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Table of content:

Abstract:

The quick rise of social media use and enhancements in internet technologies have brought about several challenges and problems. Existing literatures show that images on social media form certain beauty standards that affect people's mental well-being and self-esteem. Thus, this study explores the effects of these unrealistic pictures posted on social media on followers' mental well-being, and whether followers' appearance self-esteem levels and whether disclaimers can lessen the negative effects. For this purpose, a survey experiment was conducted, manipulating influencer picture and disclaimer. I hypothesized that skin-smoothing filters would negatively impact followers' mental well-being, and that high appearance self-esteem levels and presence of disclaimers could mitigate this negative effect. Data from 154 individuals between the ages of 18 and 79 were gathered using a cross-sectional survey design. The data was analyzed using multiple linear regression. The findings showed that there are differences in appearance self-esteem levels and mental well-being across genders and mental well-being is significantly predicted by appearance self-esteem. Additionally, the results indicated that as age increases time spend on social media decreases. And spending more time on social media is associated with poorer appearance self-esteem and mental well-being. These outcomes highlight the importance of consuming social media with awareness and the possible effects of who we follow on our mental well-being. For younger population in particular, educational programs that promotes healthy social media use and body positivity are crucial to ensure healthy mental well-being and higher appearance self-esteem.

Introduction:

With the enhancements in internet technologies, social media has gained significant importance and become a part of people's everyday lives. Influencers have emerged as social media has become more popular, with non-famous individuals building large followings by sharing content and interacting with other users. The term "influencer" is defined by Abidin and Ots (2015) as regular people who use various social media platforms to create content and share posts, attract attention, and gain followers. They also earn money by collaborating with the brands to promote them in their social media accounts to their followers. Influencers became so powerful that they can shape their followers' choices, decisions, and affect many facets of their lives. However, influencers not only shape their followers' habits or choices but also, they are affecting their followers' mental well-being.

Deci & Ryan (2006) explains mental well-being as the quality of psychological encounters and its connection to happiness, anxiety, self-image, satisfaction etc. As for mental well-being there are contradictory ideas how influencers affect their followers in the existing literature. According to Kim, followers develop a virtual friendship by connecting with the influencers through social media and this leads to a better psychological mental well-being. Finding of the research shows that both consumption of digital content and online communication helps people to develop a sense of community, increase their self-courage and meet their social needs (Kim,2022).

On the contrary, a study that is done on middle aged women showed that women who spend more time on social media and follow mostly appearance related content creators such as cosmetic influencers or fitness influencers are more inclined to compare their body thus have a lower self-esteem. Study also showed that those women who follow appearance related content creators edit their pictures more frequently than the other middle-aged women (Rodgers & Nowicki, 2024).

With the AR (Augmented reality) and AI (Artificial Intelligence) filters entering our lives, these body comparisons increased much more than before and created unattainable beauty standards. Since these filters contribute even more to the unrealistic body standards and presents an idealized self-image this thesis aims to measure the effects of these filters that are used by

influences on their follower's mental well-being, also considering additional moderating factors such as appearance self-esteem and availability of disclaimers.

There are different types of physical appearance modifications. For instance, even the Instagram app itself has its own different filters to enhance the beauty of its users such as skin smoothing, lip filling, eye enlarging etc. (Eshiet,2020). Within different types of filters this study will focus on the effect of skin smoothing filters since selfies form one of the most published photo groups on social media such that selfie tag is the number 13th most frequently used tag on Instagram (Manovich, 2016). And for face beautification, skin smoothing filters are one of the most important tools. Skin smoothing filters help to make skin look more flawless by minimizing the pores, wrinkles, and unevenness of the face (Bose et al, 2022). Another reason for focusing on skin smoothing filters is that even though there is much research done for body size modification, the effect of skin smoothing filters on mental well-being are not mentioned in the existing research a lot.

For instance, research showed that social media constructed an ideal body image based on the thin model and celebrity pictures which are also edited with body enhancing tools to create even more unachievable body figures. Again, this idealized body image creates one's dissatisfaction with its own body through comparisons and lowers self-esteem. Same research also shows, saying that pictures are edited can lower self-esteem even more through increasing the awareness of perceived flaws (Harrison et al 2014).

Briefly, even though existing research shows that beauty filters are distorting reality and affecting consumers mental health there are still gaps about how different types of influencer modification of physical appearance such as skin smoothing filters affects followers' instant mental health. Thus, this research aims to identify this relationship and also gets deeper by touching points like disclaimer use and the appearance self-esteem of the followers.

Disclaimers are used for warning the users on social media that if a picture contains either filter or a collaboration, advertisement. This research will focus on the filter disclaimers that show whether the picture is edited or not. This is mostly because this filter disclaimer use is still not mandatory in a lot of countries but there are some petitions to make these disclaimers a law. Since filter disclaimer is a hot and debatable topic this research focuses on whether the availability of a disclaimer moderates the effect of skin smoothing filter on the mental well-being of the viewer or not.

Secondly, people with high and low self-esteem might have experienced different outcomes on their mental well-being. Self-esteem is defined as "summary judgment of everything a person can assess about him/herself" This judgment includes a person's beliefs about their identity, actions, qualities, appearance, and power (Bailey 2nd, 2003). Moreover, according to Heatherton and Polivy (1991) self-esteem is correlated with 3 different factors; social, performance and appearance self-esteem and these factors reflect several aspects of an individual's self-esteem. This research will focus on the appearance judgment of oneself since it's already proven that people who compare their appearances with others shows lower self-esteem (Schaefer & Thompson, 2014). Therefore, in order to evaluate the effect of skin smoothing filters more accurately on mental well-being, availability of a disclaimer and appearance self-esteem level should be considered. In the light of these considerations the following research question is raised.

RQ: What is the effect of skin smoothing filters used by influencers on followers' mental well-being and how does followers' appearance self-esteem and presence of a disclaimer moderate this relationship.

This thesis aims to cover and highlight the topics that are not mentioned before. Also, it is important to understand the societal effects of social media influencers and filter use on individuals' mental health. Looking at the effect of skin smoothing filters on mental well-being might help psychologists and all the people who are suffering from mental health problems and insecurities. Also considering the number of people on social media, 3.065 million people on Facebook, 2.000 million people on Instagram and 1.582 people on Tik Tok, this thesis might help a broad mass of people (Statista, 2024).

For science, it explores how different types of filtered content, such as skin smoothing filters affect psychological health.

Shortly, by addressing the issues mentioned above it might help people to stop criticizing and comparing themselves with unrealistic images of influencers which might help to improve their mental well-being.

Literature Review:

According to the Statista data, in 2023, 4.89 billion people used social media, which makes up more than half of the total world population, and they expect it to reach almost 6 billion by the end of 2027 (Dixon, 2023). Over time not only has the number of people who use social media increased but also the time that is spent on social media of an average person has increased significantly. Such that in 2012 people approximately spent 90 minutes a day on social media whereas in 2023 this number reached 151 minutes (Dixon, 2023).

With this rise of internet and social media use, non-famous people got a chance to build a community of their own. Non-famous people shared interesting materials and their lives on social media to create content and to interact with other social media users. In time some of them build huge fans and followers such as Heather Armstrong who is one of the first bloggers that reached 8.5 monthly readers on her own blog or Michelle Phan who is the first person that reached 1 billion views on YouTube (Burns, 2021). With this huge accessibility power, a term called opinion leaders arose. In time this name changed, and opinion leaders started to be called as influencers.

Influencers became a spokesperson of brands, and they helped brands to build a relationship with the consumers (Kumar et al., 2023). Besides being a spokesperson, influencers are also considered as a way of generating electronic Word-of-Mouth marketing for brands and they affect the consumers purchase intentions through their trustworthiness level. In a study that examined the effect of influencers on people's purchase decisions, consumers and followers stated that they are more likely to buy products recommended by influencers they trust and find credible (Liu et al., 2015). Brands are also aware of the power of influencers such that in 2021 in the US approximately 3.7 billion US dollars spent just for influencer marketing which is 33% more than the previous year (Rizvi, 2022). Since the influencer marketing growth so has the number of influencers. According to Influencer Marketing Hub, the number of influencers in the USA have more than doubled in 2 years and increased from 1.7 billion to 4.6 billion from 2016 to 2018 (Breves et al., 2021). Briefly a new occupation called influencer marketing arose and has become a main occupation of a lot of people.

Moreover, there are articles that prove that influencers are shaping their followers' minds, shopping habits and setting trends. They are shaping our decisions from holiday

destinations or which restaurants to dine at to what brands to shop or which shoes to buy. According to an article, %30 of the people who participated in the survey stated that they get motivated to visit new places through influencers and %40 of them said they use suggestions that are recommended by influencers when planning a trip such as deciding on where to accommodate, dine and even how to transport, go there (Olavarria-Benavides et al., 2021).

Another article explains how this influence occurs through a connection called "Parasocial Relationships". Parasocial Relationships are explained as one-sided relationships where the follower feels a deep connection with the influencer so that the follower wants to be associated with the influencer and starts to behave like the influencer and buy the products that the influencer is using and suggesting (Wahab et al., 2024). Another study also explained this influence of influencers through social comparison and fear of missing out (FOMO). This study showed that people don't want to miss out the trends that are set by the influencers, thus they prefer to imitate the influencers and buy the stuff that they are promoting rather than feeling excluded (Dinh & Lee, 2021).

However, influencers are not only affecting their followers' purchase behaviors. A study showed that fashion influencers are creating unrealistic standards by posting their perfect lives, best moments, and images on social media which do not reflect the truth. This causes mostly women to compare themselves with these pictures and short videos that just shows a glimpse of influencers' lives and leads to dissatisfaction about their own images and lives which affects their mental health negatively (Panjrath & Tiwari, 2021). Influencers are not depicting their whole life on social media. They tend to share their best moments and best figures on social media which is not reflecting their everyday life realistically.

Furthermore, with the introduction of filters, these comparisons have increased much more. In 2015, an app called Snapchat introduced AR (Augmented Reality) filters primarily for fun. They became so popular that other platforms, such as Instagram, also introduced their own AR filters, including fun backgrounds, dog faces, and various other playful effects. Lots of people including influencers started to use those goofy, fun filters to get attention and become closer with their followers (Frimpong, 2023). These filters appeared innocent when first launched; however, over time, these fun AR filters have mostly been replaced by the filters which are mainly focused on changing someone's appearance to make them look more aesthetically pleasing.

Moreover, applying filters and doing edits become easier and accessible through different kinds of apps such as Facetune, Facetune2, Airbrush, YouCam. All these apps help people to enhance their looks and modify their facial features by attributes like clearing away the wrinkles, narrowing the nose, slimming the body etc. (Lavrence & Cambre, 2020). Due to the frequent use of those filters, even social norms changed. Most of the influencers that we follow become more and more far from reality and lead to even more unrealistic beauty standards.

A study found that because of the filters entering our lives a new ideal female beauty perception emerged. Participants in this study asked to define the ideal female beauty and almost all of them wrote the same things such as big, plump lips; small, pointed nose; large, foxy eyes; smooth, pimple free skin and slim, curvy waist (Castelló-Mayo & López-Gómez, 2023).

Also, with the enhancements in technology AR and AI filters are becoming more and more realistic which makes it harder to tell if a person is using them or if it's their natural look. Those filters used to be only applied to the static pictures, now with the facial enhancements those filters are adaptable in real time such that people can filter their videos while recording it and even if they move or make a mimic the filter works perfectly (Isakowitsch, 2023). Since these filters are becoming so realistic, they cause an inability to distinguish the reality and artificial intelligence so that the reality is blurred which affects people's self-esteem and mental well-being (Javornik et al., 2022).

Another research that has been done to see the effects of beauty filters on individuals also showed that, especially young people who cannot fully differentiate between reality and the edited online personas, are affected mentally most by those filters. People who participated in the survey stated that their appearance self-esteem and mental well-being increases over time when they follow genuine influencers who post unfiltered pictures of themselves and they said that they can feel closer with the influencers who portray themselves as they are (Claeys et al., 2023).

For instance, a study that is conducted by Kleemans et al. (2018) showed that being exposed to manipulated pictures on Instagram leads to lower body image satisfaction especially among adolescent girls. In the study, reshaped body images were not recognized by the girls; and almost all of them said the images looked realistic and not altered, which affected their own body satisfaction negatively by setting unrealistic beauty standards. Such that, most women stated that they now feel pressured to edit their pictures due to media and peer pressure. A study conducted a survey among young women and 90% of the participants stated that they use filters, such as

slimming themselves or lightening their skin tone, before posting their pictures on the internet (Gill, 2021).

What is more, not only the people who see or are exposed to those filters by seeing on others get affected but also the ones who use them are affected negatively. This is explained by a theory called self-discrepancy. Self-discrepancy happens when what people see in the mirror is different from what they see on the camera with the filters on. As a result of seeing the idealized image of itself and then seeing the reality in a mirror, dissatisfaction, and negative feelings towards itself arise (Isakowitsch, 2023). Self-discrepancy theory is also explained by the founder as the negative emotions, such as disappointment and sadness, that occur as a result of the difference between a person's actual self and their ideal self or the person they want to be (Higgins, 1987). Briefly, previous articles summarize that filters are causing lower satisfaction for both people who are using and for people who are being exposed.

However, another study that investigates the effect of filtered pictures showed varying ideas. In the study approximately 60 people were interviewed over 2 years and some of them stated in their interview lines that filtered pictures can be fun and it allows people to be playful, creative and represent themselves as they wish. Conversely, other participants expressed contradictory views. Some of the participants stated that they feel anxious cause they were not feel confident if their edited pictures were representing their real appearance and one of the participants even said that "you take the filter off your face and you're like, now I just feel ugly." which showed that she does not feel confident in its own body (Lavrence & Cambre, 2020).

Javornik (2022) also stated that the effect of filters on mental well-being depends on the motivation behind. Such that if a person uses AR filters for enjoyment purposes or to create fun content to increase social interaction their mental well-being increases significantly. On the contrary, if the aim of the filter use is to enhance their looks both self-acceptance and mental well-being decreases significantly.

To fill the gap in the existing research and to clear out the contradicting ideas this thesis will focus on a more specific filter type which is skin smoothing filter and look for its effect on followers' mental well-being. In the light of the research question and existing research following hypothesis will be tested:

H1: The use of skin-smoothing filters by influencers has a negative effect on follower's mental well-being

A study which was done in 1999 showed that people with higher self-esteem compared themselves with others less and satisfied with their own appearance more than the people with lower self-esteem (Lennon et al, 1999). In the same research it was also mentioned that media, specifically advertising, has a destructive effect on women's physiological well-being. This relation was explained by women who are facing low self-esteem, appearance dissatisfaction, and having dietary problems comparing themselves with the highly attractive models on advertising (Lennon et al, 1999). This is called an upward comparison which happens when someone compares themselves with someone that they considered superior because they think that they are better looking, or they admire that person (Barari,2023).

A study showed that influencers who depict their lives as imperfect and flawless can lead to unrealistic standards and cause followers to compare their lives to the influencers lifestyle which harms their self-esteem and consequently their mental well-being (Barari,2023). Even a few studies showed that upward comparisons that are triggered by beauty contents on social media leads to appearance concerns and people become more likely to consider getting cosmetic surgeries (Seekis & Barker, 2022). Another research that is done in China also displayed that people who undergo plastic surgery have lower self-esteem and self-efficacy which also affects their self-satisfaction and mental well-being compared to the general population (Yin et al., 2016).

There is evidence not only from research, but also experts in the cosmetic surgery industry voiced their worries due to the number of increases in plastic surgery which is mostly triggered by beauty standards that are shaped by social media (Hartman,2020). These filters became so unhealthy that some young women started to consider getting plastic surgeries just to look like these filters in real life. This problem is even named as Snapchat dysmorphia (Eshiet,2020). A plastic surgeon called Dr. Yagoda, stated that many of his patients' modifications that they asked for are similar with the filters on Instagram and Snapchat such as modifying the size of their eyes, lips, and cheeks; reducing the fine lines and wrinkles; and even changing the tone of their skin (Ramphul & Mejias, 2018). Same article also showed that the number of people who daily engage with those apps in 2018 was 187 million for Snapchat and

600 million for Instagram. These numbers are enough to show how influential and catastrophic those apps can be if they are used wrongly.

There were other studies that looked into the effect of beauty filter use on plastic surgery rates. For instance, a study with a participant number of more than 250 people showed that being exposed to filtered pictures on Instagram and Snapchat increased the rate of consideration and acceptance of cosmetic surgery (Chen et al. ,2019). According to the AAFPRS (American Academy of Facial Plastic and Reconstructive Surgery) 2017 data stated that 55% of the cosmetic surgery doctors stated some of their patients asked to have cosmetic surgery just to enhance the way they seem in selfies (Rajanala et al.,2018 cited in Chen et al., 2019). Besides, a study showed that, people who undergo plastic surgery have lower mental well-being than the ones who do not seek surgery (Abbasi et al., 2017). Briefly, to evaluate the moderating effect of appearance self-esteem on mental well-being following hypothesis will be tested:

H2: Appearance self-esteem level of the follower moderates the relationship between exposure to the smoothing filters of influencers and the follower's mental well-being, such that when the follower has a higher self-esteem the effect of skin smoothing filters on mental health is less negative.

As a result of these physical and mental consequences that arose from edited pictures on social media some regulatory obligations within to protect people such as use of disclaimers are introduced in some countries. Disclaimers under the photos have different purposes but in general the aim is to warn and inform the followers such as if a post includes paid partnership with a brand or the photo is altered by an AI or AR filter influencers are obliged to share this information to protect their followers.

Within time governments that saw the effect of filtered pictures on the social media users mental health introduced disclaimer laws for the edited pictures. Israel was the first country that obligated disclaimer label use that contains edits for advertising images both on social media and offline media in 2012. In 2017, France legislated a similar law for advertising images that the body size of the model is digitally edited. The new law made it obligatory to use "retouched photograph" disclaimer (Tiggemann, 2022). However, there are just a few countries that oblige influencers to use disclaimers for the beauty filters. Additionally, it is also not certain how

effective these disclaimers are to reduce the effect of filters on people's mental well-being and self-esteem.

One study that looked into the effect of disclaimers showed that young women who are exposed to unfiltered pictures with a disclaimer stating the picture is not edited have higher appearance satisfaction than those who are exposed to pictures with a disclaimer stating the photo is edited, as well as those who see photos without any disclaimer, whether edited or not (Cornelis & Peter, 2017). Another study that is conducted in Canada, examined 311 female students, and found out that retouched photos affect participants' mental well-being negatively through decreased body satisfaction and confidence whether these photos have disclaimer or not. In the second part of the study, it was found that, in general, disclaimers did not have a positive effect on the participants' well-being and body satisfaction levels. However, the group of participants who frequently edited their pictures experienced a slight decrease in the likelihood of comparing their bodies to others when exposed to disclaimers (McComb et al., 2021). Thus, to have a better understanding of the moderating effect of disclaimer availability on mental well-being, the following hypothesis will be tested:

H3: The presence of a disclaimer moderates the relationship between the skin smoothing filter and mental well-being such that when there is a disclaimer mental well-being of the follower affected less negatively

Derived from the research question and hypothesis, the following conceptual model is proposed:
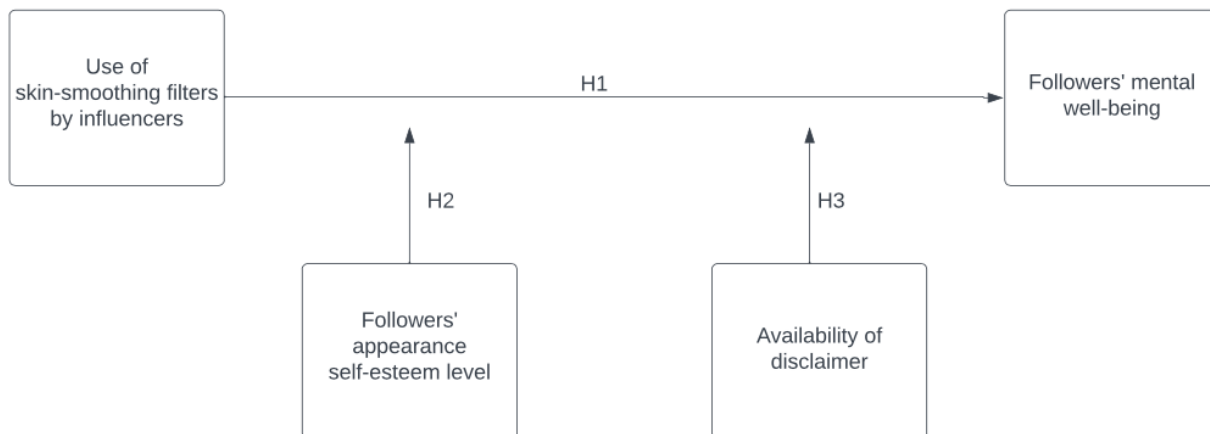
Methodology:

Research Design:

The main aim of this study is to see the effects of skin smoothing filter use by influencers on their followers' mental well-being through the moderating effect of appearance self-esteem and disclaimer use. Since mental well-being and self-esteem is a sensitive, for some a private topic and not everyone is open to sharing that information honestly an anonymous online survey-experiment could be one of the best ways to collect mental health data. For that reason, an online Qualtrics survey was created that assures the anonymity of the participants. Another reason why a survey design is suitable for this thesis is that it won't take a long time to collect data through an online questionnaire and it is easier to access a lot of people in a limited time. Additionally, it is easy to access survey data.

To answer the research, question a 2 (presence of skin smoothing filter) x 2 (presence of disclaimer) full-factorial between-subject experimental design was used. Overall, between subject design is more suitable for this research since otherwise participants might have guessed the manipulation and realize the difference between the photos. In real life people are also just seeing one version of a picture rather than multiple versions with different edits thus between subject design makes the experiment more realistic and helps us to capture real-world behaviors and attitudes. Also, it won't be possible to measure the change in the participants' mental well-being within a subject design since there will be just seconds in between seeing each photo. As a downside of a between subject design data pool has to be larger to get a meaningful outcome. To overcome this problem, survey was published through many platforms to reach out to more people.

In order to eliminate the potential previous biases towards the influencer, a not so famous meso-influencer is chosen. Meso-influencers are defined as influencers who have a minimum of 10,000 followers and maximum 1,000,000 followers (Boerman, 2020). In this case the meso-influencer that has chosen has approximately 100,000 followers. Because choosing an influencer that may be known by most of the participants can cause a previous bias towards the influencer and in that case our findings and results might be misleading and might occur not just because of the skin smoothing filter availability but also because of the previous feelings towards the

influencer. What is more, the chosen photo of the influencer was a selfie that only shows the face of the influencer and not their body again to be sure that the observed effect is only happening because of the skin of the influencer and not because of their body type and also, to ensure that the skin-smoothing effect is salient and visible.

To manipulate the use of filters a photo of an influencer was presented either with a skin-smoothing filter or without. The chosen picture is manipulated by the app called Facetune which allows you to choose the degree of the skin smoothing filter and for this study a medium level skin smoothing filter is used to make it not so obvious but make it still enough to realize and cover the imperfections.

The disclaimer was manipulated by simply including #withfilter or #nofilter hashtag under the post.

Procedure:

To start with, respondents asked to consent that their answers may be used in a master's thesis. After getting the consent to see the demographics two demographics questions were asked: gender and age. Following that to see which demographic groups use which social media platforms most and to control for the platform variable, respondents were asked to state their most frequently used social media platform. The type of social media platform, hours spent on social media, age, and gender were used as control variables to ensure that these factors did not affect the relationship and would not impact mental well-being. Fifth question was presented as a matrix table and four questions were asked to evaluate participants' appearance self-esteem. To be sure that the results of the appearance self-esteem question was not affected by the manipulation it was asked in advance before showing the manipulated photo. And then before heading to the manipulated pictures participants are informed that they are going to see an Instagram post in the following question and that they are expected to examine the post carefully for the follow up questions. Then using a randomizer, participants were randomly assigned to one of the four experimental conditions.

After that to test the effects of the manipulation on mental well-being a matrix table with 5 questions is presented to the participants. After receiving the mental well-being data, two manipulation check questions were presented. First, asking whether they think the shown

influencer photo was modified by software or not. Second, asking whether the influencer photo that they saw contained any information regarding the filter or not.

Sample & the Demographics:

Convenience sampling was used to choose the study's sample, with participants being picked based on their availability and willingness to participate. Survey links were published through WhatsApp groups and other social platforms, aiming to reach participants who were likely to spend more time on social media. The sample size aimed to be more than 120 people to achieve accurate results, using the rule of thumb of a minimum of 30 people per condition (30 x 4 = 120) (Wilson Van Voorhis & Morgan, 2007). To assess the demographics of the sample, two questions were asked one to determine the participants' gender and one to determine their age. A possible problem could be not reaching people from very different age groups, considering the survey was published mostly through student WhatsApp groups. Most of the participants were likely students aged between 20 to 25, which might lead to a poor representation of the real-world population.

Variables:

Followers' mental well-being was the dependent variable. Current mental well-being represents the physiological mood of the follower at the moment right after being exposed to one of the 4 conditions. It was measured by 5 questions that are taken from "Warwick-Edinburgh Mental Well-being Scale" (WEMWBS) that is published by Tennant et al. (2007). In the original research there are 14 questions to assess the mental well-being of the participants. However, to adapt this scale to a master's thesis and to make the quadratics survey a bit shorter so that participants wouldn't get bored and leave the survey 5 most suitable questions are chosen out of 14. It was also assessed by a 5-point likert scale 1 being not at all, 2 a little bit, 3 somewhat, 4 Very much and 5 being extremely. Based on the scores, the average total mental well-being score was calculated.

The level of appearance self-esteem was measured by 4 questions that are taken from "Development and Validation of a Scale for Measuring State Self-Esteem" article from Heatherton & Polivy (1991). Heatherton conducted research to measure the state of self-esteem considering performance, social, appearance self-esteem and in his research, he found that people's appearance self-esteem is mostly correlated with the satisfaction of their own figure, body size figure and depression which that I want to assess in this research (Heatherton & Polivy, 1991). Thus, in this study body satisfaction level is taken as an appearance self-esteem metric and participants are asked to scale their satisfaction on a likert scale from 1 to 5. In the research 6 questions were used to assess the appearance self-esteem however to shorten it only four questions are taken from Heatherton's appearance self-esteem scale. Those 4 questions are chosen based on the highest R (correlation factor) among the Appearance self-esteem factors to have a good measurement. It was also assessed by a 5-point likert scale 1 being not at all, 2 a little bit, 3 somewhat, 4 Very much and 5 being extremely. Based on the scores, the average total appearance self-esteem score was calculated.

Demographics. To better understand the impact, participants were asked about their gender, age, most frequently used social media platform, and frequency of social media use. Frequency of social media use indicates the time spent on social media on a day. Age is measured using an open-ended question, gender is assessed with a closed-ended multiple-choice question, and the most frequently used social media platform is determined through a closed-ended question with an open-ended option for participants to specify if their preferred platform is not listed. Lastly, the frequency of social media use is measured using an open-ended question in which participants are asked to state how many hours a day they spend on social media.

Data Analysis/Results:

Sample descriptive:

After cleaning the data, 154 valid responses were left out of 205 initial submissions. Five participants did not consent and were excluded from the survey from the beginning. Out of 210 potential respondents, only 158 completed the entire survey, while 42 withdrew at various stages.

Additionally, four responses were invalid due to issues such as random entries for the age variable, leaving us with 154 valid answers.

Among these 154 participants, 35.1% were male, 63.6% were female, and 1.3% identified as non-binary. The participants' ages ranged from 18 to 79, with an average age of 34.45 years. The largest age group was 18 to 28-year-olds, making up 59.9% of the sample, followed by 49 to 58-year-olds at 30.3%.

Regarding social media usage, Instagram was the most frequently used platform, with 59.7% of participants indicating it as their primary platform. This was followed by YouTube and Twitter, each at 12.3%, and TikTok at 7.1%, followed by Snapchat and Facebook. Participants who selected "other" specified WhatsApp and LinkedIn in their responses.

For gender-specific analysis, a quarter of male participants reported YouTube as their most used platform, whereas only 6% of female participants indicated YouTube as their primary platform. Nearly 70% of females declared Instagram as their most used platform, compared to 44% of males. Among females, Twitter was the second most popular platform at nearly 10%, followed by TikTok and YouTube at 6% each. For males, Twitter ranked third after YouTube, with 16% citing it as their most used platform. Facebook ranked last for all genders.

The minimum reported duration of social media use was one hour per day, with a maximum of ten hours per day. The average duration was 3.19 hours per day with a standard deviation of 1.99. Specifically, male participants reported an average of 2.59 hours per day (SD = 1.40), female participants reported an average of 3.54 hours per day (SD = 2.20), and non-binary participants reported an average of 2.50 hours per day.

Both appearance self-esteem and mental well-being were measured on a scale from 1 to 5. The average score for appearance self-esteem was 3, with a standard deviation of 0.89, and the average score for mental well-being was 2.94, with a standard deviation of 0.77.

Scale reliability:

For appearance self-esteem, as shown in the Appendix B, the overall Cronbach's alpha score is 0.893 which indicates very good reliability for the scale. The corrected item-total correlations for the items ranged from .690 to .874, showing that each item has a moderate to high correlation with the overall score.

For mental well-being the Cronbach's alpha score was 0.827. Which again shows that questions to assess mental well-being demonstrated a good reliability. The corrected item-total correlations for the items ranged from .551 to .670, showing that each item correlates moderately with the total score. These results confirm that the scales used to measure appearance self-esteem and mental well-being are reliable and appropriate for this study.

Analysis of the conceptual model:

First, a Pearson correlation analysis was performed, as shown in Appendix B, to evaluate the associations between age, time spent on social media, total appearance self-esteem, and total mental well-being. There was a moderate, negative correlation between age and time spent on social media, $r(152)=-.41$, $p<.001$. No significant correlations were found between age and appearance self-esteem, $r(152)=-.01$, $p=.90$, or between age and mental well-being, $r(152)=-.05$, $p=.55$ when the alpha level of .05 is used. Additionally, a weak, negative correlation was found between time spent on social media and appearance self-esteem, $r(152)=-.28$, $p=.001$, as well as between time spent on social media and mental well-being, $r(152)=-.21$, $p=.01$. Lastly, appearance self-esteem and mental well-being were moderately positively correlated, $r(152)=$ .40, $p<.001$.

Following the correlation analysis, a descriptive analysis was performed to examine the differences in appearance self-esteem and mental well-being scores across genders. As shown in the Appendix B, males (N = 54) reported a mean appearance self-esteem score of 3.21 (SD = 0.87), while females (N = 98) had a mean score of 2.90 (SD = 0.87). Non-binary individuals (N = 2) had a mean appearance self-esteem score of 2.63 (SD = 2.30). The overall mean appearance self-esteem score for the sample (N = 154) was 3.00 (SD = 0.90). In terms of mental well-being, males reported a mean score of 3.01 (SD = 0.87), females had a mean score of 2.90 (SD = 0.73), and non-binary individuals had a mean score of 3.00 (SD = 0.00). The overall mean mental well-being score for the sample was 2.94 (SD = 0.78). These results provide a summary of the central tendency and variability in appearance self-esteem and mental well-being scores across different gender categories in the sample.

A chi-square test was applied in order to check whether the participants recognized if the influencer picture that was displayed to them had been filtered or not and whether it included a

disclaimer or not. For the filter manipulation check, as it can be seen from the Appendix B, the chi-square test was significant, χ^2 (1, N = 154) = 26.853, p < .001, indicating that there was a substantial correlation between the participants' recognition of the disclaimer and its actual presence. Overall, out of 154 participants 107 of them correctly identified whether the picture was edited or not. To be more specific, 69 of the participants out of 78, correctly recognized that the picture was not containing a filter and 38 of the participants out of 76 recognized that the picture was filtered. As for the disclaimer manipulation check, that can be seen from the Appendix B, again the chi-square test was significant, χ^2 (1, N = 154) = 23.109, p < .001, indicating a significant association between the actual presence of a disclaimer and participants' recognition of it. Overall, 102 of the participants correctly identified whether the pictures contained a disclaimer or not. Specifically, out of 77 participants who were exposed to the picture without a disclaimer 72 of them identified it correctly and out of 77 only 30 of the participants who were exposed to the picture without disclaimer identified it correctly.

A multiple linear regression analysis was conducted to test the conceptual model. The analysis predicted mental well-being based on the availability of disclaimers, the use of filters, appearance self-esteem, and the interaction between filter availability and self-esteem, as well as filter availability and disclaimer availability. The model controlled for time spent on social media, the most frequently used social media platform, gender, and age. The overall model that can be seen in Appendix B was statistically significant, F(9,144)=3.855, p<.001, explaining 19.4% of the variance in mental well-being (R2=.194). After adjusting for the number of predictors in the model, the adjusted R2 was 0.144, meaning that 14.4% of the variance in mental well-being was explained by the predictors. The regression sum of squares was 17.910, while the residual sum of squares was 74.340, out of a total sum of squares of 92.250. The mean square values for the regression and residual were 1.990 and 0.516, respectively.

Table 1

Multiple Linear Regression Analysis Predicting Well-being

Predictor	B	Std. Error	β	t	Sig.
Constant	2.658	.489		5.432	<.001
Filter Availability	-.178	.431	-.115	-.414	.679
Self-esteem Score	.285	.095	.329	2.983	.003
Disclaimer Availability	-.065	.164	-.042	-.394	.694
Interaction Filter Self-esteem	.070	.135	.155	.521	.603
Interaction Filter Disclaimer	-.010	.283	-.005	-.040	.968
Age	-.006	.004	-.123	-1.450	.149
Gender	.009	.122	.006	.074	.941
Social Media Platform	-.052	.039	-.104	-1.346	.180
Social Media Use (hours)	-.059	.034	-.151	-1.724	.087

The results are presented in Table 1. There was no significant main effect of the filter manipulation on well-being, (B=-.178, t=-.414, p=.679). Therefore, H1 was not supported.

To examine the moderating effects of disclaimer availability and appearance self-esteem on the relationship between filter availability and mental well-being the interaction terms taken into account. The interaction term between skin smoothing filter use and appearance self-esteem was also not significant, (B=−0.070, t=−0.521, p=0.603). This result suggests that appearance self-esteem does not significantly moderate the relationship between filter availability and mental well-being, and H2 was not supported.

The interaction term between the filter use and disclaimer availability was not significant, (B=0.010, t=0.040, p=0.968), indicating that the presence of a disclaimer does not significantly moderate the relationship between filter availability and mental well-being. Therefore, H3 was not supported.

In addition, appearance self-esteem was a significant predictor of mental well-being (B=0.285, t=2.983, p=.003). Other predictors, such as the main predictor filter availability was not significant for the disclaimer availability (B=-.065, t=-.394, p=.694), results showed that disclaimer availability does not have a direct effect on follower's mental well-being.

Furthermore, demographic factors such as age, (B=−0.006, t=−1.450, p=.149) and, gender (B=0.009, t=0.074, p=.941), along with the type of social media platform used (B=−0.052, t=−1.346, p=.180), and time spent on social media (B=−0.059, t=−1.724, p=.087), were not significant predictors of mental well-being when an alpha level of .05 was used for all statistical tests.

Conclusion:

Discussion:

The purpose of the present study is to explore the impact of skin-smoothing filter availability, used by influencers, on mental well-being. Additionally, the study examines the roles of disclaimer availability and appearance self-esteem as moderators in this relationship, so it investigates how appearance self-esteem and disclaimer availability influence the relationship between the use of skin-smoothing filters and mental well-being. To ensure comprehensive analysis, the study controls for demographic factors such as gender, age, time spent on social media, and the type of social media platform used.

The results of the chi-square test indicated that the manipulations in the study were successful. Most of the participants were able to correctly identify the presence or absence of the skin-smoothing filter and the disclaimer in the influencer picture shown to them. This successful manipulation is crucial for the validity of the analyses regarding the impact of filters and disclaimers on mental well-being. Otherwise, participants' failure to recognize the manipulations would imply that any observed effects on mental well-being could not be reliably linked to the

presence or absence of the skin smoothing filter and disclaimer. This could lead to ambiguous results and weaken the study's conclusions about the impact of these variables. Although the overall manipulation was successful and significant, most participants correctly identified the picture without a filter, but only half of those who saw the filtered picture recognized it as filtered. As for the disclaimer, most of the participants correctly identified the picture that did not include a disclaimer, whereas less than half of the participants who were exposed to the picture with a disclaimer recognized it correctly. These results indicate that some participants had difficulty recognizing both the presence of the skin smoothing filter and the disclaimer which might still affect the results of the analysis.

The Pearson correlation analysis provided valuable insights. First, the moderate negative correlation between age and time spent on social media indicates that as age increases people tend to spend less time on social media. Previous findings showed similar results, such that an article stated that people who are aged from 18 to 29 are the most likely to use social media among other age groups and 2015 data showed that 90% of that age group which is from 18 to 29 is actively engaging with social media (Perrin, 2015). Another article that looked into the personal traits that triggers social media addiction found that young people are more prone to get addicted to social media and they spend more time compared to their elders. The same study also found that females are more prone to social media addiction compared to their male counterparts (Stănculescu & Griffiths, 2022). Our participants showed similar results, with females in our participant pool using social media for almost an hour more per day compared to males.

Second, the weak negative correlations between time spent on social media and both appearance self-esteem and mental well-being suggest that when the time spent on social media increases, appearance self-esteem and mental well-being tend to decrease. Thus, it can be said that increased time on social media may contribute to lower appearance self-esteem and mental well-being. Some previous findings align with this outcome. For instance, a study conducted in the U.S. with over 1,700 young adults aged 19 to 32 found that increased social media usage is associated with higher levels of depression (Lin et al., 2016). Furthermore, another study on social media use and self-esteem conducted a survey and interviews with 150 people. They found a negative correlation between time spent on social media and self-esteem, indicating that each additional hour spent on Facebook leads to a 5.574 decrease in participants' self-esteem

scores. Their findings suggest that this decline results from increased upward comparisons, making individuals feel underprivileged (Jan et al., 2017).

Third, interestingly there were no significant correlations found between age and appearance self-esteem or mental well-being. This suggests that, within this sample, age does not appear to have a direct impact on neither mental well-being nor appearance self-esteem. While age directly affects social media usage duration, which then impacts self-esteem and well-being, the lack of a direct correlation suggests that other variables, such as personality traits, might also play a significant role. For instance, a person's resilience can be a crucial factor. A study that looks into the factors that affect people's mental well-being found few personality traits such as extraverted people have a higher mental well-being levels and self-esteem levels than others due to the increased social and emotional skills or found that people with high levels of neuroticism are worse at managing stress and anxiety which can lead to lower self-esteem and mental well-being (Zięba et al., 2023). These findings highlight that while age alone may not directly influence these outcomes, the interaction between personality traits and social media usage can be critical in understanding the overall impact on mental well-being and appearance self-esteem.

Finally, Pearson correlation results also showed that there is a moderate positive correlation between appearance self-esteem and mental well-being which suggests that individuals with higher appearance self-esteem tend to experience better mental well-being. There are some studies that support this outcome such that a study that was done in the US observed that women's mental well-being levels increased after a few aesthetic non-surgical treatments through their increased appearance self-esteem and social confidence (Cohen et al., 2021). This shows that higher appearance self-esteem and confidence can affect individuals' mental well-being levels positively. Not only that, but a study also that was done in two mental health units in London showed that patients with lower self-esteem and self-acceptance are having higher levels of anxiety, depression and their mental well-being is worse. It appears that participants with higher levels of depression are engaged more in self-rating (MACINNES, 2006).

The descriptive analysis provided insight into the differences in appearance self-esteem and mental well-being levels across gender categories. The results indicated that men have higher appearance self-esteem level compared to women and non-binary individuals. Specifically, men had approximately 0.3 points higher appearance self-esteem level than women

and non-binary individuals had the lowest appearance self-esteem scores, with a mean of 2.63. However, the results are less credible for non-binary people because there are only two participants in that category which is not enough for making a certain statement.

Existing research supports that outcome, such as a study illustrated through surveys and real-world examples such as magazines, social media and tv shows that women are exposed to more rigid beauty standards than men. Firstly, the survey results showed that, people also believe that idealized beauty standards are more inflexible for women compared to men. What is more, examination of the beauty magazines, tv advertisements, and social media again showed a similar result, that women that are depicted online as beautiful are always young, thin, and not homogeneous at all, whereas for men the appearance standards were more flexible. Thus, this makes women more critical about their appearance and lowers their appearance self-esteem (Buote et al., 2011).

Another study with approximately 200 participants that looked into the gender differences in body evaluation found that women tend to rate all bodies more fairly compared to men. In the study some pictures were shown to both men and women and asked them to evaluate, and both evaluated these bodies critically, especially overweight bodies however when the same bodies are shown with the participants' faces on it women did not change their ratings significantly. In contrast, men tended to devalue non-ideal bodies and upvalue ideal ones when their own face was on the body. The results indicate that women tend to judge all bodies more equitably than males. Men perceive their own bodies as better if they are ideal and worse if they are not. (Voges et al., 2019). Briefly men might upvalue their own images and have a higher appearance self-esteem level while women are more fairly evaluating themselves and have lower self-esteem level than men.

On the other hand, there is a smaller difference between the mental well-being scores across genders. Again, men have the highest mental well-being score. This is followed by non-binary individuals and then women come last. These findings suggest that while there are some gender differences in appearance self-esteem, the differences in mental well-being are less noticeable since the difference between the mental well-being scores for women and men is approximately 0.1.

A study that also looked into the gender differences in well-being found opposing outcomes to ours such that their participant pool showed that women generally report higher

levels of well-being than men worldwide, with some exceptions in low-income countries. However, study also showed that mental well-being levels can vary also based on factors such as age, education, and urban versus rural living (Graham & Chattopadhyay, 2013). These mixed results might imply that gender differences in mental well-being are complex and influenced by other factors as well.

The multiple linear regression analysis provided several key insights into the factors influencing mental well-being. The model explained 19.4% of the variance in mental well-being, with appearance self-esteem as a significant predictor. This finding suggests that higher appearance self-esteem is strongly associated with better mental well-being. This outcome aligns with the Pearson analysis. Both analyses show a positive correlation between the appearance self-esteem and mental well-being suggests that higher appearance self-esteem is strongly associated with better mental well-being.

Unlike expected, results show that the use of skin smoothing filters was not a significant predictor of mental well-being score. This result indicates that the use of skin smoothing filters by influencers does not directly impact followers' mental well-being. Consequently, Hypothesis 1, the use of skin-smoothing filters by influencers has a negative effect on follower's mental well-being, was not supported by the data.

This outcome contradicts most of the previous studies. This outcome could be due to people who did not realize that pictures were filtered. Even Though most of the people passed the filter manipulation check question, exactly half of the participants who were exposed to the filtered picture thought there was no filter on the picture which affects the credibility of the outcome. Another reason could be that some people might not be immediately affected after being exposed to only one influencer picture. For a decrease in mental well-being to occur, it might take exposure to more than one picture. Regular daily exposure to filtered influencer pictures might negatively impact their mental well-being, which is not possible to capture from the survey conducted.

What is more, the demographics such as age, gender, type of social media platform used, and time spent on social media did not show significant effects on mental well-being suggests that these factors do not directly impact mental well-being in this study. This suggests that other variables that are not included in this study may have a greater impact on mental well-being.

Furthermore, the interaction terms between filter availability and disclaimer availability, as well as between filter availability and appearance self-esteem, were not significant. This implies that the presence of disclaimers does not moderate the relationship between filter availability and mental well-being, nor does appearance self-esteem. Consequently, the Hypothesis 2, which states that availability of a disclaimer moderates the relationship between the filter availability and mental well-being was not supported by the data. Again, this outcome could be the result of people who couldn't pass the disclaimer manipulation check. More than half of the participants, who were exposed to a picture with a disclaimer, thought there was no disclaimer.

Also, Hypothesis 3, which suggested that appearance self-esteem would moderate the relationship between filter availability and mental well-being was not supported by this data. Again, this could be due to the fact that half of the participants who were exposed to filtered pictures did not even realize that there was a filter.

These results highlight the independent impact of appearance self-esteem on mental well-being, suggesting that interventions to improve appearance self-esteem could be beneficial for enhancing overall mental health. Briefly, the model summary shows that even though this model explains a significant amount of variance there is still a huge gap that cannot be explained by the model. Thus, there are additional variables not covered in this study that impact mental well-being.

Study Limitations and Directions for the Future Research:

There are few potential limitations concerning the results of this study. First limitation could be the sample size; there are only 154 valid answers in this research which may not be enough to make a generalization for the whole population. What is more, the sample size is female dominated with %63.6 female participants and there are only 2 non-binary participants which can create a gender imbalance. As the results also show appearance self-esteem and beauty standards can vary across different genders thus having a more gender equal sample size would be better for a more accurate outcome. Also, the small number of non-binary participants makes it harder to draw a conclusion for this group.

Future research should aim to include a data set with more equally balanced genders and to increase the sample size to provide a more comprehensive understanding of the effect of the skin filter mental well-being.

Second limitation could be the manipulation effectiveness, even though the manipulation check shows that the manipulation was successful there are still 47 participants out of 154 who did not identify the availability of skin-filter correctly which makes almost one third of the participant pool. As for the disclaimer availability check, this number goes up to 52 participants out of 154. Which again means that more than one third of participants did not correctly identify whether the picture that was shown to them contained a disclaimer or not. Specifically, out of the 77 participants who were exposed to the picture without a disclaimer, 47 identified it incorrectly. This problem can affect the internal validity of the experiment making it challenging to directly link the observed effects to the manipulations. Participants who did not notice the manipulations can cause mixed and confusing results.

Future research could improve this by making experimental manipulations more noticeable and effective such as increasing the skin smoothing filter level or making disclaimers more noticeable by highlighting them or increasing the text size to make sure that manipulation is more recognizable. After the adjustments if the future studies still show that disclaimers are not enough to protect people's mental well-being other actions have to be considered to avoid mental health issues and again maybe future studies could focus on that and test other options.

Third limitation could be the period of the study. This study only focuses on the short-term effects of exposure to the filtered pictures. Since the time was limited, the survey only evaluated the immediate effect of the manipulations on mental well-being after showing only one picture and this approach fails to capture the long-term effects of being constantly exposed to filtered pictures on mental well-being.

Future research can focus on the long-term effects of being exposed to filtered pictures over time by conducting a longitudinal study. What is more, capturing the effect from just one picture might be harder. Thus, the future study can add different influencer pictures to observe the effect of skin smoothing filters and to have a more precise outcome.

For future research, our results showed contradictions with some existing research regarding gender and mental well-being differences, suggesting that the relationship between these variables is more complex. Current studies showed that females have a higher mental well-

being level whereas our outcome was the opposite. To determine whether there is a difference across genders in terms of mental well-being, future research should investigate other variables that could impact mental well-being across genders, such as socioeconomic status, cultural differences, access to mental health resources, and personality traits like resilience and neuroticism.

Contribution and Implications:

Despite the limitations that are mentioned above, these results still suggest several theoretical and practical contributions specifically to the psychology field by helping to understand the effects of social media on mental well-being and self-esteem. Besides, this research can also help on an individual level how to maintain a healthy mental well-being.

Depression and anxiety are one of the major problems in our era. Research showed that the number of depression cases increased rapidly worldwide over the years such that in 1990 recorded depression numbers were 72 million and in 2017 this number reached 25,8 million showing an increase of 49.86% (Liu et al., 2020). Thus, our findings can help to decrease these increases by contributing to the depressions that are aroused from the heavy social media use.

First of all, the study highlights that appearance self-esteem plays an important role in a person's mental well-being. What is more, the research highlights the negative correlation between time spent on social media and both appearance self-esteem and mental well-being. These results suggest that excessive social media use can harm people's both appearance self-esteem and mental well-being.

Thus, several strategies could be implemented to limit the time spent on social media. People might be advised to find ways to track their social media usage time through apps like screen time monitoring and set specific time limits for social media apps that send a reminder notification when the time limit is reached.

Since the results also show that time spent on social media increases when the age decreases, there could be some educational seminars in schools to target mostly the younger generation about the harms of excessive social media use.

Furthermore, the results indicate a relationship between the appearance self-esteem and mental well-being. The content that is shared on social media could be monitored more closely and encouraged media and advertising industries to share a more diverse range of body types and appearances. Influencers could be encouraged to share more authentic pictures to minimize the appearance comparisons which lead to lower appearance self-esteem. What is more, public health organizations can try to show the importance of appearance self-esteem and its impact on mental well-being throughout some educational campaigns.

Finally, the results indicate that there are significant differences in appearance self-esteem and mental well-being levels between genders such that males showed higher levels of appearance self-esteem and mental well-being than both non-binary and females. Targeted support programs should be arranged which are focusing females and non-binary people to address the pressures and societal expectations faced by these groups.

Summary and Conclusion:

According to the results of the survey, appearance self-esteem is a significant predictor of mental well-being. And female participants reported an average of 2.90 appearance self-esteem level whereas males reported 3.21 and non-binary 2.63 out of 5. Results of the survey also illustrated that younger people are spending more time on social media compared to older people. And people who spend more time on social media are more likely to have a lower mental well-being and appearance self-esteem which could arouse due to the things that are exposed on social media. Finally results also showed that there is a correlation between appearance self-esteem levels and mental well-being levels. Overall, these findings emphasizes that there is a need for interventions and educational programs that promote healthy social media habits and support a positive body image.

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Appendix:

Appendix A: Survey:

1)

RSM *Erasmus* | **Rotterdam School of Management**
Erasmus University

Thank you for participating in this survey! Your input is invaluable to the success of this research project. Your participation in this survey is entirely voluntary. You have the right to withdraw at any point during the survey without providing a reason. Your responses will be treated with strict confidentiality and you will stay anonymous to assure your privacy. The results of this study may be used in Goksu Eren's master's thesis. However, your individual responses will not be identifiable in any publications or presentations. If you have any questions or concerns about the study, you may contact with Goksu Eren from 702966ge@eur.nl. By continuing with the survey, you indicate that you have read and understood the information provided above, and you voluntarily consent to participate in the study.

◯ I consent

◯ I do not consent

2)

We would like to start with some demographic questions.
Please type below your age in years (for example: "22")

[   ]

3)

What is your gender?

- ○ Male
- ○ Female
- ○ Non-binary
- ○ Prefer not to say

4)

Which social media platform are you using most?

- ○ Twitter
- ○ Facebook
- ○ Instagram
- ○ Snapchat
- ○ Youtube
- ○ Other (please specify)

5)

In a day approximately how many hours are you spending on social media?

→

6)

We would further like to know about your attitude towards your physical appearance. Please answer honestly, there are no right or wrong answers.

	Not at all	A little bit	Somewhat	Very Much	Extremely
How satisfied are you with the way your body looks right now?	○	○	○	○	○
How attractive do you feel yourself?	○	○	○	○	○
How pleased are you with your appearance right now?	○	○	○	○	○
How satisfied are you with your weight right now?	○	○	○	○	○

7)

On the following page you will see a post by an influencer on Instagram. Imagine that you are following this person and see her posts regularly. Please examine the post carefully, later you will be asked a few questions about it.
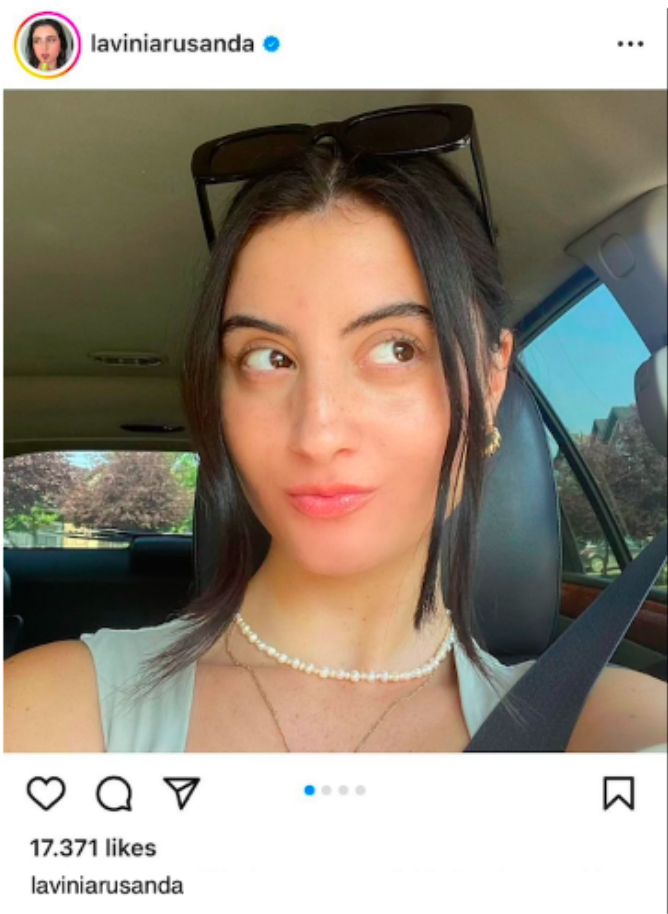
8.1)

laviniarusanda ✓

17.371 likes

laviniarusanda
#nofilter

8.2)

laviniarusanda

17.371 likes

laviniarusanda

8.3)

laviniarusanda

17.371 likes
laviniarusanda
#withfilter

8.4)

9)

Now you will see a few questions about how you feel right now. Please answer these questions honestly, there are no right or wrong answers.

	Not at all	A little bit	Somewhat	Very much	Extremely
How cheerful are you feeling right now?	○	○	○	○	○
How relaxed are you feeling right now?	○	○	○	○	○
How optimistic are you feeling about the future right now?	○	○	○	○	○
Do you think how well can you deal with your problems right now?	○	○	○	○	○
How active and energetic are you feeling right now?	○	○	○	○	○

10)

Now please think back of the Instagram post you saw.
Do you think the foto you saw was modified by software (filter, photoshop) to look more beautiful?

○ No, I think it was natural

○ Yes, I think it was modified

11)

Did the post you saw provide any information on whether the photo was modified using filters?

○ Yes, there was a hashtag saying #nofilter or #withfilter

○ No, there was no information about filters or modifications applied

Appendix B: Conceptual model analysis:

Cronbach's Alpha for self-esteem:

Reliability Statistics

Cronbach's Alpha	N of Items
.893	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
We would further like to know about your attitude towards your physical appearance. Please answer honestly, there are no right or wrong answers. – How satisfied are you with the way your body looks right now?	9.02	7.248	.874	.822
We would further like to know about your attitude towards your physical appearance. Please answer honestly, there are no right or wrong answers. – How attractive do you feel yourself?	8.96	7.868	.739	.871
We would further like to know about your attitude towards your physical appearance. Please answer honestly, there are no right or wrong answers. – How pleased are you with your appearance right now?	8.91	7.887	.797	.854
We would further like to know about your attitude towards your physical appearance. Please answer honestly, there are no right or wrong answers. – How satisfied are you with your weight right now?	9.17	6.926	.690	.903

Cronbach's Alpha for Mental well-being:

Reliability Statistics

Cronbach's Alpha	N of Items
.827	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Now you will see a few questions about how you feel right now. Please answer these questions honestly, there are no right or wrong answers. – How cheerful are you feeling right now?	11.95	9.848	.624	.792
Now you will see a few questions about how you feel right now. Please answer these questions honestly, there are no right or wrong answers. – How relaxed are you feeling right now?	11.86	9.543	.670	.778
Now you will see a few questions about how you feel right now. Please answer these questions honestly, there are no right or wrong answers. – How optimistic are you feeling about the future right now?	11.63	10.052	.624	.792
Now you will see a few questions about how you feel right now. Please answer these questions honestly, there are no right or wrong answers. – Do you think how well can you deal with your problems right now?	11.53	10.211	.647	.786
Now you will see a few questions about how you	11.82	10.668	.551	.812

Pearson Analysis:

➡ **Correlations**

Correlations

		We would like to start with some demographic questions. Please type below your age in years (for example: "22")	In a day approximately how many hours are you spending on social media?	selfesteem_total	wellbeing_total
We would like to start with some demographic questions. Please type below your age in years (for example: "22")	Pearson Correlation	1	$-.410^{**}$	$-.011$	$-.048$
	Sig. (2–tailed)		<.001	.895	.554
	N	154	154	154	154
In a day approximately how many hours are you spending on social media?	Pearson Correlation	$-.410^{**}$	1	$-.283^{**}$	$-.207^{*}$
	Sig. (2–tailed)	<.001		<.001	.010
	N	154	154	154	154
selfesteem_total	Pearson Correlation	$-.011$	$-.283^{**}$	1	$.402^{**}$
	Sig. (2–tailed)	.895	<.001		<.001
	N	154	154	154	154
wellbeing_total	Pearson Correlation	$-.048$	$-.207^{*}$	$.402^{**}$	1
	Sig. (2–tailed)	.554	.010	<.001	
	N	154	154	154	154

**. Correlation is significant at the 0.01 level (2–tailed).
*. Correlation is significant at the 0.05 level (2–tailed).

Descriptive Analysis:

selfesteem_total wellbeing_total * What is your gender?

What is your gender?		selfesteem_total	wellbeing_total
Male	Mean	3.2130	3.0074
	N	54	54
	Std. Deviation	.87065	.86697
Female	Mean	2.8980	2.9020
	N	98	98
	Std. Deviation	.87110	.73231
Non–binary	Mean	2.6250	3.0000
	N	2	2
	Std. Deviation	2.29810	.00000
Total	Mean	3.0049	2.9403
	N	154	154
	Std. Deviation	.89592	.77649

Chi-Square test:

Crosstabs

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
filter_availibility * Now please think back of the Instagram post you saw. Do you think the foto you saw was modified by software (filter, photoshop) to look more beautiful?	154	100.0%	0	0.0%	154	100.0%

filter_availibility * Now please think back of the Instagram post you saw. Do you think the foto you saw was modified by software (filter, photoshop) to look more beautiful? Crosstabulation

Count

		Now please think back of the Instagram post you saw. Do you think the foto you saw was modified by software (filter, photoshop) to look more beautiful?		Total
		0	No, I think it was natural	
filter_availibility	without filter	9	69	78
	with filter	38	38	76
Total		47	107	154

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	26.853[a]	1	<.001		
Continuity Correction[b]	25.070	1	<.001		
Likelihood Ratio	28.334	1	<.001		
Fisher's Exact Test				<.001	<.001
Linear-by-Linear Association	26.679	1	<.001		
N of Valid Cases	154				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 23.19.

b. Computed only for a 2x2 table

Crosstabs

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
disclaimer_availibililty * Did the post you saw provide any information on whether the photo was modified using filters?	154	100.0%	0	0.0%	154	100.0%

disclaimer_availibililty * Did the post you saw provide any information on whether the photo was modified using filters? Crosstabulation

Count

		Did the post you saw provide any information on whether the photo was modified using filters?		Total
		No, there was no information about filters or modifications applied	Yes, there was a hashtag saying #nofilter or #withfilter	
disclaimer_availibililty	.00	72	5	77
	1.00	47	30	77
Total		119	35	154

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	23.109[a]	1	<.001		
Continuity Correction[b]	21.297	1	<.001		
Likelihood Ratio	25.104	1	<.001		
Fisher's Exact Test				<.001	<.001
Linear-by-Linear Association	22.959	1	<.001		
N of Valid Cases	154				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.50.

b. Computed only for a 2x2 table

49

Multiple Linear Regression:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.441[a]	.194	.144	.71851

a. Predictors: (Constant), In a day approximately how many hours are you spending on social media?, Which social media platform are you using most? – Selected Choice, disclaimer_availibililty, filter_availibility, What is your gender?, selfesteem_total, We would like to start with some demographic questions. Please type below your age in years (for example: "22"), interaction_filter_disclaimer, interaction_filter_selfesteem

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.910	9	1.990	3.855	<.001[b]
	Residual	74.340	144	.516		
	Total	92.250	153			

a. Dependent Variable: wellbeing_total

b. Predictors: (Constant), In a day approximately how many hours are you spending on social media?, Which social media platform are you using most? – Selected Choice, disclaimer_availibililty, filter_availibility, What is your gender?, selfesteem_total, We would like to start with some demographic questions. Please type below your age in years (for example: "22"), interaction_filter_disclaimer, interaction_filter_selfesteem