

The Impact of Short Video Content on Users' Self-Perception of Body Image and Appearance: An Empirical Study

Yuetong Zhang^{1*}, Ziyue Wang², Simon Li³, Yidan Chen⁴

¹*Art and Science, University of Toronto, Toronto, Canada*

²*Journalism and Communication, Anhui University, Hefei, China*

³*College of Letter and Science, University of California, Santa Barbara, USA*

⁴*Kunming Rain Town School, Kunming, China*

**Corresponding Author. Email: zoezyt49@gmail.com*

Abstract: At present, short video platforms are becoming increasingly popular, which has gradually affected many audiences' cognition of life and self. This study investigates how short video platforms affect the public's attitudes towards their own appearance and body image, focusing on the perceptions and behaviors of a diverse sample of individuals who are primarily composed of individuals. The survey found that although beauty and fashion are not the top concerns for all users, users still focus on the person's appearance and body image when watching unrelated videos. This suggests that users may be unconsciously anxious about their appearance, which leads them to focus more on facial and physical features than on the core of the video content. Women show higher attention in the Fashion & Beauty, Culinary & Food, and Travel categories and compare themselves more often. But the rest of the users reported that they don't easily succumb to popular aesthetic standards, and that social media use moderately impacts mood. Analysis revealed gender disparities, notably with female users displaying heightened interest in fashion, beauty, and self-comparison behaviors. The study acknowledges limitations in sample size and demographic focus on Chinese-speaking populations, limiting broader applicability. Methodologically, it relied on self-reported data due to challenges in anonymously tracking user behavior across platforms, occasionally causing respondent confusion despite efforts to clarify survey wording. Future research should explore male users' experiences and how short video platforms affect self-awareness of facial and bodily features. This study advances understanding of digital media's impact on body image perception and calls for further investigation across diverse demographics.

Keywords: short-video platforms, body image, appearance perception, user behavior, gender differences

1. Introduction

In recent years, short video media has become the most important medium for human beings to obtain information, which also means that short video has shaped a new media ecology. How this new technology shapes our perception, cognition, and behavior is a topic worth exploring. Obviously, the rise of short video media has reshaped our perception and cognition. With its extremely brief and intuitive characteristics, a large amount of information can be spread, and users can easily convert

news, education, entertainment, and other aspects of content. It is dominated by visual culture, making humans more and more inclined to understand the world through images and videos, which is largely different from the previous written and spoken culture. At the same time, it brings a lot of fragmented information so that users can quickly understand and absorb information in a short time. These characteristics of short video technology will greatly change people's way of thinking and cognitive mode.

Appearance and body self-recognition refers to an individual's awareness and perception of their physical appearance, shaped by cultural, social, and personal influences. Factors such as cultural standards, media portrayals, social interactions, and personal experiences, including traumas or affirmations, significantly impact body image. Additionally, psychological factors like self-esteem and mental health play crucial roles. Backgrounds, including cultural, social, and personal histories, affect these perceptions, as different cultures and socioeconomic statuses influence beauty standards and resource access. Positive reinforcement or criticism during upbringing also shapes body image. Understanding these diverse influences is essential for empathetically addressing body image concerns.

Platforms like TikTok, Douyin YouTube Shorts, Bilibili and so on have millions of users worldwide. It is crucial to Understand their impact due to their extensive reach. When we do the discussion at first, everybody will look at the short videos every day, which shows how popular and extensive influence those platforms have.

Then we came to the social considerations; during our discussion process, most of us found that the image on a short video has some kind of effect on us, especially the girls. for example, there are a lot of influencers on Douyin who are really thin, and most of the people in the comments said how beautiful she is and how her body looks.

When we look at those videos and comments, we will have the thoughts of somebody and appearance dissatisfaction. So, we want to investigate how that content influences people. Is it all negative, or does it still have some positive influence or no influence on people?

Then we come up with our research question:

Our objective is to investigate the influence of short video content on users' appearance and body self-recognition. Then we through the methodology of surveys to collect some data from users about this topic from different demographics.

And after we gain the data results, we can find some relationship between the short video and people's body and appearance self-recognition.

2. Literature review

2.1. What are the definitions and influencing factors of appearance & body self-recognition

The study of the human mechanisms of self-recognition elucidates how the human sensory signals, that is, visual, tactile, and proprioception, are integrated and essential for self-awareness [1]. According to Marc Jeannerod, A person rightly feels the physical presence and maintains a stable sense of self due to this integration. He highlights that self-recognition is not an isolated cognitive function but rather a holistic process involving multiple sensory inputs. The neural basis for this involves areas such as the right hemisphere's temporoparietal junction and the medial prefrontal cortex that are activated during tasks involving self-recognition. He also emphasizes the role of mirror neurons, which help in mimicking and understanding others' actions, thereby aiding in self-other differentiation. This distinction provides the core of empathy and social interaction, making self-recognition a pivotal process in human cognitive and social development. Physical self-awareness is subject to powerful transformations through self-objectification, appearance anxiety, internal motivation, internal perceptual awareness, and physical performance. Michelle A. Dimas et al. [2]

also stated that this is where a person views himself as an object of others and cares too much about appearance defects yet disregards his internal feelings and experiences. If strong concerns exist, or when dissatisfaction exists, appearance anxiety occurs.

Women, known for their resilience and multifaceted roles in society, from leadership positions to nurturing familial relationships, face unique challenges regarding body image. Frontiers found that "body dissatisfaction was higher in women than in men and was unaffected by age in women" [3]. It also found that "importance of appearance was higher in women than in men, but only in men did age predict a lower level of the importance of appearance" [3]. This indicates that societal compulsions and cultural guidelines make a significant impact on the perception of body images in different ways, both in males and females. The study further identified that body appreciation – characterized by respect and acceptance for one's body – was generally higher in women across all age groups than in men. The researchers found it contrary to popular belief that women are typically more critical of their bodies in comparison to men. The researchers concluded that body appreciation might act as a protective factor for body dissatisfaction and associated mental health concerns. This too, alludes to the need to design interventions to enhance the betterment of a positive body image and self-appreciation, even more in societies where the media shows unrealistic ideals about the body.

2.2. How does short video content affect appearance & body self-recognition

J. O. Walter [4] argued in *The Technologizing of the Word* that pre-written spoken culture operated within a specific framework of consciousness, and the arrival of written culture brought about a major change in the way of thinking of the ancients. With the advent of the electronic age and digital age, spoken language culture has been revived in a new form. At the same time, Walter's research on "secondary spoken language culture" is of great value, that is, a "re-media", which can be understood as a general theory of all new and old media, and the results of "re-media" are particularly obvious in the current digital process [5]. Lippmann [6] believed that the continuous development of modern society has made it more and more complex, which leads to the fact that people are not satisfied with the information brought by their own scope of activity and perception. For those things beyond their own personal perception, people have to find other ways to understand them. At this time, people found mass communication, and began to rely on the "pseudo environment" constructed by the media and tried to make their own reactions on the basis of it. The so-called "pseudo environment" is actually the environment constructed by information, which is an information environment that the mass media transmits to the audience after screening, re-processing, reforming, and reorganizing the real information.

Neil Postman [7] argues that changes in media ecology led to the disappearance of childhood through a series of speculations on how media affect social processes, how printing created childhood, and how electronic media made it "disappear." When the media ecology changes, people's understanding of the concept of "childhood" has changed. His intention is not to explain why childhood dies, but to explore theories about it. Media technology creates an environment that affects users. Information = changes caused by technological innovation [8]. The advent of the short video era, without exception, changes the thinking and cognition of short video audiences as a new media environment. People are divided by technology, which is the self-intersection of human organs. After the extension of things inside people, people are hypnotized, thus becoming the puppet of the extension. Media is the message, and media is the environment, which is the cornerstone of media ecology and also reflects the way people think and understand things in contemporary society. People who use new technology will adapt to it.

Different types of short videos present a new visual pseudo environment [9]. In the context of visual presentation, personalized expression, and emotional connection of short video bloggers, users are more likely to be attracted by their content. However, the "new pseudo environment" constructed

by short video content can bring some negative cognitive effects to users, and then affect their attitudes and behaviors. [9]

Short video content has a huge effect on users' recognition of appearance and their body. The algorithmic design of these platforms further intensifies this influence by constantly recommending similar content to users to reinforce harmful beauty standards. According to [10], the A4 waist challenge and the coin challenge on Douyin encourage users to demonstrate their slimness in exaggerated ways. These two challenges aim to prove their so-called 'nice body shape' by hiding their waist behind a piece of A4 paper or placing coins on their collarbone, which promote self-objectification and foster a culture of negative self-comparison among viewers. Users who participate in these challenges or regularly watch this content report greater feelings of body dissatisfaction and are more likely to engage in unhealthy dieting behaviors.

Liu's study in 2021 [11] found that frequent exposure to content related to specific body types exacerbated feelings of body dissatisfaction and lowered self-esteem among young viewers. The interactive nature of these platforms allows users to like, comment, and share content, which creates a feedback loop. This trend further enhances the impact of these beauty standards. The pressure that users receive forces them to conform to these standards.

The appearance-enhancing filters' popularity, accompanied by the promotion of narrow beauty standards, leads to distorted self-recognition and body image disorders. The use of filters that change facial and body features fits the platform's emphasis on visual appeal, which makes it difficult for users to appreciate their natural appearance. Users will have distorted perceptions of what is "normal" or "attractive" under this kind of idealized image. It also increases user's body dissatisfaction and potential mental health problems such as eating disorders and depression. [12]

Overall, these studies have made us realize the transformative power of media and the ethical responsibilities associated with its use. Then, the negative impacts mentioned in the texts, such as reduced body satisfaction and mental health issues, also alert social platform companies and content creators to pay more attention to healthy digital environments and positive self-image, which requires the development of more stringent guidelines and regulatory frameworks. In the face of these studies, what effect social media has on our body and appearance, and whether it is all negative as the research shows, it is worth continuing to do further research and investigation. It is hoped that further research will reveal the changes that short video media bring to our self-perception.

3. Relevant studies

Recent studies by worldwide scholars have reached a consensus on the above-proposed link between body image concerns and usage of short video platforms, both in general users and explicitly female users of these platforms. Most scholarly research was done with a focus on female users' experiences and proved the validity of such correlation between body image concerns and short video platform use, which prompts us to do our own study to see if the correlation can be generalized to male users as well and see what factors affect this relationship or what focus do people have over this issue.

Seekis and Kennedy [13], by having female participants view compilations of beauty, travel and self-compassion-related content, discovered that the hashtag #beauty created the highest number of upper appearance comparisons and generated the most cases of "face-related appearance shame and anxiety, as well as negative mood" while the hashtag #self-compassion also generated a high number of upper appearance comparisons from participants, who felt more compassion towards themselves. [13]

On the other hand, Yan and Jia [14] used questionnaires with standardized measure methods to determine female users' addiction to short video platforms, degree of female objectification, and consistency of self-identity. Their finding was that constant addictive use of short video platforms "was positively correlated with the objectification of female content and internalization of beauty

ideals” and decreased self-esteem and the consistency of self-identity, with self-esteem playing a central role in mediating the effects of short video platform addiction. [14]

Pan et al. [15] conducted a similar survey on a wider scale of all female users in China 18 to 60, asking about their social media influencer viewing frequency, social comparison tendencies, and intentions to change their appearance. The result points to a “positive association between users’ influencer viewing frequency and their intentions to change appearance” as well as self-objectification, especially in people who have low comparison tendencies. [15]

With a wider focus on not just female users, Stieger et al. [16] discovered, through the use of a combination of a physical tracking device to track social media usage and surveys, that despite personal trait differences, “engagement with social media content was significantly associated with lower appearance satisfaction,” with the correlation strongest when viewing content from known others. [16]

4. Methodology

We chose to use a survey for our research because it is an effective and efficient tool for gaining insights into how short video content impacts users' physical self-recognition. Surveys allow us to collect a large volume of data in a short period, providing a broad and representative sample that helps analyze the actual effects of short video content on users. This method enables us to systematically gather participants' perspectives and experiences and analyze the data quantitatively, leading to more reliable research conclusions. We produced the questionnaire using the Questionnaire Star app and uploaded it online for data collection. Since the region we surveyed is in China, we selected Questionnaire Star, which is the most widely used survey app in China. Data collection took place from June 28th to July 2nd, 2024, and a total of 138 participants were recruited. The survey consisted of 18 questions covering demographic information and specific issues related to the research topic.

We made a questionnaire from three aspects, the first one is the basic information of users, including age, gender, identity, etc. The second point was the frequency of users using short videos and the types of short video content they watched. The last point was the extent of the impact of short videos on personal body self-recognition. We wanted to know whether short video content specifically affected people's parts of their bodies, they thought, and whether it made them more anxious or more confident. For example, for your body, you want to be fuller or thinner or for your hair, you want your hair to be thicker or thinner.

Data analysis for this study was conducted using the Questionnaire Star app software, which facilitated both quantitative and qualitative data processing. For quantitative data, detailed statistical analyses were performed to uncover patterns and trends. For qualitative data, coding and thematic analysis were employed to derive meaningful insights from textual responses. This mixed-method approach was selected for its comprehensive capability to ensure the reliability and validity of the findings. A total of 138 participants completed the questionnaire, with an equal representation of men and women. The age distribution showed that the largest groups were individuals aged 19 to 25 and 15 to 18, highlighting these as the most prominent age brackets in the study. Approximately 50% of participants indicated that short video content has an impact on their self-recognition, suggesting a significant level of influence that such media may have on body image perceptions.

This study strictly adhered to ethical guidelines, and all data were anonymized to protect participant privacy. Despite employing multiple methods to ensure comprehensive data collection, the limited sample size may affect the representativeness of the results and may not fully reflect the general population. Additionally, self-reported data from participants may introduce a degree of subjective bias, which could impact the objectivity of the findings. Therefore, future research may

need to increase the sample size and incorporate more objective data to further validate and refine the findings of this study.

5. Finding

Among the 138 users surveyed, 79.71% of those aged 15-25 were surveyed. And 52.9 percent of the respondents were women. In addition, 89.13% of the respondents use Douyin, and 68.12% of the respondents who use Douyin are heavy users. The top three viewing categories were: Travel and adventure (57.97%), food and cooking (55.8%), and games and entertainment (53.62%). 50.72% of the respondents care about the appearance or body of the characters in the videos that have nothing to do with fitness or beauty. Because of this, many of the surveyed users are dissatisfied with their weight, and 47.83% of the respondents are very dissatisfied with their skin condition.

Among those surveyed, it is surprising that beauty and fashion are not among the top categories that users identify. This is not true, however, when we only consider data from female users. The top three viewed categories for female users are fashion and beauty, cooking and food, and traveling, who also report more occurrences of conscious comparisons with what they see, proving that female users are more concerned and conscious about their appearances. Users are constantly aware of people's appearance and body images in videos unrelated to beauty and fashion, demonstrating how engagement with body images and appearances was not actively sought after by users but rather encountered when viewing unrelated content. This reflects the pervasive anxieties about appearances and body images hidden in users of short video platforms, prompting them to focus more on faces and bodies, disregarding the videos' focus. This anxiety about body images and appearances is also partly unconscious for users, as shown by our data, where most users reported that they are unlikely to change their appearance for popular aesthetic standards and that their moods are affected by social media usage at a less than medium level. It is safe to say that anxieties about body image and appearances are pervasive but not consciously recognized by those who experience them. One explanation for this could be that it is socially preferable to say one is not anxious about one's appearance or body image because of what one sees on short video platforms, resulting in a slope to the lower side of willingness to change the appearance and a fake image of self-confidence in users.

Among all the provided features of face and body, an outstanding number of 49 users report a concern for their hair, to either make them healthier or denser. Better hair is the most popular answer in both questions asking about a preferred change in facial feature appearance or body image. This answer came as a surprise since the overall trend in a dedicated question about satisfaction with hair is, on a general level, sloping slightly to above medium level of satisfaction, with an outstanding amount of a third of the answers on the high end. One possible explanation for this paradox could be that, generally speaking, users are quite satisfied with their hair, at least few are extremely unsatisfied with it, and that the popularity of better hair as a choice for change comes from users who are quite satisfied with other parts of their body, making hair the only feature they wish to change. Another explanation could be that body features and facial features are not very shapeable in the short term and require intensive training, diet, or surgery to make changes to. Hair, on the other hand, is constantly growing and easily manipulated, resulting in it attaining the most potential in changing appearances or styles. The massive potential of hairstyle changes and hair growth conditions can result in the belief that one's appearance or body image can be quickly changed with a quick touch on the hair, therefore attributing it as the sole cause for unsatisfactory appearances or body images. For the same nature of always under constant growth and easily manipulated or hurt, skin condition became a popular concern among users. It is safe to say that users believe skin condition holds great potential in determining appearance and body image satisfaction, just like hair condition. This holds true when considering only male or female data. These focus on features and how they greatly affect

people's satisfaction with their appearances and body images were not covered in detail in previous research.

It is also noteworthy that female users overwhelmingly wish for their bodies to be lighter (54.05%), while male users are almost equally divided between lighter and taller (35.21% and 39.29%, respectively). Female users are also significantly more likely to report willingness to change their appearance to fit social preferences (0.36 less than males on a scale of 1-5) and less satisfaction with their hair (0.1 above males). These, together with females viewing more content related to beauty and fashion, make it clear that female users are obviously under more severe effects from short video platform use. The role of an intimate relationship is also worth considering. Those with experience in close relationships report a slightly higher satisfaction with body images and appearances (0.2 and 0.12 on a scale from 1 to 5, respectively). Although this data difference is still not great enough to claim statistical significance, future research with a greater number of samples can look into it.

It is also important to note here that while the trends we identified are of popular choice, there is still a significant size of data that says otherwise despite lower numbers.

6. Conclusion

While the correlation between using short video platforms like TikTok (Douyin) and a change in recognition of one's body and appearance is apparent from our above analysis, we have to admit to certain limits in our study.

Firstly, despite being TikTok's core user group, the studied sample size is relatively small, and including more participants would make the correlation stronger and perhaps help us discover more about the issue. Despite covering a wide range of ages and social standings, the studied sample is comparatively focused on Chinese or Chinese-speaking users, thus making the results inapplicable to users outside of Chinese-speaking communities. The sample is also only representative of certain age groups, and therefore conclusions drawn from it may not be able to be applied to people that lie outside of it, such as people of old age or pre-teen.

Surveys and the analysis of their results rely on the user's self-report of using habit and content choice. Unlike some other research with physical devices to track user behavior, the collected data is ultimately subjective. Surveys were done only once and failed to continue on a second round due to anonymity and the difficulty of tracking user identity on survey platforms, therefore failing to conduct a longitudinal study to verify the long-term effects of using short video platforms. Survey phrasing caused confusion. Even though a lot of troubleshooting and re-phrasing was done during beta testing of the surveys, certain confusion over the question can be seen in users' reports, sometimes misunderstanding the intended area of focus of the question, other times misunderstanding the question's meaning. Though the cases of complete misunderstanding are very few, answering outside of focus has a couple of cases.

Future research can have a greater focus on male users' experience with appearance awareness and concerns. Our research sample, though still mostly female (52%), contains a considerable number of male users (40%). As our literature review demonstrated, the topic of short video platforms and appearance awareness was often studied on female users, but our study calls the male experience to attention too. On the other hand, most studies with a similar focus strive to study how much affected users are by short video platforms without getting into the details of how exactly. Our study did so by identifying what facial features of body features users were concerned with the most. Future studies can delve even deeper into the issue to understand how these features interplay in the overall correlation between using short video platforms and their effects on users' self-awareness.

Acknowledgement

Yuetong Zhang, Ziyue Wang, Simon Li, and Yidan Chen contributed equally to this work and should be considered co-first authors.

References

- [1] Jeannerod M. (2003). *The mechanism of self-recognition in humans*. *Behav Brain Res*. 2003 Jun 16;142(1-2):1-15. doi: 10.1016/s0166-4328(02)00384-4. PMID: 12798261.
- [2] Dimas MA, Galway SC, Gammage KL. (2020). *Do you see what I see? The influence of self-objectification on appearance anxiety, intrinsic motivation, interoceptive awareness, and physical performance*. *Body Image*. 2021 Dec;39:53-61. doi: 10.1016/j.bodyim.2021.05.010. Epub 2021 Jun 17. PMID: 34147854.
- [3] Quittkat HL, Hartmann AS, Düsing R, Buhlmann U, Vocks S. (2019). *Body Dissatisfaction, Importance of Appearance, and Body Appreciation in Men and Women Over the Lifespan*. *Front Psychiatry*. 2019 Dec 17;10:864. doi: 10.3389/fpsyg.2019.00864. PMID: 31920737; PMCID: PMC6928134.
- [4] Ong, W. J. (1982). *Orality and Literacy The Technologizing of the Word*. Methuen & Co. Ltd.
- [5] Bolter, J. D., & Grusin, R. (2000). *Remediation: Understanding New Media (Issues 2352–5398)*. The MIT Press.
- [6] Lippmann, W. (1919). *Public Opinion*. Harcourt, Brace & Co.
- [7] Postman, Neil. (1994). *The Disappearance of Childhood*. Vintage/Random House.
- [8] McLuhan, M., & Lapham, L. H. (1994). *Understanding Media: The Extensions of Man*. The MIT Press.
- [9] Wang, H., & Li, X. (2023). *The Influence of Short Videos on User Cognition in Visual Communication*. December 2023 *Modern Economics & Management Forum* 4(5):123. DOI:10.32629/memf.v4i5.1488.
- [10] Hu, S., Gan, J., Shi, V. et al. (2023). *Chinese TikTok (Douyin) challenges and body image concerns: a pilot study*. *J Eat Disord* 11, 108 (2023). <https://doi.org/10.1186/s40337-023-00829-5>
- [11] Liu, J. (2021). *Proceedings of the 2nd International Conference on Language, Art and Cultural Exchange (ICLACE 2021) (Issues 2352–5398)*. Atlantis Press. <https://doi.org/10.2991/assehr.k.210609.072>
- [12] Aparicio-Martinez et al (2019), *Social Media, Thin-Ideal, Body Dissatisfaction and Disordered Eating Attitudes: An Exploratory Analysis*
- [13] Seekis and Kennedy (2023), *The impact of #beauty and #self-compassion TikTok videos on young women's appearance shame and anxiety, self-compassion, mood, and comparison processes*. <https://doi.org/10.1016/j.bodyim.2023.02.006>
- [14] Yan and Jia (2023), *Effect of Short Video Addiction on Self-identity: Mediating Role of Self-esteem and Appearance Anxiety*. <https://books.google.com/books?hl=zh-CN&lr=&id=EAHmEAAAQBAJ&oi=fnd&pg=PA196&dq=Short+Video+Appearance&ots=-Ga2ON-OV8&sig=EnI4YmBRkvsd6WAnuOIV8zyGmps#v=onepage&q&f=false> P196
- [15] Pan et.al(2022), *Social Media Influencer Viewing and Intentions to Change Appearance: A Large Scale Cross-Sectional Survey on Female Social Media Users in China*. <https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2022.846390/full>
- [16] Stieger et al. (2022), *Engagement with social media content results in lower appearance satisfaction: An experience sampling study using a wrist-worn wearable and a physical analogue scale*. <https://doi.org/10.1016/j.bodyim.2022.09.009>