

**Examining the Effects of Manipulated Social Media Photos on Feelings of Body
Dissatisfaction and Inadequacy in Teenage Girls**

Katie Bischof

Abstract:

This research investigates the extent to which the use of social media, driven in part by its filter and editing capabilities, perpetuates feelings of inadequacy in teenage girls. This is a consequential topic given the more than 100% rate increases in anxiety and depression that teenage girls have been experiencing since the advent of social media apps, such as Instagram.¹ It is a relatively new phenomenon that merits better understanding through research. This paper covers the findings of four important research studies on the topic and includes suggested actions based on the implications social media has on our society. The study “Research on Body Image Anxiety among Women in the Social Media Environment,” conducted by Tian Tian, employs a mixed-methods approach to investigate social media frequency and how it connects to body dissatisfaction and self-esteem. It addresses the pressure to conform to a narrow view of beauty and the difficulty of meeting the standard due to filters. The study "Picture Perfect: The Direct Effect of Manipulated Instagram Photos on Body Image in Adolescent Girls" by Mariska Kleemans et al., examines the impact of manipulated Instagram photos on adolescent girls and their perception of their own bodies. More specifically, the researchers focus on how exposure to

¹ Haidt, Jonathan. *The Anxious Generation: How the Great Rewiring of Childhood Is Causing an Epidemic of Mental Illness*. Westminster, London, United Kingdom: Penguin Press, 2024.

edited Instagram photos results in higher body image dissatisfaction compared to non-manipulated images. This study also focuses on girls with a high tendency to compare themselves and how this propensity leads to lower body image perceptions than their low social comparison counterparts. The study "Social Media Use and Body Image Disorders" by Barbara Jiotso et al., investigates the association between the frequency of comparing oneself to others on social media with increased body dissatisfaction and desire to be thin. The research addresses how the impact of widespread social media adoption can influence body dissatisfaction and play a role in the prevalence of eating disorders in our society. Lastly, the study "Body image 2.0: Associations between social grooming on Facebook and body image concerns" by Ji Won Kim and T. Makana Chock examines the association between college students' use of social media and body image attitudes. The study's objective is to understand the relationship between engagement in social grooming activities (ie interacting with profiles and comments) and a desire for thinness, and it also addresses whether social grooming correlates more strongly with body image concerns than time spent on Facebook. This set of studies provides important results around the use of social media that policymakers, social media companies, schools, parents, and social media users should be aware of as society grapples with the many mental health issues facing our youth.

Introduction:

In May of 2023, U.S. Surgeon General Dr. Vivek Murthy issued an alarming statement, "We are in the middle of a national youth mental health crisis, and I am concerned that social

media is an important driver of that crisis—one that we must urgently address.” The data supports Murthy's concerns.² Over 93% of teens, primarily girls, use social media.³ On average, girls spend 5.3 hours per day on these platforms.⁴ A significant 81% of these users admit to using filters and/or editing their photos.⁵ The effects of constantly manipulating photos on social media have detrimental effects on teenage girls and their body satisfaction. 87% of women compare themselves to images they see on social media, and up to 84% of American girls are unhappy with their bodies.⁶

Jonathan Haidt, the author of *The Anxious Generation*, cites research that shows that since the advent of Instagram in 2010, girls have experienced a 145% increase in depression, a 134% increase in anxiety, and a 167% increase in the rate of suicide.⁷ This social media-induced epidemic is a recent phenomenon that needs to be better understood so that society can arrive at the right solutions to end this crisis in self-confidence and mental well-being. Through the analysis of four central studies—Tian Tian’s “Research on Body Image Anxiety among Women in the Social Media Environment,” Mariska Kleeman et al.’s “Picture Perfect: The Direct Effect of

² Murthy, Vivek, Dr. "Surgeon General Issues New Advisory About Effects Social Media Use Has on Youth Mental Health." U.S. Department of Health and Human Services. Last modified May 23, 2023. Accessed May 9, 2024.

³ Pew Research Center. "Teens and Social Media Fact Sheet." Pew Research Center. Last modified January 5, 2024. Accessed May 10, 2024.

⁴ Statista. "Average daily time spent on social media platforms among teenagers in the United States in 2023." Statista. Last modified February 19, 2024. Accessed May 6, 2024.

⁵ Agrawal, H., & Agrawal, S. "Impact of Social Media and Photo-Editing Practice on Seeking Cosmetic Dermatology Care." *Clinical, cosmetic and investigational dermatology* 14 (2021): 1377-85. Accessed May 9, 2024.

⁶ Chen, Melissa. "Unrealistic and Unrepresentative Ideals: Social Media and Body Image." Medium. Last modified December 21, 2021. Accessed May 10, 2024.

Runfola, C. D., Von Holle, A., Trace, S. E., Brownley, K. A., Hofmeier, S. M., Gagne, D. A., & Bulik, C. M. "Body Dissatisfaction in Women Across the Lifespan: Results of the UNC-SELF and Gender and Body Image (GABI) Studies." *European eating disorders review : the journal of the Eating Disorders Association* 21, no. 1 (2013): 52-59. Accessed May 10, 2024.

⁷ Haidt, Jonathan, *The Anxious Generation*.

Manipulated Instagram Photos on Body Image in Adolescent Girls,” Barbara Jiotsa et al.’s “Social Media Use and Body Image Disorders,” and Kim and Chock’s “Body image 2.0: Associations between social grooming on Facebook and body image concerns”—this paper will explore the complex relationship between social media usage (specifically scrolling through manipulated images), body dissatisfaction, and feelings of inadequacy.

These studies illuminate the problematic consequences of greater social media frequency and the normalizing of manipulated images that create an unattainable beauty standard. Mainstream adoption of new technologies often brings unintended consequences that require a coordinated response by government regulators, technology companies, and citizens. Society now has the data to know that action is needed to address the harmful implications of how social media is used today. This topic does not cover the totality of the problems social media has introduced to our youth, but it addresses an important set of issues that affect the mental well-being of our nation’s future.

Literature Review:

Tian Tian’s study “Research on Body Image Anxiety among Women in the Social Media Environment” was conducted in Japan and published in 2023 by the *Academic Journal of Humanities & Social Sciences* by the Francis Academic Press, UK. The study explores the impact of social media on “body image perception,” “body dissatisfaction and self-esteem,” and “anxiety and mental health effects.”⁸ The research utilized a mixed-methods approach,

⁸ Tian, Tian. "Research on Body Image Anxiety among Women in the Social Media Environment." *Francis Press* 6, no. 9 (2023): 51-57. Accessed May 5, 2024.

combining primary data and a literature review of existing research regarding social media and its impact on body-image anxiety among women. The primary data consisted of two sources: surveys and interviews. Surveys were sent to teenage and adult women to evaluate their experiences with social media usage and body dissatisfaction and anxiety. They used the Body Image Satisfaction Scale (BISS) and the Social Media Impact Scale (SMIS) to measure body dissatisfaction (BD) and the impact of social media influence. Some of those who received the survey later engaged in a semi-structured interview to better understand their experiences and perspectives on social media and its connection to body dissatisfaction. This allowed for open-ended conversation and greater qualitative, unaided, nuanced feedback in exploring the reasons that intensify body image dissatisfaction.

The results revealed that time on social media and higher levels of body dissatisfaction are directly related. The findings also showed that women who spent more time on social media were more likely to follow those who represent idealized beauty standards and experience dissatisfaction to a greater degree. Women reported that they felt that they did not meet the online beauty standard, resulting in intense self-criticism and feelings of inadequacy. There is pressure to conform to these narrow beauty standards on social media and change one's appearance. This is particularly difficult to achieve, considering many of the online images are enhanced.⁹ Tian and Tian's work is important because it demonstrates the toll social media takes on women goes well beyond dissatisfaction with their own bodies. It creates more profound core anxiety issues, including a decrease in self-esteem and mental well-being. The study delves into two theories that are relevant to the research: self-objectification theory and social comparison

⁹ Tian Tian, "Research on Body Image Anxiety among Women," (51-57).

theory. Filters create narrowly defined, unrealistic standards that women feel pressure to meet. This promotes self-objectification as women warp themselves to the idealized image of women, “altering their self-perception to match what is perceived as attractive”. The desire to conform to such narrow standards contributes to the homogenization of beauty, eradicating diverse beauty. Scrolling through social media and comparing oneself to these heavily edited photos results in body dissatisfaction and pressure to conform to these standards. The intense pressure to fit these standards can lead to serious behavior changes and mental health issues such as anorexia and bulimia.¹⁰

“Picture Perfect: The Direct Effect of Manipulated Instagram Photos on Body Image in Adolescent Girls,” written by Mariska Kleemans, Serena Daalmans, Ilana Carbaat, and Doeschka Anschutz was published in *Media Psychology* on December 15, 2016. This study was conducted in the Netherlands and explores the impact of manipulated Instagram photos on adolescent girls’ perception of their own bodies. It also dives into whether a girl's tendency to engage in social comparison plays a crucial role in perception. This study was conducted online with 144 girls ages 14-18 years old and controlled for differences in educational level. 72 girls were randomly assigned to view ten original Instagram selfies while the other 72 girls were exposed to ten manipulated selfies. The girls then answered questions in an online survey. The study utilized the Iowa Netherlands Comparison Orientation Measure to measure social comparison tendencies and the Body Image State Scale for body image.

The study found that exposure to edited Instagram photos results in higher body dissatisfaction compared to exposure to non-manipulated images. The study highlighted this

¹⁰Tian Tian, "Research on Body Image Anxiety among Women," (51-57).

finding was particularly true for girls who are more prone to frequent social comparisons. These girls scored higher in body dissatisfaction than their peers with lower social comparison tendencies when viewing original images, and this gap increased after exposure to filtered images. Overall, the participants scored the manipulated images as more attractive, which could be the basis for the higher dissatisfaction scores around manipulated images. The study pointed out a few other troublesome findings. In general, participants were less aware that images on Instagram were enhanced, especially by peers, and it was particularly difficult for them to discern or detect body-shaping techniques. This highlights that girls are susceptible to underestimating the extent to which the images they are seeing have been manipulated. Interestingly, the girls with the lower social comparison tendency score did not see significant differences in their body dissatisfaction scores between the original and manipulated images. Also, the study found that those who were older and more educated had higher body image scores and were less affected by the manipulated photos.¹¹

“Social Media Use and Body Image Disorders: Association between Frequency of Comparing One’s Own Physical Appearance to That of People Being Followed on Social Media and Body Dissatisfaction and Drive for Thinness” written by Barbara Jiotsa, Benjamin Naccache, Mélanie Duval, Bruno Rocher, and Marie Grall-Bronnec, was published in France in 2021 by *International journal of environmental research and public health*. This transversal observational study aimed to investigate to what extent the frequency of comparing one’s physical appearance to others on social media impacts body dissatisfaction and desire to be

¹¹ Kleemans, Mariska, Serena Daalmans, Ilana Carbaat, and Doeschka Anschutz. "Picture Perfect: The Direct Effect of Manipulated Instagram Photos on Body Image in Adolescent Girls." *Media Psychology* 21, no. 1 (2018): 93-110. Accessed May 9, 2024.

skinny. The study was performed on people ages 15 to 35 and totaled 1,331 subjects, 193 of whom had eating disorders (ED). Each of the participants filled out questionnaires that provided general personal data, social media use frequency, and body image perception scores.

The main finding showed a strong association between the frequency of comparing one's self to others on social media with increased body dissatisfaction and the desire to be skinny. The correlation held regardless of the subjects' Body Mass Index (BMI) so the key finding is broadly applicable to many. Those subjects with greater education levels had a mean EDI Body Dissatisfaction and Drive for Thinness score that was lower than participants with less education. The findings also highlighted that the group that was at risk for eating disorders had significantly higher social media use and higher comparison of their physical features to the people they followed on social media than the group that was not at risk for eating disorders.¹²

“Body image 2.0: Associations between social grooming on Facebook and body image concerns,” written by Ji Won Kim and T. Makana Chock, was published in Syracuse, New York in 2015 by *Computers in Human Behavior*. This cross-sectional online survey study explores the relationship between college students' social media use and body image attitudes. In particular, the study set out to understand whether the likelihood of engaging in content through social grooming activities (browsing profiles, leaving comments, and clicking ‘likes’) correlates with a drive for thinness and whether social grooming correlates more strongly with body image concerns than overall time exposure on Facebook. It also examines if higher appearance

¹² Jiotsa, B., Naccache, B., Duval, M., Rocher, B., & Grall-Bronnec, M. "Social Media Use and Body Image Disorders: Association between Frequency of Comparing One's Own Physical Appearance to That of People Being Followed on Social Media and Body Dissatisfaction and Drive for Thinness." *International journal of environmental research and public health* 18, no. 6 (2021): 2880. Accessed May 9, 2024.

comparison traits contribute to a higher drive for thinness. An email was sent to 2,000 students, 186 elected to participate. 60% of the participants were teens, and 119 were female. The participants answered various questions about their Facebook use and body image attitudes that provided scores on indices that measured tendencies around social grooming, physical appearance comparison, and drive for thinness.

The main finding revealed that social grooming activity was significantly positively correlated with body image concerns, such as girls' drive for thinness. The researchers hypothesized that this would be the case since they believed high engagement with content (such as reviewing or posting more manipulated images) would be associated with greater comparison. In fact, the study revealed that the participants with higher social grooming scores had higher appearance comparison scores as well as more friends on Facebook. Having more 'friends' on the platform increases the scope for comparison and increases the exposure to more profiles with idealized, often manipulated, beauty standards. The study also found that the association between social grooming activity and drive for thinness was significantly stronger than the connection between time spent on Facebook and drive for thinness. The researchers did not find a significant correlation between time spent on Facebook and drive for thinness.¹³

Analysis of Scholarship:

Each of the four studies above focuses on the impact of social media and its effects on the participants' perception of their bodies. In each study, there is an association between uses of the

¹³ Ji Won Kim and T. Makana Chock. "Body image 2.0: Associations between social grooming on Facebook and body image concerns." *Computers in Human Behavior* 48 (July 2015): 331-39. Accessed May 12, 2024.

online social platforms and increased dissatisfaction with one's own body. There is a clear consensus that the effects of social media, especially with filters, have negative consequences and contribute to the subjects' perceiving their bodies less favorably. The studies approach the topic from different research objectives, though, and the difference in their focus is highlighted in the next four paragraphs.

The first study (Tian Tian) highlights the effects of increased body dissatisfaction from increased social media usage by calling out the mental health issues that go beyond disappointment with physical appearance comparisons.¹⁴ Social media creates a narrow standard of beauty, a set of criteria that most people do not meet. As a result, teens and women tend to feel inadequate and feel a desire to conform to something they are not. This pressure extends beyond body image issues and creates significant mental health and self-esteem issues. A prominent theory demonstrated in Tian Tian's study is the self-objectification theory. Many people use filters and edit their photos to meet certain criteria, conveying their belief that others will judge them as mere objects largely based on their appearance. Since many women do not naturally meet this standard, it results in body dissatisfaction.¹⁵ This study is the only one of the three analyzed studies that includes open-ended interviews, and perhaps this contributes to the additional depth of the impact of social media on teens' and women's mental health.

The second study (Kleemans, Daalmans, Carbaat, and Anschultz) singles out the damaging impact of filters and the manipulation of images.¹⁶ Exposure to edited Instagram photos results in even higher body image dissatisfaction scores compared to non-manipulated

¹⁴ Tian Tian, "Research on Body Image Anxiety among Women," (51-57).

¹⁵ Tian Tian, "Research on Body Image Anxiety among Women," (51-57).

¹⁶ Kleemans et al., "Picture Perfect: The Direct Effect of Manipulated Instagram Photos," (93-110).

images. The research also points out that participants who have higher social comparison tendencies score lower in general and are particularly vulnerable to altered images. One of the alarming findings in this study is that girls are less aware of how many of the images they see on Instagram have been manipulated. This is particularly true of images posted by their peers. Although social identity was not explicitly mentioned in the studies, its manifestations are evident in Kleeman's findings. This theory highlights the rationale that images of peers have a more significant impact on individuals than images of celebrities. Individuals gain some of their self-esteem from their peer groups so peer comparisons on social media can have detrimental effects on body image, particularly when their peers are considered a representation of social norms.¹⁷ This dynamic exacerbates body dissatisfaction since participants underestimate the frequency with which the images they see from peers are manipulated.

The third study (Jiotsa, Naccache, Duval, Rocher, and Grall-Bronnec) demonstrates a high association between the frequency of social media use with increased body dissatisfaction and desire for thinness but includes the additional lens of including at-risk individuals for eating disorders. The at-risk eating disorder group exhibits higher social media usage and higher comparison tendencies. They are a particularly vulnerable group because as they try to conform to the accepted standards that Study 1 highlights, their resulting behavior includes anorexia and bulimia, which exacerbate mental challenges and create new physical ones. The theory of conformity is relevant to this study as women see edited photos of people on social media who engage in unhealthy habits to get skinny and begin to mimic these behaviors themselves.

Additionally, social learning theory is highlighted in Jiotsa's study. The study explores how

¹⁷ Kleemans et al., "Picture Perfect: The Direct Effect of Manipulated Instagram Photos," (93-110).

frequent exposure to edited photos on social media can result in body dissatisfaction and the desire to be thinner. Many women see other women and subconsciously learn to dislike their own bodies, just as the women who feel the need to edit their bodies do. They end up adopting similar behaviors and attitudes towards their body with the desire to be thin and fit the narrowly defined standard for beauty.¹⁸

The fourth study (Kim and Chock) highlights the strong correlation between active engagement with social media profiles through social grooming behavior and the drive for thinness. Those who exhibit more social grooming behavior score higher in appearance comparison.¹⁹ This cohort also has more friends on Facebook so they have more points of comparison and likely see more filtered images. The strong association between social grooming activities and drive for thinness was materially more significant than the association between time on Facebook and drive for thinness. In fact, time on Facebook was not associated with statistically significant increases in drive for thinness.

This contradicts the findings in the first and third studies that find an association between frequency and time on social media platforms and body dissatisfaction. The researchers confess this finding is inconsistent with other earlier studies. They offer up the need for further research on this point and mention some possible shortcomings with their study. The main explanation could be that this study was confined to Facebook which is a platform that encompasses a wide range of behaviors such as playing games, reading news stories, and chatting. Facebook also has long been supplanted as the teen demographic's top choice in favor of Instagram.

¹⁸ Jiotsa, B. et al., "Social Media Use and Body Image Disorders," (2880).

¹⁹ Ji Won Kim et al., "Body image 2.0: Associations," (331-39).

Social comparison theory is prevalent in all four studies. Teen girls tend to fixate on the images they see in other people's profiles, and this induces anxiety when they compare their perceptions of themselves to others and/or they think about what they post of themselves and how it will be viewed by others. In Tian Tian's study, this theory explains how frequent exposure to idealized social media content leads to greater body dissatisfaction among women. Women see these edited photos and compare themselves to the unrealistic standard.²⁰ Similarly, the third study (Jiotsa) finds that the frequency with which people compare their own bodies to those they see on social media is associated with the tendency to want to look thinner and experience body dissatisfaction.

As a result, people's self-esteem decreases, and they are more likely to harm themselves (anorexia, etc.) in an attempt to pursue an unattainable ideal.²¹ The second study (Kleemans) discovers that adolescent girls who are more prone to comparison experience greater body dissatisfaction after viewing manipulated photos than original images as the comparison gap increases when filters are used.²² The fourth study (Kim and Chock) highlights that interactive engagement with profiles and comments is associated with a strong drive for thinness. Active engagement with the profiles is a powerful act of comparison and is a more consequential predictor of drive for thinness than time on the platform.²³ The results make sense as they find active social groomers are the participants with higher appearance-related comparison scores and more Facebook friends with which to compare themselves.

²⁰ Tian Tian, "Research on Body Image Anxiety among Women," (51-57).

²¹ Jiotsa, B. et al., "Social Media Use and Body Image Disorders," (2880).

²² Kleemans et al., "Picture Perfect: The Direct Effect of Manipulated Instagram Photos," (93-110).

²³ Jiotsa, B. et al., "Social Media Use and Body Image Disorders," (2880).

Overall, the studies certainly paint a cautionary tale for social media use. The second and third studies offer some hope by mentioning that higher educational levels help reduce the adverse impact of social media use.²⁴ These two studies, along with the findings in Kim and Chock's work, also indicate that lower social comparison groups fare better than their high social comparison tendency counterparts.²⁵

Implications:

The root cause behind the staggering statistics on teenage girls' mental health and anxiety mentioned in the introduction section has been in need of study. The impact of the dramatic shift in behaviors over the past 15 years that has led to teen girls spending nearly a third of their waking hours on social media apps has to be better understood.²⁶ Thanks to the research by Tian Tian, Mariska Kleemans et al., Barbara Jiotso et al., and Kim and Chock, along with the work of others, a clear association has been established between the use of social media and teenage girls' mental wellness and self-esteem. The research validates many people's intuition but is significant because it provides the proper data to validate a response, such as the advisory alert from the Surgeon General.²⁷

More specifically, the research conducted by Tian Tian, Mariska Kleemans et al, Barbara Jiotso et al. and Kim and Chock has uncovered significant findings that show high engagement

²⁴ Tian Tian, "Research on Body Image Anxiety among Women," (51-57).

Kleemans et al., "Picture Perfect: The Direct Effect of Manipulated Instagram Photos," (93-110).

²⁵ Jiotso, B. et al., "Social Media Use and Body Image Disorders," (2880).

²⁶ Statista. "Average daily time spent on social media platforms among teenagers in the United States in 2023." Statista. Last modified February 19, 2024. Accessed May 6, 2024.

²⁷ Office of the Surgeon General. "Surgeon General Issues New Advisory About Effects Social Media Use Has on Youth Mental Health." U.S. Department of Health and Human Services. Last modified May 23, 2023. Accessed May 12, 2024.

with social media, and filter use is damaging to the well-being of teen girls. As these four studies have emphasized, there are problematic issues with social media that are associated with higher body dissatisfaction, greater feelings of inadequacy, lower self-esteem, and increased risk of eating disorders. The studies call out the basis for many of the mental health problems our society has been witnessing for years.

Teenage girls are naturally prone to social comparison because they are hyper-focused on ‘belonging’ and ‘finding an identity’ that is validated and ‘liked’ by others. Developmental psychologist Kathleen McElhaney covers how the teen years can be a fragile period of growth in her study “‘They Like Me, They Like Me Not’’: Popularity and Adolescents’ Perceptions of Acceptance Predicting Social Functioning Over Time.”²⁸ Given the heightened need for approval and validation during the teen years, it should not be surprising that the effects of a technology platform that amplifies social comparison at an unlimited scale can escalate the natural anxieties that teens confront. Thanks in part to the four studies highlighted above, society now has the data to know that actions must be taken to protect our nation’s teen girls.

The best result would include collective action from legislators, technology companies, parents, schools, and users of social media. Below, I discuss how these entities can play a role in helping to solve our society’s social media problem, starting with four proposals government legislators should consider.

Government:

²⁸ Kathleen B. McElhaney, Jill Antonishak, Joseph P. Allen. "'They Like Me, They Like Me Not': Popularity and Adolescents' Perceptions of Acceptance Predicting Social Functioning Over Time." *Child development*, 2008, 720-31. Accessed May 9, 2024.

One potential solution would be to increase the minimum age to open a social media account to 16 years of age.²⁹ Currently, TikTok, Instagram, Snapchat, VSCO, and other forms of social media require users to be at least 13 years old. Two out of the four studies (“Picture Perfect: The Direct Effect of Manipulated Instagram Photos on Body Image in Adolescent Girls” and “Social Media Use and Body Image Disorders: Association between Frequency of Comparing One’s Own Physical Appearance to That of People Being Followed on Social Media and Body Dissatisfaction and Drive for Thinness”) produced data that demonstrates that the more educated one is, the less dramatic of an impact social media has on body image and mental health. By raising the minimum age by three years, government regulators would allow social media participants to be older, better educated, and better equipped to handle the pressures that come with social media.³⁰

Second, government regulators can require social media companies to enforce this age limit by using verification technology and data sources used by other apps such as Uber. Today, the account registration process allows users to self-report their age. Raising the age limit to 16 would not be sufficient if users can misrepresent their age and companies readily accept the registration data without impunity. According to Pew Research Center, 71% of adults would prefer age be validated before social media accounts can be used.³¹

Third, legislators can require social media companies to label the hazards of social media usage when users open the apps. In the past, the government has protected its citizens by

²⁹ Haidt, Jonathan, *The Anxious Generation*.

³⁰ Kathleen B. McElhaney et. al., “They Like Me, They Like Me Not,” (720-31).

³¹ Monica Anderson and Michelle Faverio. “81% of U.S. adults – versus 46% of teens – favor parental consent for minors to use social media.” Pew Research Center. Last modified October 31, 2023. Accessed May 12, 2024.

mandating that cigarette and alcohol producers include warning labels on their products. Based on the mounting evidence of harm from studies like those of Tian Tian, Kleemans et al., Jiotsa et al, and Kim and Chock, social media companies should do the same. This could include language that many of the images have likely been edited or manipulated. These warnings would increase awareness and better educate our youth on the perils of their actions. Psychologists from Bournemouth University in the UK found that 80% of survey participants believe warning labels would encourage better use of social media sites.³²

Fourth, government regulators could set constraints on how social media companies design their products. The social media companies are motivated by advertisement dollars, so like casinos, cigarette, and alcohol companies, they are motivated to build in addicting stimuli to increase time on the platform. Regulators could mandate ‘pauses’ after 10 minutes of infinite scrolls and autoplay videos. Less exposure would lead to less harm. The New York State Attorney General agrees and is trying to pass the Stop Addictive Feeds Exploitation (SAFE) for Kids Act that forces social media companies to restrict addictive features that can harm young users.³³ Finally, as Tian and Tian discuss, algorithms could be required to “promote a more diverse and authentic representation of body diversity.”³⁴ This would expand the exposure beyond a narrow standard of beauty and downplay the algorithms’ prioritization of certain beauty features such as ‘high nose bridge,’ ‘pointed chin,’ ‘fair skin,’ and ‘big dark eyes.’

³² Ali, Raian, Dr. "Warning labels should be introduced to prevent digital addiction, research suggests." Lecture, Bournemouth University, Bournemouth, United Kingdom, October 6, 2015.

³³ Hochul, Kathy. "Governor Hochul Joins NYC Officials and Activists to Celebrate the Signing of Sammy's Law." Speech, New York City, New York, United States, May 3, 2024.

³⁴ Tian Tian, "Research on Body Image Anxiety among Women," (51-57).

Kennedy, Lawrence, and Rountree from the University of Houston promote the idea of the FCC reviewing algorithms that promote such harmful biases.³⁵

Social media companies:

Ideally, the above four points would be led by the social media companies themselves without the need for government mandates to change behavior but it is reasonable to assume that the companies are benefitting from the status quo and will not change their actions unless they feel guilty or forced to make changes. If the community puts tremendous pressure on these companies, social media companies may realize it is in their best interest to make these changes on their own or risk losing customers. There are several other actions the companies can take.

The companies can increase transparency around how the algorithms work so users are more aware they are being targeted.³⁶ The *Social Media Regulation* report from researchers at the University of Houston goes a step further and states companies should be required to provide alternative algorithms.³⁷ This strategy would provide the users with more control over what they see rather than having companies use their massive data sets to target users in a way that increases usage. Companies can also provide other user controls to help users block content they do not want to see, which could include the advertising of specific product categories. These controls could include time monitoring and time limit features so people can better manage their

³⁵ Dr. Ryan Kennedy, Dr. Windy Y. Lawrence, and Dr. John Rountree, "Social Media Regulation: How Should We Decide What Speech Is Acceptable/unacceptable on Social Media?" In *Social Media Regulation Issue Guide 2023*, by Dr. Ryan Kennedy, Dr. Windy Y. Lawrence, Dr. John Rountree, and UHD CPD Election Public Deliberation Team, 1-19. University of Houston-Downtown Center for Public Deliberation, 2023. Last modified 2023. Accessed May 12, 2024.

³⁶ MacCarthy, Mark. "Transparency Recommendations for Regulatory Regimes of Digital Platforms." Centre for International Governance Innovation. Last modified March 8, 2022. Accessed May 12, 2024.

³⁷ Dr. Ryan Kennedy et al., "Social Media Regulation," (1-19).

experience. Finally, creating a ‘positive mental health executive’ role at Facebook that would allow someone to be an ongoing internal advocate for these changes and own the results would be a good step to ensure these actions take place.

Parents:

Parents can play a powerful role in protecting their kids from the harms of social media. Until the government legislates a minimum age of 16 for social media apps, parents should set this rule of law in their households.³⁸ Kids should not be able to access these addictive and harmful platforms until they are more developed. This is one of the takeaways from the second and third highlighted research studies in this paper, which showed that social media has a more negative impact on those who are less educated and younger. As Megan Moreno (MD, pediatrician) states, “handing over a phone is a watershed event for kids. Once they have a phone, they won’t ever not have a phone.”³⁹

Setting an age limit requires having difficult conversations with the kids. Collective parent action across a community would help the discussions land better by making sure every kid has to play by the same rules. If nearly every teen cannot use social media apps until the age of 16, there is less pressure to be on the platform and less FOMO.⁴⁰ Parents can help argue their case around an age limit and also help manage healthy usage by making their teens aware of the damage social media can bring. Leading with education and awareness provides a strong reason

³⁸ Haidt, Jonathan, *The Anxious Generation*.

³⁹ Lee, Ellen. "The Best Parental Control Apps to Manage Screen Time (and Keep Your Kid Safer Online)." *The New York Times: Wirecutter*. Last modified May 7, 2024. Accessed May 10, 2024.

⁴⁰ Haidt, Jonathan, *The Anxious Generation*.

for the age limit and careful usage. High-quality discussions that show parents' love and emotional support hopefully build trust for future conversations about ongoing experiences and usage.⁴¹ Parents can also lead by example by not engaging heavily in social media in front of their teens. Planning fun non-screen based activities with family also models healthy, real-life experiences that are engaging alternatives to online time.

Schools:

Schools are another party that can take several actions to help reduce teen social media usage and influence. Educational programs that build awareness of the problems can sensitize students to the downside of usage and reinforce messaging students may hear at home.⁴² The JED Foundation's Report on *How Education and Awareness Can Offset the Negative Effects of Social Media* draws on work from the American Academy of Childhood and Adolescent Psychiatry and espouses online media training in schools to help students "deconstruct what they see and become aware of how it's affecting them."⁴³ Schools can also build environments that favor face-to-face experiences and set up phone-free times and zones. Tian and Tian and Jinosta et al.'s research would support bans that reduce time on social media apps since they found time on the apps to be associated with body dissatisfaction and decreases in mental health well-being.⁴⁴ Finally, schools can provide support groups and peer mentoring resources as well.

⁴¹ Lee, Ellen, "The Best Parental Control"

⁴² American Psychological Association (APA). "Health advisory on social media use in adolescence." American Psychological Association. Last modified May 9, 2023.

⁴³ Kusner, Valerie. "How Education and Awareness Can Offset the Negative Effects of Social Media." The Jed Foundation. Last modified August 18, 2022. Accessed

⁴⁴ Tian Tian, "Research on Body Image Anxiety among Women," (51-57).

Teen users:

Finally, users of social media can help themselves. Many of these steps tie into recommendations for the other constituents, but this underscores the importance of partnership in solving this ubiquitous problem. Teens can seek out education and think critically about what they can do to improve their experience.⁴⁵ Properly setting privacy controls and actively managing feeds by unfollowing individuals or flagging certain content as uninteresting can reduce anxiety and social comparison.⁴⁶ Setting time limits and monitoring usage are prudent steps. Doing self-check-ins to monitor psychological well-being can lead to moderating usage or taking a detox period. If problems persist, seeking support should be viewed as a positive and smart action, not a badge of shame. Ultimately, making sure you have balance and a full and meaningful offline, real-life existence is essential.⁴⁷ There are many solutions the government, social media companies, parents, schools, and teen users can take to help solve the problems that come with social media frequency. The highest probability of success likely depends on contributions from each of these constituents. There is no likely single solution but rather a series of helpful acts.

Personal connection:

⁴⁵ Jiotsa, B. et al., "Social Media Use and Body Image Disorders," (2880).

⁴⁶ Marika Tiggemann and Amy Slater. "NetGirls: the Internet, Facebook, and body image concern in adolescent girls." *The International journal of eating disorders* 46, no. 6 (2013): 630-33. Accessed May 12, 2024.

⁴⁷ Haidt, Jonathan, *The Anxious Generation*.

I selected this subject because it is a topic that has been a material part of my life since I got my Instagram account in 7th grade. Social media is fun and allows me to stay current with today's pop culture and connect with my friends. But, it is addicting and can seem like an impossible habit to manage if you only want to derive the positive benefits without the disadvantages. Like the participants in the research studies, I have experienced some of the same self-doubts and anxiety. Looking back, I wish I had not started using Instagram when I was 13. During the first few years of my journey with social media, I was ill-equipped to handle it. I was one of the 14-year-old girls who fell victim to comparing myself to the perfect girls on my 'for you' page. I remember the stress I felt looking at classmates' pictures and wondering if I would come off as well when I posted pictures of myself. I spent hours reviewing photos from peers who used filters; they always appeared to have the perfect nose or the ideal body shape and weight, while I did not. I doubted myself and worried about how I would be perceived by others.

Fortunately, my journey with social media has matured and become more healthy over the most recent few years. My friends and I have been informed of the traps of social media and are on the lookout for manipulated images and people projecting false realities. We openly talk about some of the ridiculous things we see. Talking directly about social media with friends has helped us categorize the perfection on our feeds as humorous rather than a flawless ideal we need to emulate. We pulse-check our feelings with one another and support each other in person and over calls as well as online. We realize in-person friendships and experiences are what count most.

Nowadays, I can finally say I have a low social comparison type. I do not filter my photos. I'm comfortable with my body image and would expect and hope my friends approve of me for who I am, not how I look. For me, greater awareness of the harms social media can bring helped me start to see the online world differently. My parents, school, and friends reinforced this message and, as importantly, helped me build the initial layers of a foundation of self-confidence so that I could place less emphasis and feel less anxious about my online interactions with social media. As was the case with the participants in the second and third studies, more education and the benefit of being older have helped me be less susceptible to letting social media define my sense of self-worth.

I feel fortunate because I know many 17-year-olds are not yet in this place. I hope no young girl will ever have to go through the anxious times I have experienced and that many 17-year-olds still experience. By digging into this topic more extensively through this paper, I feel armed with more facts about the consequences but also the solutions to these problems so that I can hopefully be in a better position to help others, as well as myself. Social media is not going to go away so it is important that we learn to live with it and manage it versus being controlled by it. Advances in AI will only make manipulations more frequent and real, and easier to post. We need to arm and protect our future generations with some of the helpful concepts covered in this paper so our future leaders do not start their adulthoods with a crisis of confidence.

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