletic bodies, and that appearance comparison and internalization of both thin/low-fat and muscular/athletic bodies will then negatively contribute to appearance satisfaction. We also assumed experienced media pressure by young women would directly negatively contribute to their appearance satisfaction (Figure 2).

Figure 2

Part of the Tripartite Influence Model Tested in the Sample of Young Croatian Women



Method

Participants

A total of 308 female university students participated in this study. Their average age is 21.27 (SD = 1.34), and most of them are in the second or third year of college (n = 65, n = 157, respectively). Most of the participants studied psychology (around 20%), economy (around 15%), and biomedical or computer science (around 15%). They reported the average daily time of smartphone use of 4.26 hours (SD = 1.62), with most of them spending between 3 and 4 hours a day in smartphone use (n = 105, 34%).

Measures

Appearance Satisfaction

For the measure of appearance satisfaction, the *BE-Appearance* subscale of the *Body Esteem Scale for Adolescents and Adults* (BESAA; Mendelson et al., 2001) was used. The subscale was translated to Croatian and then back-translated to English by a researcher. This subscale examines one's general feelings about their appearance (e.g., "I like what I see when I look in the mirror."), where participants give their answers on ten items on a scale from 0 (*never*) to 4 (*always*). Confirmatory factor analysis (CFA) was conducted and showed good fit ($\chi^2 = 179.59$, df = 35, p = .00; CFI = .927; TLI = .906; RMSEA = .116; SRMR = .042), with modification indices suggesting improvement of fit with inclusion of correlation between items 3 and 4, and 5 and 6. After the inclusion of these correlations, CFA showed satisfactory fit ($\chi^2 = 116.19$, df = 33, p = .00; CFI = .958; TLI = .943; RMSEA = .090; SRMR = .037) The total score was made as a sum of all ten items, with a higher score indicating higher appearance esteem or satisfaction.

Appearance Comparison with Content on Instagram

Physical Appearance Comparison Scale (PACS; Thompson et al., 1991) was used to measure the amount of social comparison students made with the people seen on social media, specifically Instagram. The subscale was translated to Croatian and then back-translated to English by a researcher. In its original form, the scale consists of five items that refer to different social situations (e.g., "At parties or other social events, I compare my physical appearance to the physical appearance of others."), and participants have to report the amount of comparison they make from 1 (*never*) to 5 (*always*). In this study, the scale was adapted following the research of Prieler et al. (2021), i.e., social situations were replaced with Instagram (e.g., "I compare my physical appearance to the physical appearance of others on Instagram."). CFA was conducted and showed satisfactory fit ($\chi^2 = 5.10$, df = 5, p = .40; CFI = 1.00; TLI = 1.00; RMSEA = .008; SRMR = .016). The total score was made as a sum of all five items, with a higher score indicating a higher tendency of appearance comparison with people on Instagram.

Internalization of Muscularity/Athleticism Beauty Ideal

Internalization of muscularity/athleticism beauty ideal was measured with a subscale from the *Sociocultural Attitudes Towards Appearance Questionnaire* (SATAQ-4R; Schafer et al., 2015), and a Croatian translation was used (Anić et al., 2021). Participants indicated their agreement on a scale from 1 (*completely disagree*) to 5 (*completely agree*) on five items (e.g., "It is important for me to look muscular."). CFA was conducted and showed a satisfactory fit for this subscale ($\chi^2 = 11.98$, df = 5, p = .04; CFI = .993; TLI = .986; RMSEA = .067; SRMR = .016). The total score

for the subscale is calculated as a sum of all five items, with a higher result indicating higher internalization of muscularity/athleticism beauty ideal.

Internalization of Thinness/Low-Fat Beauty Ideal

Internalization of thinness/low-fat beauty ideal was measured with a subscale from the *Sociocultural Attitudes Towards Appearance Questionnaire* (SATAQ-4R; Schafer et al., 2015), and a Croatian translation was used (Anić et al., 2021). Participants indicated their agreement on a scale from 1 (*completely disagree*) to 5 (*completely agree*) on four items (e.g., "I want my body to look very thin."). CFA for this subscale showed poor fit ($\chi^2 = 27.27$, df = 2, p = .00; CFI = .943; TLI = .830; RMSEA = .203; SRMR = .039), with modification indices suggesting inclusion of correlation between items 3 and 13, and items 6 and 11. After the inclusion of these correlations, CFA showed a satisfactory fit ($\chi^2 = 4.60$, df = 0, p = .00; CFI = .990; TLI = 1.000; RMSEA = .000; SRMR = .019). The total score for the subscale is calculated as a sum of all four items, with a higher result indicating higher internalization of thinness/low-fat beauty ideal.

Media Pressure

Sociocultural pressure from media was measured with a subscale from the *Sociocultural Attitudes Towards Appearance Questionnaire* (SATAQ-4R; Schafer et al., 2015), and a Croatian translation was used (Anić et al., 2021). Participants indicated their agreement on a scale from 1 (*completely disagree*) to 5 (*completely agree*) on four items (e.g., "I feel pressure from the media to look thinner."). For this subscale, CFA showed poor fit ($\chi^2 = 55.53$, df = 2, p = .00; CFI = .964; TLI = .893; RMSEA = .295; SRMR = .017), with modification indices suggesting inclusion of correlation between items 28 and 30. After the inclusion of this correlation, CFA showed a satisfactory fit ($\chi^2 = 0.13$, df = 1, p = .72; CFI = 1.000; TLI = 1.000; RMSEA = .000; SRMR = .001). The total score for the subscale is calculated as a sum of all four items, with a higher result indicating a higher feeling of media pressure to conform to beauty ideals.

We also collected some basic sociodemographic information from the participants (i.e., age, gender, year of study, field of study), as well as their average daily time of smartphone use. Participants answered the question "How much time do you spend per day using your smartphone?" on a slider timeline with time from 0 hours to 8 hours, with checkmarks for every 15 minutes in an hour. Correlations of time and other variables were checked, and there were no significant correlations between them. Accordingly, the variable of average daily time of smartphone use was not used in further analysis.

Procedure

This study, "Smartphone use, viral challenges and appearance satisfaction in children and adolescents", from which the data came, was conducted during May and June 2023. The ethical committee of the Catholic University of Croatia approved the study. Students of psychology at the Catholic University of Croatia were sent a link to the questionnaire and were instructed to share it with their friends and colleagues at other universities. The questionnaire had two different versions, for females and males, because of the different questions in the SATAQ-4R questionnaire. As the research was conducted online, informed consent with all information about the research was prompted after opening the link. It took students around 20 minutes to finish the questionnaire.

Results

Descriptive statistics of the used variables are shown in Table 1, and their correlations are shown in Table 2. As seen in Table 1, young women have moderately high appearance satisfaction (M = 23.84, SD = 7.76) and are somewhat prone to compare their appearance with others they see on Instagram. They also have significantly higher internalization of a muscularity/athleticism ideal than a thinness/low-fat ideal (t[307] = 3.91, p < .01) and feel moderate pressure from the media to achieve beauty ideals.

Table 1

Descriptive Statistics for Appearance Satisfaction, Appearance Comparison, Muscularity and Thinness Internalization, and Media Pressure (N = 308)

	k	Min	Max	М	SD	Skewness	Cronbach alpha
Appearance satisfaction	10	1	35	23.84	7.76	-0.53	.91
Appearance comparison	5	4	15	12.14	3.57	-0.06	.56
Muscularity/athleticism internalization	5	5	25	12.91	4.95	0.16	.91
Thinness/low-fat internalization	4	4	20	11.67	3.95	0.12	.81
Media pressure	4	4	20	10.52	5.37	0.14	.96

Note. k – number of items per scale.

As seen in Table 2, all observed variables are significantly moderately correlated. Appearance satisfaction is significantly negatively correlated with a tendency for appearance comparison, internalization of both thinness/low-fat and muscularity/athleticism ideals, as well as pressure from media to pursue those ideals.

In other words, more appearance comparisons with people on Instagram, higher internalization of muscularity/athleticism and thinness/low-fat beauty ideals, and higher feelings of media pressure to pursue these ideals are related to lower appearance satisfaction in young women. Young women who have a higher tendency to compare their appearance with people on Instagram also report higher internalization of both muscularity/athleticism and thinness/low-fat beauty ideals and feel higher media pressure to pursue those ideals. Pressure from media shows a significant positive correlation with the internalization of muscular/athletic body, as well as the internalization of thin/low-fat body, meaning that young women who feel higher media pressure also have a higher internalization of beauty ideals of muscular/athletic and thin/low-fat body appearance.

Table 2

Correlations Among Appearance Satisfaction, Appearance Comparison, Muscularity and Thinness Internalization, and Media Pressure

	1	2	3	4	5
1. Appearance satisfaction	-				
2. Appearance comparison	53**	-			
3. Muscular/athletic body internalization	24**	.27**	-		
4. Thin/low-fat body internalization	53**	.51**	.24**	-	
5. Media pressure	52**	.43**	.15**	.49**	-

***p* < .01.

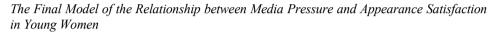
To test our hypotheses, we conducted path analysis using Mplus version 8 (Muthén & Muthén, 2020) with observed scores, using the ML estimator. The Bootstrap method of estimation (n = 1000) was used for the calculation of confidence intervals (CI) of the effects.

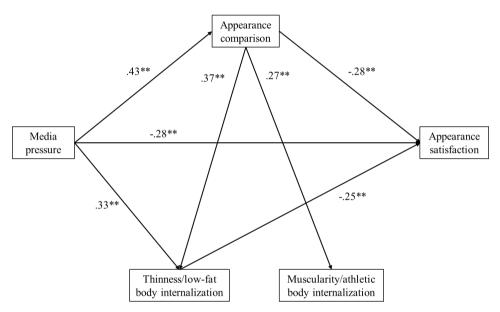
The model with only direct effects shown in Figure 2 was the first one to test and examined indicators showed poor fit ($\chi^2 = 32.697$, df = 2, p = .000; CFI = .920; TLI = .602; RMSEA = .223; SRMR = .049). Correlations between all variables in the model were significant. The second tested model included the hypothesized direct and indirect effects of media pressure on appearance satisfaction (Figure 2). This model showed acceptable fit ($\chi^2 = 3.940$, df = 1, p = .0472; CFI = .992; TLI = .924; RMSEA = .098; SRMR = .020), but there was no significant effect of media pressure on muscular/athletic body internalization ($\beta = .037$, p > .05), as well as no significant effect of muscular/athletic body internalization on appearance satisfaction ($\beta = ..071$, p > .05). Due to this insignificance, we omitted these relationships from the model and tested it again. The tested model showed satisfactory fit ($\chi^2 = 4.313$, df = 2, p =.116; CFI = .994; TLI = .970; RMSEA = .061; SRMR = .024) and was accepted.

The final, accepted model (Figure 3) showed that media pressure significantly positively contributes to thinness/low-fat internalization and appearance comparison. Specifically, higher media pressure is related to more comparison to people on

Instagram and a higher internalization of a thin/low-fat ideal. Media pressure also had a significant negative contribution to appearance satisfaction, meaning that more experience of media pressure directly contributes to lower appearance satisfaction in young women. The model also showed that more appearance comparisons with people on Instagram contribute to higher internalization of both thinness/low-fat and muscularity/athleticism beauty ideals and lower appearance satisfaction. Finally, internalization of the thin/low-fat beauty ideal significantly negatively contributed to appearance satisfaction, indicating that higher internalization of the thinness ideal contributed to the explanation of lower appearance satisfaction in young women.

Figure 3





Note. Standardized coefficients are shown in the figure. $*p^* < .01$.

Table 3 shows the significance and confidence intervals for indirect paths in the final model (Figure 3). The indirect path from media pressure through appearance comparison to appearance satisfaction is significant. Higher media pressure is significantly related to lower appearance satisfaction through its relation to more appearance comparisons with people on Instagram. Media pressure also indirectly contributes to appearance satisfaction through thinness/low-fat internalization. In other words, high media pressure is associated with lower appearance satisfaction in young women through its relation to higher internalization of the thin/low-fat beauty

ideal. The results also show a significant indirect path from media pressure to internalization of muscular/athletic body through appearance comparison, meaning that higher media pressure is related to higher muscular/athletic body internalization through its relation to more appearance comparison.

Table 3

Significance and	Confidence	Internals for	Indinant	Daths in the	Final Model
significance and	Conjuence	intervais jor i	muireci	i ains in ine	T'inai Mouei

Path	β	р	[CI 95%]
1. Media pressure – Appearance comparison –	07	.00	[12, -0.03]
Appearance satisfaction			
2. Media pressure – Thin/low-fat body internalization –	17	.00	[24, -0.11]
Appearance satisfaction			
3. Media pressure – Appearance comparison –	.14	.00	[08, 0.20]
Muscular/athletic body internalization			

Discussion

This study aimed to test part of the Tripartite Influence Model on a sample of young Croatian women related to media influences. The results of the analysis indicate that most of the relationships assumed by the TMI related to media influences are present in our sample. Confirmation was not obtained for the relationship between media pressure and muscularity/athletic internalization, as well as the relationship between muscularity/athletic internalization and appearance satisfaction.

This study shows that experienced media pressure by young women directly contributes to their appearance comparison with people on Instagram and to their internalization of thinness/low-fat ideal, but not muscularity/athletic ideal. These results are in line with some previous research (e.g., Christensen et al., 2021; Fardouly et al., 2017; Fuller-Tyszkiewicz et al., 2019; McComb & Mills, 2020) that points out the high influence of media (both traditional and social media) on the tendency of young women to compare their appearance with others and to internalize different beauty ideals. Croatian young women in this sample experience media pressure to pursue beauty ideals, and this pressure is related to their comparison with other people they see on Instagram, as well as their internalization of ideals of thin/low-fat bodies. This study did not find a significant contribution of media pressure to the internalization of muscularity/athletic ideals, even though some previous research has shown this relationship (e.g., Fardouly et al., 2017; Fuller-Tyszkiewicz et al., 2019). It is possible that the media content that women in our sample are consuming isn't highly focused on the idea of a muscular/athletic body and therefore isn't related to the internalization of this ideal. Future research should

consider other sources of pressure (i.e., family, peers, or significant others) to examine their relationship with the internalization of muscularity/athletic ideal.

This study also found that appearance comparison with people on Instagram positively contributes to the internalization of both thinness/low-fat ideal and muscularity/athletic ideal, confirming some previous research (e.g., Chang et al., 2019; Fardouly et al., 2017; Hogue & Mills, 2019). As stated earlier, it is still unclear if appearance comparison is a predictor of beauty ideals internalization or if the relationship goes the other way around (internalization predicting appearance comparison). It is possible that the relationship between these two constructs is highly intertwined and that the prediction path differs from one individual to another. Nevertheless, this significant relationship opens up a possibility that appearance comparison mediates or moderates the relationship between media pressure, beauty ideals internalization, and appearance satisfaction. Valkenburg and Peter (2013) propose a similar idea in their Differential susceptibility to media effects model. In their paper, they state that the effects people experience due to media use are not only mediated by some individual factors but also moderated by them (Valkenburg & Peter, 2013). Thus, media pressure may affect appearance satisfaction in two ways. Firstly, it could be that this path is mediated by beauty ideals internalization, mainly thinness/low-fat internalization, as the results of this study have shown. Secondly, it could also be that this path is moderated by the tendency toward appearance comparison. In other words, it is possible that individuals who feel higher media pressure to achieve beauty ideals also compare their appearance more, thus internalizing beauty ideals and having lower appearance satisfaction. We encourage future research into testing this hypothesis and examining the bi-directional relationship between beauty ideals internalization and appearance comparison.

It is important to notice that we found a significant indirect relationship between media pressure and muscularity/athletic ideal internalization through appearance comparison. In other words, high media pressure to conform to beauty ideals contributes to higher internalization of muscularity/athletic beauty ideal through more appearance comparison, a relationship found in a few previous studies (e.g., Fuller-Tyszkiewicz et al., 2019; Jarman et al., 2021). As there was no significant direct relationship between media pressure and muscularity/athletic ideal internalization, this finding is highly noticeable and proposes the following notion – media content that is focused on muscular/athletic bodies isn't created to directly encourage internalization, but to induce appearance comparison with seen content, thus indirectly contributing to the internalization of this beauty ideal. These findings are also supported by the significant difference between the internalization of thinness/low-fat body and muscularity/athletic body in our sample. As we cannot know what causes this difference in internalization, we can only hypothesize that it may come from media pressure, specifically media content focused on muscular and athletic bodies. This notion should be examined in future research, as some research

shows that high internalization of muscular/athletic ideal can encourage excessive physical activity, especially in men (e.g., Keum et al., 2022; Lee & Lee, 2020).

The results also confirmed previously known results that higher internalization of the thinness/low-fat beauty ideal contributes to lower appearance satisfaction (e.g., Choukas-Bradley et al., 2021; Fuller-Tyszkiewicz et al., 2019). The results showed that internalization of muscular/athletic ideal has an insignificant relationship with appearance satisfaction. These results may be a product of different understandings of these ideals. In other words, thinness/low-fat ideal could be highly related to one's appearance, i.e., how their clothes fit them or how they generally appear, while muscularity/athletic ideal could be more related to one's body, i.e., size and shape of their muscles or their physical fitness. Considering this differentiation and previously discussed results, young women with higher thinness/low-fat internalization may be more focused on media content that values appearance and therefore are less satisfied with their appearance. On the other hand, young women with higher muscularity/ athletic internalization are more focused on media content that values body fitness and are prone to compare themselves with it, but their appearance satisfaction isn't affected by this internalization. We encourage future research into the inclusion of both body and appearance satisfaction as a way of examining this hypothesis.

Analysis has also confirmed the indirect path of media pressure to appearance satisfaction through internalization of thinness/low-fat beauty ideal and appearance comparison. These results are in line with previous ones (e.g., Choukas-Bradley et al., 2021; Fuller-Tyszkiewicz et al., 2019). However, it is important to notice that some previous research pointed out that mediating effects are stronger for appearance comparison than for internalization (e.g., Girard et al., 2018; Krug et al., 2020), which is not obtained in this study. This could be because young women in our sample are not highly prone to compare their appearance with others they see on Instagram; therefore, this indirect path is somewhat weaker than for thinness/low-fat internalization. It is possible that this relationship was weaker in our study mainly due to measurement reasons. It could be that young women in our sample are not prone to compare their appearance with people they see on Instagram but compare themselves with others in other social situations. We encourage future research to examine the tendency for appearance comparison on a more general level or in situations that refer to in-person interactions to check for differences in these indirect relationships.

We also encourage future research to consider examining pressures from other sources (i.e., family, peers, or significant others) and their relationship with appearance comparison with people on Instagram, beauty ideals internalization, and appearance satisfaction in young women in Croatia. As this is one of the rare studies that examined the prepositions of the TIM in a sample of Croatian young women, we encourage a more in-depth look into these variables and measures in the future.

As with every study, this has some limitations, but also some implications. First of all, the data for this paper comes from cross-sectional research. Because of this,

we cannot draw conclusions about causal relationships between observed constructs (i.e., it is possible that low appearance satisfaction contributes to more comparison on social media, leaving the media and its content more space for affecting the individual). We encourage the conduction of longitudinal and experimental studies, as well as experience sampling studies, for a better understanding of these, possibly bi-directional relationships. Secondly, we support the examination of these constructs in a sample of Croatian young males and different age groups. Regarding the implications, firstly, we must mention that this is one of the rare studies that examined relationships assumed by the TIM in the Croatian sample, and in that way, it paves the way for more research into the model. Secondly, even though this was cross-sectional research, we found the same relationship as shown in different longitudinal and experimental research (e.g., Fardouly et al., 2017; Fuller-Tyszkiewicz et al., 2019; Saiphoo & Want, 2018). It would be important to examine the perception of media pressure in young people since consumption of media is a part of their everyday lives, as well as the content in the media that represents thin/low-fat or muscular/athletic beauty ideals to which they are exposed.

Conclusion

The results showed that high media pressure is related to more appearance comparisons with people on Instagram and higher internalization of thinness/low-fat beauty ideal, as well as to lower appearance satisfaction among young women. The results also showed that more appearance comparison with people on Instagram is related to higher internalization of thinness/low-fat and muscularity/athletic beauty ideals. The findings indicate that media and the content presented in the media can be harmful to the appearance satisfaction of young women.

References

- Aime, A., Fuller-Tyszkiewicz, M., Dion, J., Markey, C. H., Strodl, E., McCabe, M., Mellor, D., Granero Gallegos, A., Pietrabissa, G., Alcaraz-Ibanez, M., Begin, C., Blackburn, M.-E., Caltabiano, M., Castelnuovo, G., Gullo, S., Hayami-Chisuwa, N., He., Q., Lo Coco, G., Manzonie, G. M., ... Maiano, C. (2020). Assessing positive body image, body satisfaction, weight bias, and appearance comparison in emerging adults: A crossvalidation study across eight countries. *Body Image*, 35, 320–332. https://doi.org/10.1016/j.bodyim.2020.09.014
- Anić, P., Pokrajac-Bulian, A., & Mohorić, T. (2021). Role of sociocultural pressures and internalization of appearance ideals in the motivation for exercise. *Psychological Reports*, 125(3), 1628–1647. https://doi.org/10.1177/00332941211000659
- Aniulis, E., Sharp, G., & Thomas, N. A. (2021). The ever-changing ideal: The body you want depends on who else you're looking at. *Body Image*, 36, 218–229. https://doi.org/10.1016/j.bodyim.2020.12.003

- Anixiadis, F., Wertheim, E. H., Rodgers, R., & Caruana, B. (2019). Effects of thin-ideal Instagram images: The roles of appearance comparisons, internalization of the thin ideal and critical media processing. *Body Image*, 31, 181–190. https://doi.org/10.1016/j.bodyim.2019.10.005
- Beyens, I., Pouwels, J. L., van Driel, I. I., Keijsers, L., & Valkenburg, P. M. (2021). Social media use and adolescents' well-being: Developing a typology of person-specific effect patterns. *Communication Research*, Advance online publication. https://doi.org/10.1177/00936502211038196
- Chang, L., Li, P., Loh, R. S. M., & Chua, T. H. H. (2019). A study of Singapore adolescent girls' selfie practices, peer appearance comparisons, and body esteem on Instagram. *Body Image*, 29, 90–99. https://doi.org/10.1016/j.bodyim.2019.03.005
- Choukas-Bradley, S., Roberts, S. R., Maheux, A. J., & Nesi, J. (2022). The perfect storm: A developmental–sociocultural framework for the role of social media in adolescent girls' body image concerns and mental health. *Clinical Child and Family Psychology Review*, 25, 681–701. https://doi.org/10.1007/s10567-022-00404-5
- Christensen, K. A., Forbush, K. T., Cushing, C. C., Lejuez, C. W., Fleming, K. K., & Swinburne Romine, R. E. (2021). Evaluating associations between fitspiration and thinspiration content on Instagram and disordered-eating behaviors using ecological momentary assessment: A registered report. *International Journal of Eating Disorders*, 54, 1307–1315. https://doi.org/10.1002/eat.23518
- 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. https://doi.org/10.1016/j.bodyim.2016.11.002
- Fuller-Tyszkiewicz, M., Chhouk, J., McCann, L., Urbina, G., Vuo, H., Krug, I., Ricciardelli, L., Linardon, J., Broadbent, J., & Richardson, B. (2019). Appearance comparison and other appearance-related influences on body dissatisfaction in everyday life. *Body Image*, 28, 101–109. https://doi.org/10.1016/j.bodyim.2019.01.002
- Girard, M., Rodgers, R. F., & Chabrol, H. (2018). Prospective predictors of body dissatisfaction, drive for thinness, and muscularity concerns among young women in France: A sociocultural model. *Body Image*, 26, 103–110. https://doi.org/10.1016/j.bodyim.2018.07.001
- Hogue, J. V., & Mills, J. S. (2019). The effects of active social media engagement with peers on body image in young women. *Body Image*, 28, 1–5. https://doi.org/10.1016/j.bodyim.2018.11.002
- Jackson, S., & Goossens, L. (2006). Handbook of adolescent development. Psychology Press.
- Jarman, H. K., Marques, M. D., McLean, S. A., Slater, A., & Paxton, S. J. (2021). Social media, body satisfaction and well-being among adolescents: A mediation model of appearance-ideal internalization and comparison. *Body Image*, 36, 139–148. https://doi.org/10.1016/j.bodyim.2020.11.005

- Keresteš, G., & Štulhofer, A. (2020). Adolescents' online social network use and life satisfaction: A latent growth curve modeling approach. *Computers in Human Behavior*, 104, Article 106187. https://doi.org/10.1016/j.chb.2019.106187
- Keum, B. T., Li, X., Cheng, H. L., & Sappington, R. T. (2022). Substance use risk among Asian American men: The role of gendered racism, internalization of western muscularity ideals, interpersonal and body shame, and drive for muscularity. *Psychology of Men & Masculinities*, 23(1), 109–122. https://doi.org/10.1037/men0000368
- Krug, I., Selvaraja, P., Fuller-Tyszkiewicz, M., Hughes, E. K., Slater, A., Griffiths, S., Yee, Z. W., Richardson, B., & Blake, K. (2020). The effects of fitspiration images on body attributes, mood and eating behaviors: An experimental ecological momentary assessment study in females. *Body Image*, 35, 279–287. https://doi.org/10.1016/j.bodyim.2020.09.011
- Lee, M., & Lee, H. H. (2020). A test of the expanded tripartite dual pathway model in physically active Korean men. *Sex Roles*, *82*, 743–753. https://doi.org/10.1007/s11199-019-01082-4
- Maes, C., Trekels, J., Tylka, T., & Vandenbosch, L. (2021). The positive body image among adolescents scale (PBIAS): Conceptualization, development, and psychometric evaluation among adolescents from Belgium. *Body Image*, 38, 270–288. https://doi.org/10.1016/j.bodyim.2021.05.004
- McComb, S. E., & Mills, J. S. (2020). A systematic review on the effects of media disclaimers on young women's body image and mood. *Body Image*, 32, 34–52. https://doi.org/10.1016/j.bodyim.2019.10.010
- McComb, S. E., & Mills, J. S. (2021). Young women's body image following upwards comparison to Instagram models: The role of physical appearance perfectionism and cognitive emotion regulation. *Body Image*, 38, 49–62. https://doi.org/10.1016/j.bodyim.2021.03.012
- Mendelson, B. K., Mendelson, M. J., & White, D. R. (2001). Body-esteem scale for adolescents and adults. *Journal of Personality Assessment*, 76(1), 90–106. https://doi.org/10.1207/S15327752JPA7601_6
- Muthén, L. K., & Muthén, B. O. (2020). Mplus user's guide (8th ed.). Muthén & Muthén.
- Pokrajac-Bulian, A., Ambrosi-Randić, N., & Kukić, M. (2008). Thin-ideal internalization and comparison process as mediators of social influence and psychological functioning in the development of disturbed eating habits in Croatian college females. *Psihologijske* teme, 17(2), 221–245. https://hrcak.srce.hr/file/51638
- Prieler, M., Choi, J., & Lee, H. E. (2021). The relationships among self-worth contingency on others' approval, appearance comparisons on Facebook, and adolescent girls' body esteem: A cross-cultural study. *International Journal of Environmental Research and Public Health, 18*(3), Article 901. https://doi.org/10.3390/ijerph18030901

- Roberts, S. R., Maheux, A. J., Hunt, R. A., Ladd, B. A., & Choukas-Bradely, S. (2022). Incorporating social media and muscular ideal internalization into the tripartite influence model of body image: Towards a modern understanding of adolescent girls' body dissatisfaction. *Body Image*, 41, 239–247. https://doi.org/10.1016/j.bodyim.2022.03.002
- Rogers, A., Fuller-Tyszkiewicz, M, Lewis, V., Krug, I., & Richardson, B. (2017). A personby-situation account of why some people more frequently engage in upward appearance comparison behaviors in everyday life. *Behavior Therapy*, 48, 19–28. https://doi.org/10.1016/j.beth.2016.09.007
- Rukavina, T., & Pokrajac-Bulian, A. (2006). Thin-ideal internalization, body dissatisfaction and symptoms of eating disorders in Croatian adolescent girls. *Eating and Weight Disorders*, 11, 31–37. https://doi.org/10.1007/BF03327741
- Saiphoo, A., & Want, S. C. (2018). High cognitive load during attention to images of models reduces young women's social comparisons: Further evidence against cognitive efficiency. *Body Image*, 27, 93–97. https://doi.org/10.1016/j.bodyim.2018.08.012
- Schaefer, L. M., Burke, N. L., Thompson, J. K., Dedrick, R. F., Heinberg, L. J., Calogero, R. M., Bardone-Cone, A. M., Higgins, M. K., Frederick, D. A., Kelly, M., Anderson, D. A., Schaumberg, K., Nerini, A., Stefanile, C., Dittmar, H., Clark, E., Adams, Z., Macwana, S., Klump, K. L., ... Swami, V. (2015). Development and validation of the Sociocultural Attitudes Towards Appearance Questionnaire-4 (SATAQ-4). *Psychological Assessment*, 27(1), 54–67. https://doi.org/10.1037/a0037917
- Schmuck, D., Karsay, K., Matthes, J., & Svetic, A. (2019). "Looking up and feeling down". The influence of mobile social networking site use on upward social comparison, selfesteem, and well-being of adult smartphone users. *Telematics and Informatics*, 42, Article 101240. https://doi.org/10.1016/j.tele.2019.101240
- Steinberg, L. (2014). Adolescence. McGrow-Hill.
- Stojčić, I., Dong, X., & Ren, X. (2020). Body image and sociocultural predictors of body image dissatisfaction in Croatian and Chinese women. *Frontiers in Psychology*, 11, Article 731. https://doi.org/10.3389/fpsyg.2020.00731
- 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. https://doi.org/10.1037/10312-000
- Thompson, J. K, Heinberg, L. J., & Tantleff, S. (1991). The Physical Appearance Comparison Scale (PACS). *Behavior Therapist*, *14*, 174.
- Tiggemann, M., Anderberg, I., & Brown, Z. (2020). Uploading your best self: Selfie editing and body dissatisfaction. *Body Image*, 33, 175–182. https://doi.org/10.1016/j.bodyim.2020.03.002
- Valkenburg, P. M., & Peter, J. (2013). Five challenges for the future of media-effects research. *International Journal of Communication*, 7, 197–215. http://ijoc.org/index.php/ijoc/article/download/1962/849

- van den Berg, P., Thompson, J. K., Obremski-Brandon, K., & Coovert, M. (2002). The tripartite influence model of body image and eating disturbance: A covariance structure modeling investigation testing the meditational role of appearance comparison. *Journal* of Psychosomatic Research, 53, 1007–1020. https://doi.org/10.1016/S0022-3999(02)00499-3
- Vejmelka, L., & Matković, R. (2021). Online interactions and problematic internet use of Croatian students during the COVID-19 pandemic. *Information*, 12(10), Article 399. https://doi.org/10.3390/info12100399
- Viskić, J., Jokić, D., Marelić, M., Machala Poplašen, L., Relić, D., Sedak, K., & Vukušić Rukavina, T. (2021). Social media use habits, and attitudes toward e-professionalism among medicine and dental medicine students: A quantitative cross-sectional study. *Croatian Medical Journal*, 62(6), 569–579. https://doi.org/10.3325/cmj.2021.62.569
- Žulec, A., Merkaš M., & Varga, V. (2023). Screen-based activities among children in Croatia: A media diary approach. *Journal of Psychological & Educational Research*, 31(1), 63–83. https://www.marianjournals.com/files/JPER_articles/JPER_31_1_2023/Žulec_et_all_JPE R_2023_31_1_63_83.pdf

Received: October 16, 2023