

The Rise of AI Beauty Filters and Their Psychological Impact on Body Image and Self- Esteem: A Systematic Review

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Abstract

The psychological impacts of the use of AI beauty filters on users' body image and self-esteem are not adequately cohesive, as they are commonplace on Instagram, Snapchat, and TikTok. The purpose of this systematic review is to compile empirical research investigating the effects of the use of AI or augmented reality beauty filters on body dissatisfaction, self, esteem, self, objectification, social comparison and mental health outcomes from 2010 to 2025. In accordance with PRISMA 2020 guidelines, several databases were searched and because of the diversity in designs and measures, a narrative synthesis of studies was conducted. The results consistently point to the fact that people who often use filters and thus get exposed to the idealized, edited images of themselves and others experience body dissatisfaction, have lower self, esteem, suffer from appearance anxiety, and, moreover, engage in upward appearance, based social comparisons more strongly, which especially happens in adolescents and young adults. Moreover, the fact that filters often have very limited yet euro-centric parameters that can inadvertently lead to higher levels of internalized racism and colorism among nonWestern users are also acknowledged. The results suggest that, when interpreted in light of the aforementioned well-known media effects and body image theories, the use of AI beauty filters accentuates the discrepancy between what is and

what is not considered attractive, to such an extent that cosmetic intervention to “fix” the perceived difference is becoming increasingly accepted as a solution to reduce that difference. The review highlights the importance of culturally responsive filter design, greater clarity in filter regulations, and specific digital literacy and body image interventions. AI beauty filters can be used to create this phenomenon of self objectification, resulting in what has been described as a "Beauty Void. This phenomenon of self objectification can be created through AI beauty filters, leading to what has been termed a “Beauty Void.”

Keywords: AI Beauty Filters, Body Dissatisfaction, Self-Objectification, Social Comparison, Digital Literacy

1. Introduction

With the advent of digital technologies in the beauty industry, beauty filters powered by AI have come into use on social networks, making them popular (Ramonita, 2025). These filters have seamlessly become a part of both adolescents' and adults' online routines (Oh & Park, 2023), enabling the ability to change facial and body features to align with the prevailing beauty ideals. Some of the widely-used apps with AI beauty filters include Instagram and Snapchat. More than 400-million people use snapchat filters every day and Meta has reported that more than 600-million people have used Meta's filters on Facebook and Instagram (Generator, n.d.). Filters started with some really silly fun, such as a puppy dog lens on Snapchat, one of the first to gain popularity back in 2016. However, as its use has increased, there have been concerns about the potential impact of these filters on the body image and self-esteem of those using them (Isakowitsch, 2023; Herranz, 2024).

More recent research has also revealed that the use of filters not only changes the appearance of people in these platforms, but also has an impact on how they see themselves and could even contribute to the normalization of more extreme beauty modification techniques such as cosmetic surgery (Dijkslag et al., 2024; Andrada, 2025). With these factors in mind, it is crucial to understand the negative impact that these AI beauty filters can have on an unrealistic body image and self-confidence, ultimately impacting mental health. This is a systematic review that combines the results of various research studies to check the effects of AI beauty filters on body image and self-esteem, especially in depth.

As a result of the psychological mechanisms involved in it, self-objectification, social comparison, and the self consequences of self-presentation online. Through this, the review is expected to provide a more comprehensive understanding of the prevalence, theories, and potential implications of the use of filters in digital media context.

2. Background of Study

Understanding AI Beauty Filters. What is meant by AI Beauty Filters?

AI beauty filters prove to be digital filters utilizing artificial intelligence to automatically edit pictures in real-time. Such tools are aimed at making various changes to the appearance such as smoothing skin, changing the shape of face elements (e.g. making noses look thinner or faces more symmetrical) and even changing body figures (Schroeder & Behm-Morawitz, 2024; Gulati et al., 2024). The essence of such filters is to distill beauty into a hyperreal expression of beauty as defined by today's beauty standard. Thus, the application of these tools has turned into a crucial aspect of the picture perfecting procedure on social networks (Calderia et al., 2018).

Over the last few years, artificial intelligence (AI) has been adopted within the social media landscape with great success. One of the most prominent and impactful uses of it is the AI beauty filters which are a real-time image editing tool that adjusts and alters facial and body features to conform to the current beauty standard (Eliass et al., 2017). The filters are included as part of camera effects in applications like Instagram, Snapchat and Tik Tok, making the ability to enhance the appearance of images and videos immediately accessible and popular, especially among younger users. According to recent reports, more than 400 million people are using Snapchat filters daily, but Meta has stated that more than 600 million people have used its filters in the Facebook and Instagram platforms. Digital filters were initially designed with the intent to provide fun and play, like the hugely popular dog-face filter from Snapchat in 2016 – the first one to be widely used (Calogero, 2012; Swami et al., 2010; Javornik et al., 2021).

The rise of digital beauty ideals and social pressures. The emergence of digital beauty ideals and social pressure.

Such filters tend to support a homogenous and ideal standards of beauty based on smooth skin, symmetric features, lighter skin tones and thinner face structure. Exposure to and use of these

perfect images creates a small amount of push to fit in (Rowland, 2022). This can lead to dissatisfaction with their appearance as users edit their appearance in real-life but a different appearance to the digitally altered ones. It is increasingly feared that such an invasive appearance changing habit as cosmetic surgery, extreme dieting or dermatological procedures may appear commonplace and even desirable due to the constant exposure to retouched images (Saloni & Gaurav, 2024).

This virtual to real shift is what could make the AI-based beauty standards harmful. When they notice that there is something that does not match up between what they are and what they want to be, disappointments and dissatisfactions set in as they struggle to achieve the beauty ideal they have set for themselves (Lo Destro, 2024). Similarly, when one's perception deviates from what they think they look like – their perceived judgment or consequences can trigger negative emotions and the formation of anxiety (Cowan et al., 2021; Maqsood & Sangra, 2021). The study showed that beauty filters can have negative effects on self-image when users use Snapchat beauty filters, which may cause a feeling of disconnect from their current self and the appearance of the filters. Such contradiction may provoke a series of negative emotional reactions (Razali & Ramonita, 2025).

The psychological impact of using a filter.

However, as there is a growing amount of research that suggests the use of AI beauty filters can be correlated with adverse psychological effects such as: Body image dissatisfaction, Reduction in self-esteem, Increase in self-objectification and acts of social comparison.

These effects are observed in adolescent and young adults primarily in females, but not exclusively (Perkins, 2022; Szambolics et al., 2023). AI filters are increasingly being utilised, and young people are once again facing a tough challenge as they find themselves continually comparing themselves to impossible standards. This process can lead to a loss of self-esteem, at some point. Therefore, the larger context of impact on mental fitness and wellbeing needs to be explored in relation to AI produced images and their nuanced impact on self-image (Cohen et al., 2017). Filters can also lead to misconceptions about beauty among users, and to external validation, such as likes or comments (Poppescu, 2012).

Research has been conducted on the impact of the body images produced with the help of AI and these studies indicate that there is a potential impact on the formation of body dissatisfaction and disordered eating behaviors when the body images are encountered frequently. (Mohammed & Badr, 2024). Along with hyper-idealized images of beauty and success, these filters can give special problems in the area of self-image. This can, therefore, negatively affect a person's body image and overall mental health (Marie, 2022; P & T, 2025). By elucidating the effect of AI-generated content on body perception, it will be possible to create more effective interventions to help people have healthier self-esteem in this ever more digital environment.

There is a developing literature on the subject, but the current evidence is scattered across a range of disciplines, including psychology, media studies, gender studies and public health. It is crucial to note here that summarizing this knowledge, identifying the dominant psychological mechanisms and understanding the extent and size of the problem (Benamor et al., 2024; Riccio et al., 2024) require a systematic approach. The review will offer a unified idea of the effects of AI beauty filters on the self-image and mental health outcomes in a variety of populations.

3. Significance of Study

In the era of self-presentation and self-image digitalization becoming a key element of identity and social recognition, AI beauty filters exert great pressure on how people look and their mental health (De Vaate et al., 2018; Alsaaggaf, 2017). Their smooth operation in the daily use of social media, especially in adolescents and young adults causes imminent worry over their effects on body image and self-esteem (Cruz, 2018).

The present study has significant implications in the following ways. Firstly, it provides a summary of the effects of AI beauty filters on intangible psychological phenomena such as self-objectification, social comparison, and appearance anxiety, which are not covered in previous literature. Second, it deals with age and gender related variation giving us understanding of who can be the most vulnerable population? Third, this review is relevant to a broader context of the impact of digital tools on attitudes and behaviors related to health because it examines the link between filter saturation and normalisation of invasive cosmetic behaviours.

In general, the results of the presented systematic review can provide a basis for the development of interventions, policy recommendations, and educational campaigns to promote digital media literacy and psychological resilience in the filtered world.

4. Research Questions

1. How people who use social media like ‘creators’ typically use AI beauty filters?
2. Why is there a connection between AI beauty filters and perceiving one’s body?
3. What is the impact of the AI beauty filter on people's level of self-esteem?

5. Literature Review

The complex tools of machine learning and facial recognition and have also developed as tools far beyond minor adjustments of the visual image to creating hyper-idealized virtual appearances. These are more accepted uses, especially among teens and young adults, and researchers began to wonder about the role these devices play in reinforcing unattainable beauty standards; promoting self-objectification; and contributing to body dissatisfaction. This review of the literature examines the existing pool of research on AI beauty filters, including their technical development, psychological effects, and social consequences, paying particular attention to effects of self-perception, gender disparities and regulatory issues on their development. Just as the research areas of psychology, media and digital technologies are integrated, the present review brings together the most interesting trends and gaps in research that characterize this new field of study.

Technical Evolution of AI Beauty Filters

The transformation of the AI beauty filters as a new gimmick to strong real-time image editors resembles the current speed of technology development over the past years. They first started as mere overlay filters, such as a pair of dog ears or a crown of flowers, performing some low-end forms of image processing, such as blurring and tinting the appearance. The principal objective was to entertain, and they let users do something funny to their selfie, which can either be to enhance or to distort (Javornik et al., 2021). However, the nature and role of these filters have

become more complex with the evolution of the social media as an arena of proper and maintained self-representation.

Contemporary AI beauty filters are much more than some sort of digital gimmick. They are based on advanced machine learning algorithms, particularly convolutional neural networks (CNNs) that are highly accurate at recognizing the facial features. These systems can extract dozens or even hundreds of facial features such as distance between eyes, shape of lips, jaw line (face) shape, etc. (Piera, 2021). Both the mapping of face thinner and skin tone adjustment to more realistic lighting colour, eye size correction and slightly modifying nose to make it more symmetrical will be possible at all times without breaking the symmetry of the face.

Programmers began to incorporate Generative Adversarial Networks (GANs) into these filters recently. Recently, Generative Adversarial Networks (GANs) were introduced by the programmers into such filters. GANs are pre-trained with massive amounts of human faces and have the capability of extracting patterns about what the society defines as beautiful. This allows them to alter a face in any way and enhance it based on the guessed attractiveness score as opposed to the initial face effects. As an example, GAN-enhanced filter could smooth the skin, but modify the structure of bones slightly or the color of the skin to make it correspond to beauty standards, all this in a manner that would seem realistic and seamless (frontiersin.org, 2023).

Augmented Reality (AR) has also helped to drive technological change. With the integration of face tracking and augmented reality overlaid images, Instagram and Snapchat have provided their users the opportunity to see how they'll look on their photos and videos before even taking the shot. These filters are reactive – reacting to expressions, head movements and the lighting, further adding to the authenticity of the changes.

What emerges is a musical tool that goes far beyond photograph supplements, and redefines human perception. Previously these types of filters were a playful enhancement to digital communication but are now accepted “beauty norms.” The more realistic and subtle they become, the more psychological power they are able to wield on the consumers- often without them realizing at what level they can do so, and the more important they become in shaping their sense of self and identity.

From a sense of Idealized beauty to Filtered appearances

It would be important to note the reinforcement of an ideally narrow and homogenized vision of beauty that is one of the most notable effects of using AI beauty filters. These filters are not isolated; they tend to uphold the standard beauty norms that include fairer skin tones, an even skin tone, larger eyes, a more prominent chin, and an imperfect face (Riccio et al., 2022). The users are not only enhancing their images with these filters repeatedly but they are also unwittingly developing themselves in becoming internalized as they are described as “ideal”.

With time these filtered images start influencing the perceptions of the users about their depiction of something to be normal or desirable. People who follow Instagram, Snapchat, Tik Tok and get caught up in the airbrushed faces will have a twisted sense of what is truly beautiful in this world. Especially concerning is that younger people and adults begin to forge their identity and stifle their self-awareness (Wang et al., 2020). When all the pictures on a feed feature a fantastically smooth skin or a symmetrical face that can be contoured to perfection, natural beauty might begin to seem wrong - even embarrassing.

What is worse, the change of playfully augmented appearance towards aspiration appearance is disappointing. A study has revealed that when users view a lot of filtered images than they view unfiltered images, they get discontent with their unfiltered images after a while (Alsaggaf, 2021). The dissatisfaction can cause a feed-back in which people begin to prefer their "faux-liked" self and only post images that he or she has edited. This takes all the creativity out of filters as they become tools for self-correction.

The change is reflected on the perception of beauty in others as well. Most of the profiles have been edited to a similar standard, with the eyes being lighter, lips being more exaggerated, face slimmer, a trend towards standardising crazy internet. Whereas Individual differences that may have been the basis of individuality can start to feel lacking when they don't align with this digital standard. The impact is quiet yet far reaching: beauty is less of an expression but depending on conformity.

It is also important to note that many of these criteria for ideal beauty are Eurocentric or commercial, and may not apply to those from other ethnicities or cultures (Lo Destro, 2024). As a

result, these filters can result in a general issue of exclusion and culture destruction, and not only on the individual's self-esteem.

Psychological Impacts – Body image and self-esteem

After the surge in popularity of this kind of filter, the cognitive effect of the AI beauty filter has come into light, particularly on the psychological problems of body image and self-esteem. Purchased as non-threatening or even helpful technology, the evidence is building to show that these filters may be leading to a growing cohort of emotional and thinking issues in some particularly at-risk young people, at least in the longer term.

Firstly, filters give temporary overall self-confidence. In many cases individuals who use make-up to alter their appearance to represent beauty ideals which are popular in their community of users are likely to express feeling more beautiful or camera-ready (Szambolics et al., 2023). This quick satisfaction however can end up being a costly endeavor. The filtered photos are now the standard image of self-representation, but some individuals may grow uneasy with or discontent with their “real” appearance. Especially after the use of filters with two images side by side, video calls and mirrors (Alsaggaf, 2021).

The phenomenon is consistent with the notion of self-discrepancy theory (SDT) related to the acquisition of negative emotions when people's own image falls short of the inner image, their own ideal self (Fox et al., 2020). With AI filters, the divide between reality and appearance is magnified, making it feel as though it's near and familiar to the image that's considered the 'ideal' version of 'this particular self,' and it's just a swipe away. Thus, the users begin to feel that their “real” face is missing and complete, and that it is flawed, lowering their self-esteem over time.

The problems become even more critical when it comes to groups of adolescents and young adults, where young people already have to deal with the uncertainty of identity and the need to compare themselves with others. Subsequently, being exposed to filtered faces (both their own and those of others) several times can develop a warped conception of what is perceived as normal, resulting in the development of body dissatisfaction as well as appearance anxiety, and even depressive symptoms (Perkins, 2022; Mohammed & Badr, 2024). This dissatisfaction can be grown into an unbalanced diet in the most extreme cases or obsessive editing of their lives or even the possibility of cosmetic surgery to make their actual image match their image online.

The other issue is that it's dependent on outside validation. Numerous users start identifying their self-value with the likes, shares or a compliment on a photo that has been filtered. This has led to a cycle of self-objectification, whereby people are continually observing and assessing how they look as opposed to more thorough or meaningful assessments of self (Cowan et al., 2021). This reliance on external validation could have a negative effect on one's self-esteem in the long-term and worsen the insecure tendencies.

In particular, there is a difference in the psychological impact of filter use. Young women and girls appear to be more prone to coping with the impact of social media; the overall trend is that males, non-binary individuals and users with varied backgrounds are impacted by similar issues of digital body dissatisfaction (Steinsbekk et al., 2021; Rios et al., 2018). But, despite these effects being increasingly recognized by some of these filters' users, many continue to use the filters daily without even realizing the far-reaching effects they may be having to their mental and emotional health.

Social comparison theory and the self-objectification

The use of AI beauty filters does not only change the perceptions of self but also increases the social comparison and surface-level judgmental tendency. In an augmented universe where images appear everywhere, the user experiences a world full of slick and good images of other people and it is harder and harder to differentiate between the real and the augmented. This makes social comparison tendency greater; their value is compared with the filtered value and usually they are not satisfied with their appearance and depreciate themselves.

The social comparison theory states that people tend to compare themselves to others, especially when appearance is a key component to identity (Vogel & Rose, 2016). Instagram and Snapchat are social media networks that are extremely visual and thus provide an environment in which comparative judgment is based on looks. People might begin to think that they are not good enough if they don't use the filter because there is a lot of content that is selfie perfect, with skin smoothed out, teeth whitened and facial contours emphasized. These comparisons upward are likely to cause a decrease in body satisfaction, envy, and engage in negative self-assessment (Riccio et al., 2022).

According to Badass Beauty, the worst part of beauty filters is they aren't just encouraging people to compare themselves to other people, they are also getting people to compare themselves to their

filtered version. This brings out a paradox where the people make and at the same time suffer idealized imagery. The more it's compared to how people look, the more entrenched people become in the use of such filters. When users see their filtered (and hence more symmetrical, glowing, traditionally pretty) face, it is even more difficult to embrace the appearance they see in the mirror. It also makes people think that it is essential and that it is easy for them to change (or, for perfectionists, be changed) into the second one, which then diminishes their body confidence (Zhao et al., 2018; Alsaggaf, 2021).

But this visualization, along with promoting ideal images at all times, also plays a part in self-objectification, a psychological mechanism, leading to people to begin seeing their bodies as objects in the eyes of other people. The benefits from social media communications tend to be in visual form (likes, shares, and compliments) that leads to conditioning with social media users putting an emphasis on appearance and not other characteristics like personality, intelligence or talents (Cowan et al., 2021). The trend is more evident in young women who are brought up to value their appearance. However, the research recently shows that men and gender diverse are increasingly facing the same pressure, in image-filled platforms (Steinsbekk et al., 2021).

It results in self-creating surveillance – the consumers are constantly vigilant about their image and change it to meet the perceived standards. It may seem a little habit, but it is emotionally exhausting and can lead to an increase in anxiety, body shame and a decrease in psychological resilience (Calogero, 2012). Besides, the reinforcing effects of social acceptance, attention and perceived popularity as rewards to living into such narrow categories of ideals make the application of filters, even when users are cognizant of the emotional costs of this practice, even more ingrained.

Hyper-edited looks are more a product of AI filters in a broader cultural understanding where the integrity of facial features, skin color, and texture are questioned. This doesn't just force people into conforming with norms; it also excludes those who either don't fit in or can't fit in to these normatively artificial ideologies of beauty that have been codified.

Address cultural and gender-specific factors. Take into account cultural and gender-specific factors.

While it is understood that there are psychological impacts of AI beauty filters in general, not everyone is equally impacted. The factors of cultural background, gender identity and societal

norms are especially significant in understanding the nature of these interactions and how much impact it has on the person. There is a growing body of literature which is skeptical of the imposition and reproduction of beauty ideals that may exclude and/or marginalize the users of such tools that are diverse ethnic, racial and gender groups.

Most of the AI beauty filters are developed using the computational model trained on the Eurocentric beauty standards, which include fair skin, thin nose, big eyes and symmetrical face features. In non-Western contexts, these filters will often be used to make the skin tone of their faces look more like a standard, white-skinned face, or to alter ethnic characteristics of their faces (or even change their face proportions) to look more like a homogenized ideal (Riccio et al., 2022; Lo Destro, 2024). It can give a hint that looking natural isn't desirable, and can contribute to internalized racism, colorism, or, even cultural shame, for the users of such a product, specifically for Asian readers, black readers, and indigenous readers.

Gender difference also makes it a problem to this issue. While the majority of research has focused on women, who statistically use the beauty filters or feel less satisfied with their bodies, the new evidence suggests that men and gender diverse are interested in these tools as well (Wang et al., 2020; Rios et al., 2018). For just one example, filters used by male users could be designed to reinforce unrealistic expectations of manliness, such as a sturdier jawline, or muscularity, by manipulatively fostering this impression. The users who are not binary/gender conforming are not represented in the filters available and are either expected to conform to the binary filter or they do not use filters at all.

In other cultures, filtered self-presentation is highly related to social acceptance, and even modesty requirements. In Saudi Arabia, women make use of filters to traverse about cultural norms on the issues of appearance and visibility in public (Alsaggaf 2019). Beauty filters are a double-edged sword in these settings as they give users freedom in how they look online, but also enable the reinforcement of societal ideals of beauty.

Another important factor is age. Younger people are more vulnerable to the beauty ideals portrayed online, particularly teens as they are developing their identity. They are, therefore, more likely to develop body image problems, appearance anxiety and validate their value in a filtered image (Steinsbekk et al., 2021). Older people will also be using filters differently at times, though –

maybe with a certain jocularity or novelty – but the psychological effects of idealized comparison will not disappear for the older person, especially when it comes to dating or socialising.

Although these filters are commonly used, the majority don't realize that there is a bias in them. Because beauty is universal, and beauty ideals have spread around the world, the internet space offers an ideal opportunity in which beauty appears to be the same, even though there is significant variation in the human form.

Indeed, beauty filters are social and cultural, and reflect and reinforce existing beauty hierarchies between different racial, gender and social norms. Addressing these disparities requires more inclusive design strategies, more diverse training datasets and greater media literacy on the part of users. Sadly, these digital instruments can exacerbate insecurities of identity among a wide range of users if not properly managed.

To what does the state respond to digital literacy? What does the state respond to in terms of digital literacy?

But with greater understanding of the psychological and social impacts of AI-driven beauty filters, policy makers, researchers, and technology companies are beginning to debate a response to their harm. Still, responses are piecemeal and reactive, tending to fall behind the speed of technological innovation. Both regulatory transparency and digital media literacy are very interesting fields of focus, the former aimed at helping users receive the filter rather than receive it and internalize it, the latter aimed at helping them to understand how to be a critical consumer of digital media.

Over the past decade or so, several countries have taken steps carefully towards passing laws to regulate digital image manipulation. The United Kingdom and France, for example, have implemented measures to require influencers to disclose when the images they have posted are digitally manipulated, such as when they show contouring lines on bodies or lines on faces (Cruz, 2018). Likewise, Israel enacted laws compelling overly manipulated photos to have a prominent disclaimer. These campaigns are a welcome acceptance that edited images, especially when used out of context, can encourage unrealistic expectations for looks and can contribute to mental health problems.

Platforms are beginning to explore options to promote authenticity or at least reduce pressure on platforms, as the case may be. For instance, Instagram tried a “like”-less mode, so there is no more

an obsession with popularity. Others are testing the filter transparency features, which will let anyone know what changes are being made—even offer unedited versions on the side. However, these changes are not widespread yet, and the majority of social media platforms still have a lot of content that is obviously geared toward appearances (Alsaggaf, 2021).

Along with policy initiatives, mental health experts and practitioners stress the importance of digital media literacy as a barrier to protection. Educating consumers, especially youth, on the work of filters, the concept of beauty they reinforce and how they affect their self-image could help contribute to a critical perspective and reduce internalization of unattainable beauty standards. Knowing that there are many photos that they are seeing on the internet that have been edited or are filtered will make them less likely to compare themselves in an unreasonable way, or strive for an unattainable standard (Benamor et al., 2024).

There are still significant disparities in teaching and oversight. Most legislation focuses on advertising situations and don't deal with the occasional filter use and application by the general public. Similarly, the vast majority of digital literacy programs are only a starting point or, in many cases, confined to the classroom and do not provide opportunities for older adults to critically assess filtered information. Additionally, the rapid advancement of the deepfake technology and the high level of realism of the filters makes it more difficult to draw clear lines between the manipulated images and the real ones.

Collaboration among disciplines will be necessary to overcome these problems. To ensure that users are not hindered from creativity, inclusive frameworks must be developed by researchers, policymakers, educators and tech developers. The notion of regulation is not just about what to regulate but also about design choices, such as offering different types of filters, reducing training data bias, and explicitly and responsibly labelling AI-generated content.

5. The Integrated Theoretical Framework

This current study is based on the following theoretical frameworks that show the effect of the beauty filters on body image and self-esteem. We need to know where all the bodies are buried, in order to understand where we are going—the evidence generated by all those seemingly innocent technologies that remake our inner landscapes.

Self-Effects Theory provides just this lens, suggesting self-beliefs and self-concepts are not solely a function of introspection, but rather as a result of people's own thoughtfully considered behaviours, especially behaviours that they replicate and are witnessed by others (Valkenburg, 2017). Users repeatedly use beauty filters and are not just playing with pixels on a screen but creating a non-verbally communicated message about their true selves, one that grows in force, "The natural self isn't enough for public consumption" (Prochazka, 2024).

Through repetition over time, people internalize the ideal which becomes more and more different from the one that faces them in the morning mirror. When the filtered "ideal" self is contrasted with the offline "actual" self, the resulting tension, which is cognitive dissonance, can feel unpleasant and trigger feelings of shame, anxiety or a lack of self-worth (Winter et al., 2023). In order to resolve this dissonance, people must choose between becoming more dependent on, or more committed to, digital enhancement or to physical changes and transformations, such as dieting or cosmetic surgery and other behaviors aimed at making them look better (Quinn et al., 2006). In this view, the theory of self-effects sheds light on how the mundane, routine act of using a filter slowly and over time become a tool for building self-esteem, body satisfaction, and self-identity in our increasingly digital age.

A darker shift is illuminated by the theory of self-objectification, which was originally proposed by Fredrickson and Roberts (1997): the change from lived body to an image constantly subjected to scrutiny. AI beauty filters are catalysts to this process in the highly visual amphitheaters of social media, encouraging users to look over, edit and enhance their faces and bodies prior to sharing them with an audience that is both imagined and real (Moradi & Huang, 2008; Tiggemann & Slater, 2014).

While the process of editing the body to an algorithmically perfect form, smoothing the skin and reshaping faces, emphasize a problematic notion; that physical appearance is the key currency for identity and social worth (Fredrickson & Roberts, 1997). This evaluative gaze becomes internalized by the user, and he or she starts to watch his own body from a third-person point of view, engaging in what the researchers call "chronic body surveillance," constantly assessing his or her body against the standards that were never intended to be met by flesh and blood. The ongoing self-monitoring comes with a price: greater body shame, higher levels of anxiety, and a

reduced ability to experience life outside the looking glass (Carrotte & Anderson, 2018). The self-objectification and the beauty standards reinforced by AI are especially powerful for teenagers and young adults, whose self-esteem is still being formed and is highly susceptible to the influence of social media likes and comments (Jones & Griffiths, 2014).

The theory that this study was based on was Social Comparison Theory (Festinger, 1954), which suggested that people make evaluations based on comparison with other people. With AI, humans can have ideal and beatified versions of themselves which satisfy their need to feel better than others. Social comparisons in the form of physical appearances, and beauty standards lead towards low self-esteem, body dissatisfaction and compromised state of mental wellness.

Next, Self-Discrepancy Theory (Higgins, 1987) concerns with the difference between an ideal self and an actual self. AI filters produce the perfect photos of the person, leading to a lack of satisfaction with oneself. The more often filters like these are used, the bigger the gap becomes and people are craving for an ideal self. When people do not reach the ideal self in reality, due to their constant dissatisfaction and frustration, they suffer from low self-esteem, shame and appearance anxiety.

The “Sociocultural Theory of Body Image” (Cash, 2004) revealed that there was a definite impact of media and culture on the perception of body image. Social media apps and AI platforms are perpetuating digitally created beauty ideals, while individuals internalize these unattainable beauty ideals, further exacerbating the gap between unrealistic ideals and the true appearance comparisons and leading to negative body image, body esteem and psychological distress.

Finally, theories were proposed that indicate that people are likely to internalize illusory ideals of beauty through AI beauty filters and engage in social comparisons. The comparisons further extends the distance between ideal self and actual self, which contributes further to the negative consequences for people's psychological well-being

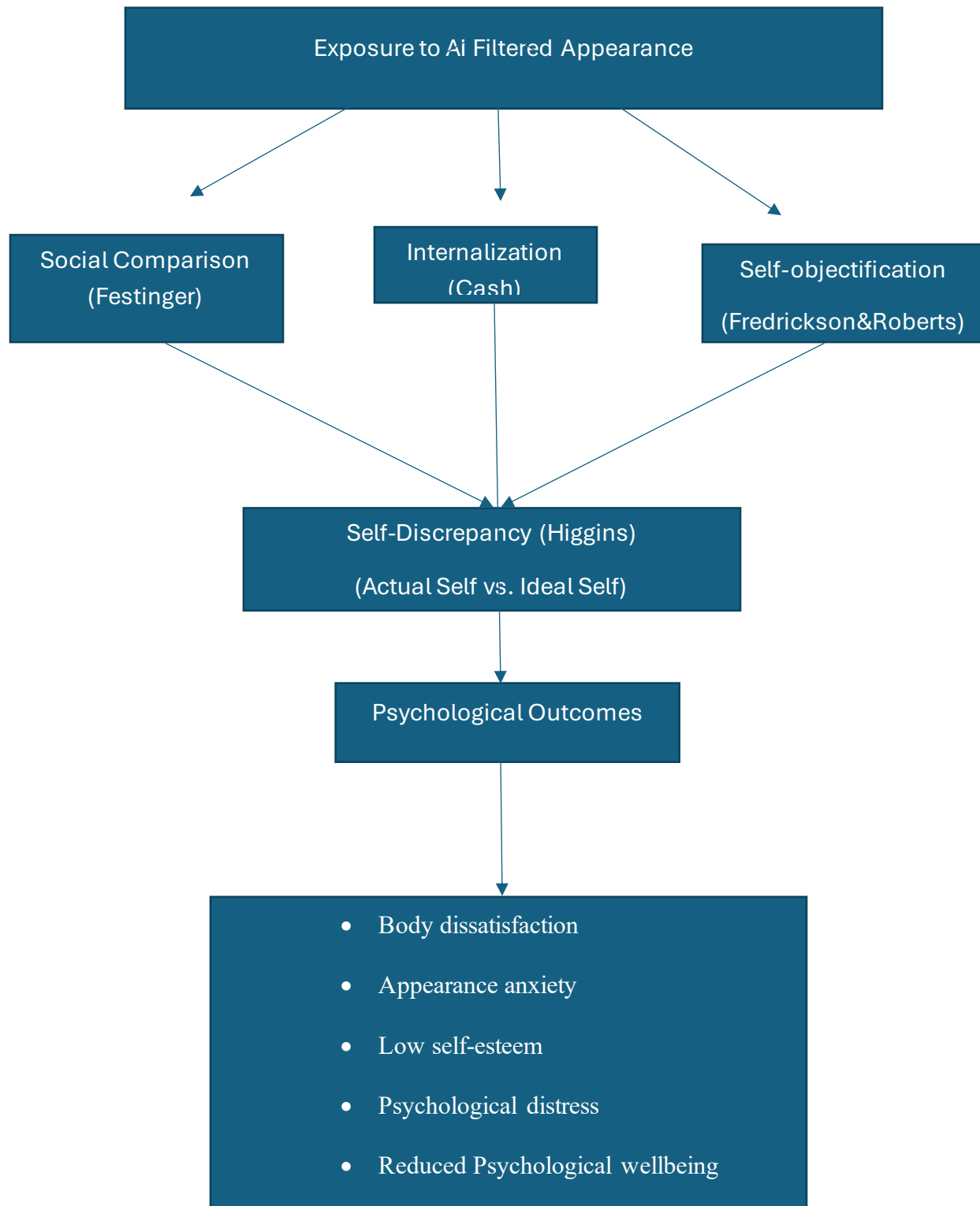


Figure 1: Integrated Theoretical Model of AI beauty Filter Use

6. Methodology

The systematic review followed PRISMA 2020 guidelines, which detail the transparency and methodological rigor in reporting a systematic review. The goal was to bring together the fragmented body of empirical research related to the psychological effects of AI cosmetics filters, focusing on body image, self-esteem, self-objectification, and social comparison processes, as reported by Page et al. (2021). We searched across the following databases: PsycINFO, PubMed, Scopus, Web of Science and Google Scholar for studies published from 2010 to 2025, a period that aligns with the introduction and widespread adoption of smartphone-based social media and real-time AI filters. The terms in the search were Boolean operators that used keywords such as "AI beauty filters", "AR face filters", "body image", "self-esteem" and "social media" to obtain the highest accuracy and recall (Tugwell & Tovey, 2021).

1215 records were found by searching in databases and by manual reference screening. Following the deletion of duplicates, 900 records were screened for titles and abstracts and 250 studies were selected for full text assessment. After the evaluation of eligibility, 205 studies were rejected because they did not have empirical data, were not relevant to the impact of AI beauty filters or psychological effects, or lacked clarity in their methodologies. In the end, 45 studies were used in the final systematic review. A meta-analysis was not possible because of differences in study design, measurement, and reported outcomes and the results are given in narrative form. Study characteristics, study sample demographics, filter type, research design and the main psychological outcomes were extracted from the data. Sorting results by thematic domains, corresponding to the theoretical framework of self-effects, self-objectification, and social comparison (Ahmmad et al., 2025). Sampling clarity and measurement validity were used as indicators of study quality to interpret the evidence strength, but they were not exclusion criteria.

As shown in the figure 2,

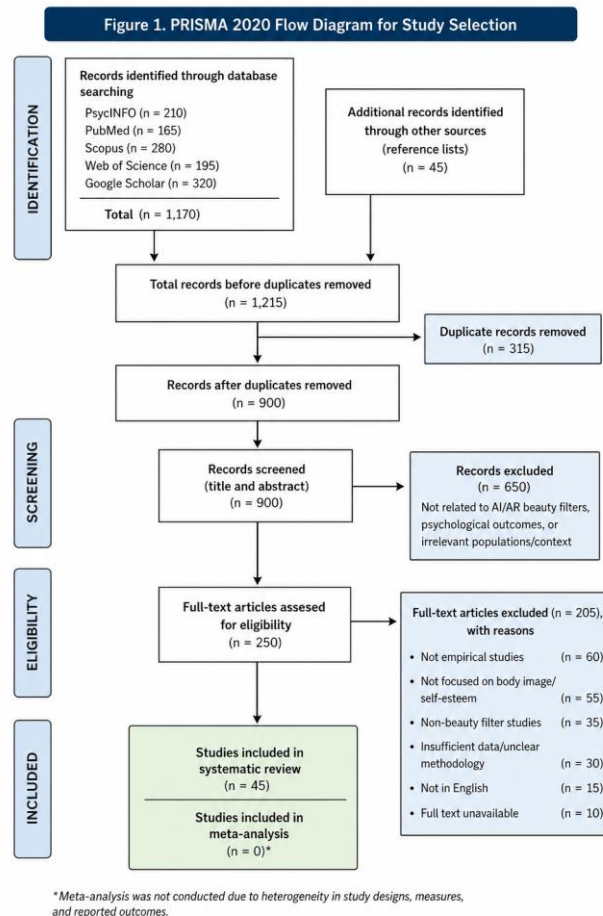


Figure 2

The systematic review followed PRISMA 2020 guidelines, which detail the transparency and methodological rigor in reporting a systematic review. The goal was to bring together the fragmented body of empirical research related to the psychological effects of AI cosmetics filters, focusing on body image, self-esteem, self-objectification, and social comparison processes, as reported by Page et al. (2021). We searched across the following databases: PsycINFO, PubMed, Scopus, Web of Science and Google Scholar for studies published from 2010 to 2025, a period that aligns with the introduction and widespread adoption of smartphone-based social media and real-time AI filters. The terms in the search were Boolean operators that used keywords such as "AI beauty filters", "AR face filters", "body image", "self-esteem" and "social media" to obtain the highest accuracy and recall (Tugwell & Tovey, 2021).

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