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13.10.2022

ISSN 2737-0534

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Did the pandemic increase social media-induced appearance pressures? A longitudinal analysis of social media caused appearance-related pressures before and during the Covid-19 pandemic

Has the use of social media intensified and increased appearance-related pressures during the Covid-19 pandemic? A growing body of research has suggested that body image concerns and disordered eating have increased during the Covid-19 pandemic. One of the potential pathways includes an increase in social media use. However, examinations of this pathway have been limited because of the lack of longitudinal data. Drawing on a four-wave population-based survey, we demonstrate that social media-based appearance pressures did not increase at the beginning of the pandemic, but rather at the later stage, and among women only. However, the changes in social media use do not explain this subtle increase. These findings suggest that other pathways than intensified use of social media might be more useful in explaining increased appearance-related pressures during the Covid-19 pandemic.

Keywords: appearance pressures; Covid-19; longitudinal data; gender; social media; Instagram; “Zoom effect”

1. Introduction

Several studies suggest that individuals’ relationships to their bodies and physical appearances have undergone a change during the Covid-19 crisis. For instance, researchers have reported that disordered eating and body image concerns have increased during the pandemic (e.g., Robertson et al., 2021; Swami et al., 2021). Researchers have suggested that the heightened levels of general stress and anxiety related to social distancing and uncertainties caused by the crisis, as well as sudden and forced changes in people’s eating and exercising habits, are among the reasons for increased body and appearance concerns (Cooper et al., 2022; Swami et al., 2021). In addition, the pandemic has changed the ways people use social media. Due to social distancing policies individuals increasingly turn to social media to compensate for the lack of face-to-face contacts and to interact with other people in the contexts of school, work, and leisure, as well as to search for information and entertainment (Gong et al., 2022; Kohvakka & Saarenmaa, 2021; Nguyen et al., 2021). The intensified social media use and consumption of appearance-based content, as well as different modes of observance by the self and others, such as video calls and meetings (Pfund et al., 2020; Vall-Roqué et al., 2021), have raised concerns about intensifying appearance concerns.

Based on previous research on physical appearance-related pressures and social media use, it is clear that social media is associated with appearance concerns. First, exposure to idealised images on social media is connected with appearance dissatisfaction and eating disorders (e.g., Holland & Tiggemann, 2016; Tiggemann & Zinoviev, 2019). Second, the photo-based users of social media tend to have more body image concerns (for a review, see Saiphoo & Vahedi, 2019; Vandenbosch et al., 2022) and to express more social media-based appearance pressures (Åberg et al., 2020). Moreover, these concerns have been more common among the users of Instagram, in particular (Åberg et al., 2020; Tiggemann et al., 2020) among younger women (Fardouly et al., 2015; Slater & Tiggemann, 2010; Tiggemann & Miller, 2010). However, the examinations of the pathway between social media use and appearance pressures during the Covid-19 pandemic have been limited because of the lack of longitudinal data.

This study examines how the Covid-19 pandemic has affected appearance pressures related to people’s use of social media. We base our analysis on a longitudinal population-based survey. The study allows us to assess whether changed media consumption practices had an immediate

impact on people's experiences with appearance concerns. In addition, the research provides an opportunity to test previous theories about the associations between appearance-related pressures and social media use. We found that perceived appearance concerns related to social media increased only slightly during the Covid-19 pandemic. This change did not take place at the beginning of the pandemic, but rather at the later stage. In addition, it seems that only women's experiences have changed. Although our data verifies that use of social media has increased during the Covid-19 pandemic, the changes in the use of Instagram, video calls, nor social media have explained the change in appearance concerns.

The study has several implications. First, it clarifies the role of social media in generating appearance-related pressures during the pandemic by showing that association between the use of social media and appearance concerns does not mean that the relationship is causal. Second, our study demonstrates how a historic period such as the Covid-19 pandemic has not changed the status quo in terms of appearance pressures. Throughout history, socially constructed appearance pressures on women have been more severe, compared to ones concerning men. Therefore, this study links to the broader discussion about the relationship between social media and appearance concerns by suggesting that the link is more multifaceted than typically understood.

2. Literature review

2.1 Social media and appearance-related pressures

Physical appearance has become increasingly important in contemporary societies media plays a significant role in this process. People are expected to look good in more private and public sectors of life, which undoubtedly causes pressures to look a certain way; 'the best versions' of ourselves as claimed in the media (Sarpila et al., 2021; Widdows, 2018). Most media research on appearance pressures draws mainly from two perspectives: social comparison theory (Festinger, 1954) and objectification theory. Social comparison theory claims unrealistic and idealised media images drive individuals to compare themselves to others and, as a consequence, to experience appearance dissatisfaction (Åberg & Koivula, 2021), body image concerns (Hogue & Mills, 2019), feelings of envy (Latif et al., 2021), and in social media, social media fatigue (Tandon et al., 2021). Objectification theory refers to internalising certain observer's perspectives and viewing oneself in objectified terms (e.g., Bell et al., 2018; for a review, see Tiggemann, 2011).

As highly visual platforms, social media networking sites constitute spaces for appearance-related comparison, which increase users' pressures and dissatisfaction with appearance (Åberg et al., 2020; Vandenbosch et al., 2022). Social media can more efficiently trigger these types of comparisons compared to traditional forms of media. Fardouly, Pinkus and Vartanian (2017) found women actually compared their appearances to those of others on social media more than other media sites, such as television, magazines, and billboards. Despite its alleged versatility, social media appearance comparisons are mostly done in an upwards direction (Festinger, 1954; for a review, see Gerber et al., 2018) unfavourable to oneself, resulting in lowered appearance satisfaction and, for example, increased thoughts and acts of dieting and exercising (Robinson et al., 2017; Tiggemann & Zaccardo, 2015). In addition, various other negative individual-level outcomes of social media use have been detected in previous research, such as body image concerns and disordered eating, which concern male and female social media users (for reviews, see Holland & Tiggemann, 2016; Saiphoo & Vahedi, 2019). Simultaneously, several studies have argued that social media is associated with body image and appearance concerns especially among younger women (Åberg et al., 2020; Fardouly et al., 2015; Tiggemann & Miller, 2010; Tiggemann & Slater, 2013; e.g., Fardouly et al., 2015; Tiggemann and Miller, 2010; Tiggemann and Slater, 2013; Åberg et al., 2020).

But the platform matters, as it has been reported that appearance concerns are more common among the female users of photo-based platforms, that is Instagram, in particular (Åberg et al., 2020; Tiggemann et al., 2020; Vandenbosch et al., 2022). 13/10/2022 15:42:00 However, despite the well-documented negative outcomes of social media use, other scholars have also stressed the positive consequences of social media, emphasising its possibilities for empowerment (Barnard, 2016; Kedzior et al., 2016; Tiidenberg & Gómez Cruz, 2015) and constructing valuable forms of social and cultural capital (Dobson, 2016). Moreover, Paasonen et al. (2020) contested the dominant conceptualisation of social media through the object–subject binary in objectification theory by criticizing the conceptualisation of women’s behaviour in overly simplified terms. Broadening this binary and critically assessing the previous claims may be particularly relevant during the pandemic, as most social interaction shifted to online platforms and virtual meetings.

Less clear, however, is how and especially for whom the changes in social media use during the Covid-19 pandemic has impacted appearance pressures.

2.2. Social media and appearance pressures during the Covid-19 pandemic

Despite the magnitude and causes of the pandemic on appearance-related pressures perplexing researchers and general audiences, existing research has not specifically answered these questions. However, based on previous research, we draw several hypotheses.

First, the pandemic has increased social media use, which might amplify appearance-related pressures. From the first weeks of the pandemic, people increasingly turned to social media and messaging apps, especially video conferencing tools, for interaction (Nguyen et al., 2021). For example, the use of popular platforms, such as Facebook and Instagram, increased globally by up to 60% after the Covid-19 outbreak (Kantar, 2020). As previous research suggested the use of social media is associated with appearance concerns (for review, see Rodgers & Rousseau, 2022; Saiphoo & Vahedi, 2019), it is likely that the increase in social media use has increased perceived appearance pressure during the Covid-19 pandemic. These pressures have been likely to increase, especially during the pandemic’s peak periods when appearance-related messaging saturated social media, such as ‘covibesity’, which is weight gain during quarantine (Cooper et al., 2022; Schneider et al., 2022). Thus, we can assume that social media-based appearance pressures have increased during the pandemic.

Second, the intensified pressures to look a certain way might relate to changes in the use of particular social media platforms. As certain platforms, including Instagram and Snapchat, are based on consumption and production of photo-based content, they have been widely recognised as more severe sources of appearance pressures, compared to the text-based platforms (Åberg et al., 2020; Vandenbosch et al., 2022). Hence, as the use of Instagram increased in the beginning of the Covid-19 pandemic, exposure to appearance-based content also grew. The pandemic also gave rise to novel appearance-focused campaigns in Instagram, including #quarantine15, the content of which was weight gain stigmatism (Lucibello et al., 2021).

Moreover, the photo-based social media platforms and intensified digitalization, such as video chatting and conference tools, have affected the role of physical appearance, changing individuals’ relationships with their faces and bodies. During the Covid-19 pandemic, people began to use video chatting in communication for work, education, and general socialization. It has been suggested that, as a consequence of increased use of video chatting, people have

become more aware and, thus, more concerned about their physical appearances (Gullo & Walker, 2021; Thawanyarat et al., 2022). In this respect, Pfund et al. (2020) studied the use of video chatting tools on appearance concerns. Using retrospective data and self-reporting, they concluded that, despite the increase in video chatting since the beginning of the pandemic, time spent on video chatting was not associated with appearance satisfaction. However, certain behaviours, including looking at oneself during video calls and using appearance filters offered by video conference platforms, were associated with appearance concerns. Therefore, it might be that video chatting use per se is not critical, but ways of using it and certain features included in it are (see also Gullo & Walker, 2021). Indeed, the “Zoom effect” storyline seems so tempting that it has been used as a background story in some research to explain the descriptive findings on increasing interest and acceptance of plastic surgery (Chen et al., 2021; Thawanyarat et al., 2022).

Therefore, based on previous findings, it is reasonable to assume that increased Instagram use has increased appearance pressures among the general population. However, based on previous research, we have no reason to believe that video calls have increased those pressures.

Third, several studies on the Covid 19-pandemic’s impact on body image and eating disorders suggest that members of those social groups who were already at risk of experiencing higher appearance pressures are more at risk of intensified concerns during the pandemic (Pikoos et al., 2020; Zhou & Wade, 2021). Those studies that have concentrated on eating disorders have seen a drastic rise in disordered eating among those who have had tendencies for such pathologies before the pandemic (Brownstone et al., 2022 [qualitative]; Castellini et al., 2020 [longitudinal]; Flaudias et al., 2020 [cross-sectional]). In a cross-sectional retrospective Australian study, individuals with eating disorder backgrounds self-reported increased exercising, whereas self-reported exercising remained the same within the general population (Phillipou et al., 2020). Accordingly, Robertson et al. (2021) utilised a retrospective approach to analyse changes in people’s attitudes towards their bodies and body regulation practices (i.e., eating and exercising during the pandemic). According to their study, the Covid-19 pandemic has impacted different social groups unequally in terms of body- and appearance-related concerns: women, young people, and people with a history of eating disorders, in particular, self-reported changes in their thoughts and behaviours in relation to their bodies and appearances. Moreover, Vall-Rogué et al. (2021) confirmed that lockdown had an impact on overall patterns of social media use, which are linked to an increased drive for thinness and eating disorder risk, especially among adolescent and young women. However, the results from the previous studies are somewhat inconsistent. Baceviciene and Jankauskiene (2021) found no body image or disordered eating changes in Lithuanian university students during the Covid-19 lockdown. Instead, they observed a significant increase in perceived appearance-related media pressures among female students, but not among male students.

Relying on previous research, we assume that women, who by default have greater appearance scrutiny and are active users of Instagram, likely experienced an increase in appearance pressures during the pandemic.

3. Research design

3.1 Context

Finland survived the first wave of the Covid-19 pandemic relatively well. Infections, need for intensive care, and mortality were low compared to other European countries (Oksanen et al.,

2020). During the first wave, the Standby Act was introduced, and strict restrictions regulated people's mundane activities in many ways. Many public spaces closed; people worked and studied at home; and the government advised people to avoid social contacts. The epidemic calmed down during the summer 2020, and thereafter, the restrictions were quite lenient before the pandemic's second wave, which began in late autumn 2020. In the pandemic's second year, the government reintroduced slightly stricter restrictions in Finland in the spring (2021), but these were not as severe as in the previous year. At the end of 2021, there were many delta and omicron variants in Finland, which also threatened the carrying capacity of hospitals. However, the government made efforts to keep society as open as possible. Throughout the data collection period, the government and businesses recommended remote working in Finland, and people were to avoid social contact whenever possible.

Against this theoretical and practical information, we ask the following research questions.

RQ1: Have appearance pressures from social media increased during the Covid-19 pandemic?

RQ2: Does increased social media use explain the possible changes?

RQ3: What is the role of (a) platform (Instagram vs. video conferencing) and (b) gender in explaining the possible changes?

3.2 Participants

Our data is based on longitudinal data from four measurement points of "Digital Age in Finland" -survey collected in Finland during the years 2017–2021. The first measure point (T1) was in December 2017 ($n = 3,724$). The initial data were based on two samples of Finnish people aged 18-74. The major part of participants (66%) were collected randomly from the Finnish population register. The rest of the participants (34%) were from a representative internet panel organized by a Finnish research company (Taloustutkimus Inc.). The response rate for the T1 was 30.8% (from the initial sample of 8000 participants from the Finnish population register).

In the T1, participants were asked about their willingness to participate in the follow-up survey, and this question was also asked again at the end of each follow-up survey. The first follow-up survey (T2) was conducted for 1,134 participants in March-April 2019, with a response rate of 30.5 % (from the respondents in T1). The second follow-up (T3) was during the first wave of Covid-19 pandemic in May-June 2020 ($n = 735$), with a response rate of 64.8% (from the respondents in T3). The last measurement point (T4) was in December 2021, when 543 respondents participated (with a response rate of 73.9% from the respondents in T4) in the study while several Covid-related restrictions were still in effect and Omicron-infections were constantly increasing.

This study involved those 543 participants (a total of 2,172 observations) who participated in all follow-up surveys. The demographic representativeness of the data was fairly good in terms of age ($M = 48.1$, $SD = 15.5$) and gender (males: 52.8%). Instead, the data is rather emphasised on the highly educated with college or university degrees (48.3%) on the one hand and on retired people (32.4%) on the other.

3.3 Measures

In each survey, mainly the same main questionnaire was repeated to the respondents. T3 and T4 had also a separate section for the Covid-19-related questions. In this study, we followed Åberg et al. (2020) to measure appearance-related pressures in social media. The respondents were

given a statement, ‘Social media sometimes causes me appearance-related pressures’, with the following response options: 1 = *completely disagree*; 2; 3 = *do not disagree or agree*; 4; and 5 = *completely agree*. To guarantee enough participants for each category, we recoded the variable into three categories by combining values 1-2 into the category “Disagree”, 3 into the category “Neutral”, and 4-5 into the category “Agree”.

We also considered *frequency of social media use* by asking respondents’ about their use frequency with different social network sites (e.g., Facebook, Twitter, and Instagram) according to a 5-point scale (1 = *never*; 2 = *less than weekly*; 3 = *weekly*; 4 = *daily*; and 5 = *many hours per day*). Moreover, we distinguished the effect of Instagram. *Frequency of Instagram use* was asked on a 5-point scale (1 = *never*; 2 = *less than weekly*; 3 = *weekly*; 4 = *daily*; and 5 = *many hours per day*). We asked questions about social media use and Instagram use in each round, which allowed us to assess the changing impact within and between individuals during the observation period by considering them as continuous and time-varying variables through the analyses.

In the second phase, we consider for the zoom effect. In this regard, we measured how often respondents used *video callings for professional and study purposes*. We asked for responses on a 5-point scale (1 = *never*; 2 = *sometimes*; 3 = *weekly*; 4 = *daily*; and 5 = *many hours per day*). For the within-level effects, we recoded the variable along a three-point scale by combining the three highest values (1 = *never*; 2 = *less than weekly*; and 3 = *at least weekly*) because no more than 11% of respondents had participated in video callings on a daily basis. We used the variable as a categorical element. However, we also used a continuous mean variable (consisting of the full scale) to assess the effects at between-individual level.

Moreover, we controlled for age and gender. Age was considered in years and gender in binary terms (0 = *male*, 1 = *female*). In the first phase of analyses, we conducted models separately for males and females. We controlled for age throughout the analyses.

3.4 Analysis procedure

We began with descriptive statistics of applied variables across the measurement points. Then, we explored in detail how appearance-related pressures developed during the observation period within individuals (2017–2021). Moreover, we examined how the frequency of social media use and Instagram use corresponded to appearance-related pressures and how this relationship varied over time. In the second phase, we concentrated on the Zoom effect during the Covid-19 pandemic (2020–2021) by predicting appearance-related pressures according to the use of video calling for study or work purposes. The analysis in the second phase focused solely on those in employment or education (N = 293).

We conducted a generalized mixed-effects model to take into account that our dependent variable of appearance-related pressure was categorical with three levels and the individuals were nested within different time points. To account for the individual level confounding, we used the between-within models (Bell et al., 2019). We estimated between-subject effects as associations between individual means of the dependent and independent variables, whereas we estimated within-subject effects between the dependent variable and the observed deviation from individual means. In the analyses, we consider within-subject effects and between-subject effects for time-variant predictors and between-subject effects for time-invariant predictors. Moreover, the models considered the random intercept for individuals. The mixed-effects models were implemented by using the *meglm* command in Stata (version 16)

4. Results

Table 1 shows the descriptive statistics of applied variables. The results show that appearance-related pressures increase among respondents between the last two points (T3–T4), from 14.5% to 17%. The use of Instagram and other social networking sites also increases in the last measurement point. Respondent activity also increases in video call participation between the last two measurements. In T3, during the first wave of the pandemic, approximately 52% participate in video calls at least sometimes, compared with 57% in T4.

Table 1 here

The results of the first models show that appearance-related pressures on social media increased at the final time point among women ($B = .57, p = .03$). We observe a similar effect among men, but it is not statistically significant. The second models introduce within-level variables of Instagram and social media use. We find that the effect of Instagram was positive among both genders ($B_{\text{male}} .45, p = .007; B_{\text{female}} .50, p < .001$). Instead, there is no effect for social media use frequency. After adjustment of the within-level parameters in social media and Instagram use, we no longer find significant (at level 95%) growth of appearance-related pressures at T4, but effect is similar to the first model.

The final models include the between-level variables of Instagram use and social media use. After adjusting the between-level variables, the effect of T4 is again significant ($B = .59, p = .034$). The results also show that the use of Instagram predicts an increase in pressure between individuals among women ($B = 1.25, p < .001$) and men ($B = .73, p = .016$). For women, the results suggest that general social media use predicts appearance-related pressures between individuals ($B = .67, p = .042$). Considering the variance of Instagram use at the between-individual level, we no longer find an Instagram effect at the within-individual level among women ($B = .15, p = .210$).

Table 2 here

The second phase of analysis examines the “Zoom effect” on appearance-related pressures among those in employment or education during the Covid-19 pandemic (2020–2021). The first model presented in Table 3 suggests that irregular participation in video calls increases appearance-related pressures ($B = 1.64, p = .023$). However, the effect is not significant for those who participate on a weekly basis. The second model introduces the within-and between-level variables for social media use and Instagram use. After adjusting for these confounding variables, the effect of video calling participation decreases; however, we find that participation ($B = 1.46, p = .045$) can increase appearance-related pressures.

Table 3 here

5. Discussion & Conclusion

This study focused on the possible pathway between social media use and appearance pressures during the Covid-19 pandemic. Previous research on disordered eating and body image concerns suggest that individuals’ relationships to their bodies and physical appearances would have changed under the pandemic’s unique circumstances (e.g., Robertson et al., 2021; Swami et al., 2021). The intensified social media use and appearance-based content consumption as an immediate reaction to the global health crisis, as well as changing modes of observance by the self and others (e.g., video calls and meetings), have raised concerns about intensified appearance pressures (for discussion, see Pfund et al., 2020; Vall-Roqué et al., 2021). However, it has been

difficult to assess the link between previously reported changes in social media use and possibly increased appearance pressures during the pandemic without longitudinal data. Thus, this study using novel panel data representing the Finnish population is, to our knowledge, the first study to assess whether changed social media consumption practices during the pandemic impacted people's perception of appearance concerns among the general population.

Our study suggests that, although perceived social media-based appearance pressures increased during the Covid-19 pandemic, the increase was very subtle and did not take place immediately after the pandemic's outbreak. Moreover, we did not find evidence supporting the claim that intensified general social media use or the increase in Instagram or video call use would have caused this change in perceived pressures. In addition, the increase in experienced appearance pressures applied only to female social media users.

Our study demonstrates how a historic period such as the Covid-19 pandemic cannot change the status quo regarding the gendered 'tone' of appearance pressures. Throughout history, women's appearances have been under more serious scrutiny than men's have, causing more severe social complications than those concerning men. Overall, our results confirmed the well-established notion that female users of social media are more likely to experience appearance-related pressures on photo-based social media than male users are (Åberg et al., 2020; Åberg & Koivula, 2021; Vandenbosch et al., 2022). Although the changes in the use of social media did not explain changes in these pressures, consumption and production of appearance-centered content online may result in self-objectification and social comparison (cf. Pfund et al., 2020). This likely applies particularly to female users of photo-based social media. For example, #quarantine15, an appearance-focused campaign in Instagram during the pandemic, was predominantly about pictures of lower-weight, white women (Lucibello et al., 2021). Generally, the motivation and methods of using the same visual platforms might vary significantly between different users of social media, producing concerns for specific social user groups. Previous research establishes such differences, such as those in surveillance or knowledge about others, documentation of one's own life, exhibiting coolness, or showing creativity (Sheldon & Bryant, 2016). These types of individual motivations might be behind the experienced pressures and are not included in this study.

One possible explanation for the slight increase in appearance pressures could also be an increase in the public debate on the topic during the pandemic (Cooper et al., 2022; Goldman, 2020; cf. Schneider et al., 2022). It might be that it is socially more acceptable to report experiencing appearance pressures on social media, especially for females, to whom the discussion about concerns is also more often related and who, according to previous studies, experience more appearance pressures than men do (for a review, see Vandenbosch et al., 2022).

In the light of our results, it seems that the arguments about the role of "Zoom effect" in causing appearance pressures (Pikoos et al., 2020; Thawanyarat et al., 2022) have also assumed too much. Our results show that, in the first wave of the pandemic, attending video conferencing calls was associated with appearance pressures. However, active use seems to have equalized these experiences, and an increase in the use of video calls did not explain the increase in appearance pressures. Again, different motivations and methods of using the tool are likely more important in terms of explaining appearance pressures than the use of this tool per se (Gullo & Walker, 2021; Pfund et al., 2020). Future research should study these individual differences to see how these motivational factors protect or expose individuals to social media pressures. Furthermore, researchers should assess how these individual-level motivations are related to different offline inequalities, for example, Instagram is certainly not only about gender but also about social-class power struggles (e.g., Lamont & Ross, 2020). In terms of appearance

pressures, having cultural capital and feeling that one is “doing it right” in the visual platforms may play a significant role in the magnitude of experiencing pressures and even feeling empowerment (cf. Barnard, 2016).

Our study also has limitations. We acknowledge that self-reported responses are sensitive to social desirability bias, which is seeking social approval when answering survey questions (Krumpal, 2013). Moreover, our dependent variable on appearance pressures is a single-item variable, but previous studies mostly used multi-item measures. However, the strength of this variable is its four measuring points and its stability in measuring the individual, within-level stability on appearance pressures over time. We also acknowledge that our study has limitations because of potential selection bias and generalisability. First, although the data were relatively comprehensive and representative in relation to the Finnish adult population, we could only assess approximately 500 respondents for temporal changes. In this respect, the data did not allow for the examination of various interactions.

To conclude, this study suggests that the relationship between social media and appearance pressures is more multifaceted than typically understood. Even a global crisis, when people increasingly turned to social media, does not automatically increase perceived appearance pressures caused by social media use, increased Instagram use, or video calls. It also appears that the Covid-19 pandemic has not been the great equalizer of appearance pressures. On the contrary, it seems that gender differences have become even wider during the pandemic, as the subtle increase in pressure experiences takes place among female social media users.

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Tables

Table 1. Descriptive Statistics for Study Variables

<i>Continuous variables</i>	Range	T1 Mean (SD)	T2 Mean (SD)	T3 Mean (SD)	T4 Mean (SD)	Within SD	Between SD
Frequency of Instagram use (Insta)	1–5	2.06 (1.28)	2.21 (1.34)	2.35 (1.37)	2.42 (1.40)	.53	1.24
Frequency of network site use (SNS)	1–5	3.05 (1.38)	3.09 (1.34)	3.09 (1.34)	3.15 (1.33)	.82	1.11
Video calls for working or educational purposes (Video calls)	1–5			1.93 (1.10)	2.02 (1.11)	.42	1.02
Birth cohort	1943–99	1969 (15.6)	1969 (15.6)	1969 (15.6)	1969 (15.6)	0	15.6
<i>Categorical variables</i>	Range	T1 %	T2 %	T3 %	T4 %	Within SD	Between SD
Appearance-related pressure (disagree)	0–1	75.00	75.47	74.52	71.28	.24	.36
Appearance-related pressure (neutral)	0–1	10.04	8.39	10.83	11.74	.22	.20
Appearance-related pressure (agree)	0–1	14.96	16.14	14.65	16.98	.18	.30
Video calls (never)	0–1			47.97	42.51	.21	.45
Video calls (sometimes)	0–1			23.80	27.36	.23	.35
Video calls (weekly)	0–1			28.23	30.13	.20	.41
Gender: Female	0–1	47.2	47.2	47.2	47.2	.00	.50

Observations: 2,205; Individuals: 735

Table 2. Generalised Multilevel Mixed Effect Models Predicting Social Media-Caused Appearance-Related Pressures 2017–2021.

VARIABLES	Male			Female		
	M1	M2	M3	M1	M2	M3
<i>Time (reference T3)</i>						
T1	-0.22 (0.34)	-0.09 (0.36)	-0.25 (0.38)	0.11 (0.30)	0.28 (0.31)	0.11 (0.32)
T2	-0.58 (0.34)	-0.43 (0.34)	-0.52 (0.34)	0.22 (0.27)	0.33 (0.27)	0.25 (0.28)
T4	0.27 (0.31)	-0.04 (0.37)	-0.02 (0.40)	0.57* (0.26)	0.53 (0.27)	0.59* (0.28)
Insta_Within		0.45** (0.17)	-0.16 (0.24)		0.50*** (0.14)	0.09 (0.20)
SNS_Within		-0.17 (0.17)	-0.23 (0.21)		-0.14 (0.14)	-0.39* (0.17)
Insta_Between			1.25*** (0.35)			0.73* (0.30)
SNS_Between			-0.10 (0.35)			0.67* (0.33)
<i>Random effect parameters:</i>						
Intercept (Individual)	18.63*** (5.49)	10.07** (3.88)	10.17** (3.69)	21.94** (7.99)	11.19*** (2.74)	11.75*** (2.98)
Observations	965	954	954	928	918	918
Number of groups	270	270	270	248	248	248

Clustered standard errors in parentheses

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Table 3. Generalised Multilevel Mixed Effect Models Predicting Social Media-Caused Appearance-Related Pressures According to Video Calling

VARIABLES	M1	M2
<i>Video calling (ref: Never)</i>		
Sometimes	1.94** (0.71)	1.46* (0.72)
Weekly	1.56 (0.90)	1.13 (0.92)
Video calling_Between	-0.60 (0.44)	-0.51 (0.42)
SNS_Within		-0.05 (0.32)
SNS_Between		0.32 (0.49)
Insta_Within		-0.73 (0.41)
Insta_Between		1.87*** (0.53)
<i>Random effect parameters:</i>		
Intercept (Individuals)	15.36* (7.04)	10.09* (4.11)
Observations	569	530
Number of individuals	304	293

Clustered standard errors in parentheses

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Models adjust for gender and birth year

