



Development and Validation of an Indigenous Assessment Tool for Measuring the Influence of Short-Form Social Media Content on Self-Esteem among Teenagers

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Abstract

The present study aimed to develop and validate an indigenous instrument to measure the influence of short-form social media content on adolescent self-esteem. The Delphi process systematically reduced the item pool to 14 items demonstrating strong conceptual relevance and cultural appropriateness. Content validity was established using the Item-Level Content Validity Index (I-CVI), Scale-Level Content Validity Index (S-CVI), and Content Validity Ratio (CVR), with findings indicating excellent agreement among experts (S-CVI = 1.00). A pilot study conducted on 20 adolescents provided preliminary evidence regarding the clarity, comprehensibility, and practical applicability of the instrument. Subsequently, the final version of the scale was administered to a sample of 300 adolescent females. Exploratory Factor Analysis (EFA) supported the construct validity of the scale, with an excellent Kaiser-Meyer-Olkin measure of sampling adequacy (KMO = .924) and a statistically significant Bartlett's Test of Sphericity ($\chi^2 = 1973.23$, $df = 91$, $p < .001$). Reliability analysis demonstrated excellent internal consistency, with a Cronbach's alpha coefficient of .912. The findings suggest that the developed scale is a reliable and valid instrument for assessing the influence of short-form social media content on adolescent self-esteem. The scale offers valuable theoretical and practical implications for researchers, psychologists, educators, and mental health professionals seeking to understand and address the psychological consequences of emerging digital media environments among adolescents.

Keywords: Short-Form Social Media, Adolescent Self-Esteem, Scale Development, Psychometric Validation, Exploratory Factor Analysis, Content Validity, Social Media Influence

Introduction

According to Harter, self-esteem is mainly related to self-worth and how people value themselves and refers to a positive self-evaluation which comes from individuals' comparison with others (Harter, 1985), (Harter, 1999). People are inclined to evaluate themselves from various perspectives, and the impact of different factors on their self-esteem may depend on the value of the specific object to people (Harter, 1985), (Harter, 1999). Self-esteem is viewed as an important positive element in stress situations (MacDonald & Leary, 2005), (Pruessner & Baldwin, 2015). People with a high self-esteem level would have better coping strategies and performance when feeling pressure (Petty, Haugtvedt, & Smith, 1995). However, those

with low self-esteem levels may feel it's difficult to cope with complex problems; this will lead to people's negative emotions and mental health problems (Galanakis, Stalikas, Pezirkianidis, & Karakasidou, 2016). According to previous studies, self-esteem was negatively related to stress (Galanakis, Stalikas, Pezirkianidis, & Karakasidou, 2016), (Hyun, Ku, Lee, Kang, & Lee, 2022). Therefore, self-esteem is important to adolescents' emotion development and mental health. In this article, the authors aim to discuss the influencing factors on adolescents' self-esteem, such as parental care and family education, teacher-student relationships, and peer relationships. From these three perspectives affecting adolescents' self-esteem, different solutions also would be proposed.

Self-Esteem and Body Image

Self-esteem is inextricably linked to thoughts about one's body; physical appearance has long been considered the primary indication of self-esteem. (Ata, Thompson, & Small, 2013). Physique esteem is defined as "judging one's own body individually through intrinsic feelings and attitudes." (Merino et al., 2024). The definition of self-esteem is "a positive or negative attitude towards the self." (Clay, Vignoles, & Dittmar, n.d.). By many accounts, one of the main causes of low self-esteem among college students is body image issues and life dissatisfaction. (Sujetha et al., 2025) These days, our pupils are pressured to have an amazing ideal figure, which is hard to achieve on their own. For the most part, women are more likely than men to have a poor body image and low self-esteem. However, it has been noted that self-esteem is stable in both sexes until they reach adolescence. (Ogden, 2022). The discrepancy between an actual body and an ideal body is one of the main causes of body contentment. This can undoubtedly be affected by failing to achieve the ideal, which results in a lack of self-worth and introspection. (Dahlenburg et al., 2020) Over the past few years, a variety of studies have been conducted that focus on body image and self-esteem. (Zhang et al., 2024). One's body image or self-esteem reveals their own personality patterns. (Grogan, 2021).

Social Comparison, Peer Approval, and Self-Esteem

Depending on the circumstances, adolescents' self-esteem may also depend on a number of variables. Academic success may be a source of self-esteem for some people, but peer approval or physical appearance may be more important to others. These self-esteem elements are particularly triggered in social media interactions where physical appearance and peer validation are significant (Charmaraman, Hojman, Auqui, & Bilyalova, 2024). According to Valkenburg, Pouwels, Beyens, van Driel, and Keijsers (2021), teenagers who base their self-esteem on peer approval or physical appearance may be more vulnerable to the negative impacts of social media use and the influence of social media experiences on self-esteem.

Family Relationships and Self-Esteem

According to research on teenage students in 31 Chinese provinces, there is a current phenomenon in China where the self-esteem level of senior school students is lower than that of middle school and college students due to the rise in psychological issues related to self-esteem in the modern age of adolescents, such as social anxiety disorder, aggressive behavior, and psychological insecurity brought on by poor companionship and family relationships (Yan et al., 2021). According to various kinds of summaries about causes of low self-esteem, there was research focusing on how family factors such as parental care influence adolescents' self-esteem levels. It demonstrated that a key factor is parental care. Positive parent-adolescent relationships are a significant predictor of Chinese adolescents' self-esteem, according to Shi et al.'s research (Hong Shi et al., 2022). This suggests that when adolescents build positive relationships with their parents, they will have higher self-evaluation and a sense of value, which will improve adolescents' mental health.

Educational Environment and Self-Esteem

Hu and Ai also looked at how parent-adolescent relationships affected adolescents' self-esteem. The findings indicated that there was a positive correlation between parent-adolescent relationships and children's self-esteem, and that a warm, supportive, and friendly family environment has a positive impact on children's development of self-esteem and enhances their self-identity and self-evaluation. Teenagers' development of self-esteem is also significantly influenced by their educational environment, which includes their connections with peers and teachers. Additionally, a review of gender studies revealed that girls' self-esteem was somewhat correlated with the school environment and education, suggesting that the gender environment in school would have different effects on boys' and girls' self-esteem (Hu & Ai, 2016; Cribb & Haase, 2016).

Role of Social Media

Individuals actively engage in online social networking sites with the express intent of obtaining information and seeking assistance. Social media platforms give users a continuous flow of current information and a wide range of viewpoints, according to Beaudoin (2008). Compared to conventional websites, this results in increased accessibility, faster information retrieval, and a wider range of knowledge. People must be able to recognize, assess, and select information. Customers' wants and curiosity are sufficiently satisfied by using social media platforms to access information (Ruggiero, 2000). Businesses strive to provide audiences with the newest material as quickly as possible due to the ongoing advancements in technology in a world that is changing quickly. The internet started out with basic blogs, developed into full-length films that compete with movies on sites like YouTube, and is currently witnessing the emergence of short-form content. TikTok, originally known as Musically, is the most infamous platform for short-form entertainment that appeals to both adults and children. Although producers can publish videos on TikTok for up to ten minutes, most videos are shorter than three minutes, and most are less than one minute. The fact that users do not select the content they see is a distinctive aspect of short-form video services. Content is chosen by an algorithm depending on the user's past actions on the app. This enables users to easily skip any content that does not immediately pique their interest while mindlessly scrolling through their feed, continually aroused by each video. For young people, this combination of mindless scrolling and automated content selection poses two serious issues: addiction that shortens attention spans and algorithmic prejudice that causes narrow-mindedness. The nature of short-form films can quickly lead to addiction and have a detrimental effect on viewers' daily life, according to a study on Springer Link (Wang et al., 2022). When an algorithm produces unfair results and filters out stuff that a user might not find enjoyable, this is known as algorithmic bias (Baha, 2024). This restricts the user's exposure to a variety of perspectives and comprehension of contentious concepts and significant international issues (Baha, 2021). This begs the question: What is the impact of short-form content on adolescents?

Short-Form Videos

Short videos are internet video segments that range in duration from a few seconds to several minutes. They are posted and shared using mobile applications or social media sites like YouTube Shorts, Instagram Reels, and TikTok. Users' needs for entertainment, social connection, and information gathering are fully satisfied by short video applications, which allow users to watch, share, comment on, and produce short videos as well as live broadcasts. According to Huang et al. (2021) and Yang et al. (2023), these systems are able to provide users with personalized video content recommendations that considerably suit their individual psychological needs and even induce a "flow experience." Short video applications are more appealing and highly addictive than traditional social media with simple textual and graphical

material (e.g., Facebook, Twitter, WeChat, and Weibo) (Dong et al., 2023; Su et al., 2021). The China Internet Network Information Center (CNNIC) reported that 1.026 billion people in China were using short videos by June 2023. Globally, there has been a sharp increase in the number of users of short video applications. As of 2022, there were 1.2 billion active TikTok users worldwide, and 41% of American adults reported using the app every day, according to statistics (Statista, 2023). From a technical perspective, a defining characteristic of short video platforms like TikTok is their personalized recommendation algorithms (Hasan et al., 2018; Zhao, 2021). As users engage with more content, these platforms accumulate extensive behavioral data, enabling progressively refined recommendations. This interaction forms a closed-loop system where user behavior and recommendation algorithms mutually reinforce each other (Zhao, 2021). Although personalized algorithms reduce the cost of information acquisition for users, they lead to a large amount of reward stimulation and neural adaptation, making it difficult for some users to control their usage, resulting in SVA (Dong et al., 2023; Su et al., 2021). Interpersonal contact and self-presentation are the main reasons people use traditional social media (Kuss & Griffiths, 2011; Nadkarni & Hofmann, 2012; Ross et al., 2009); this is not the case with short video applications. According to Bhandari and Bimo (2020), users' interactions with their "algorithmized self" are more important than their interactions with the social network on TikTok. According to Omar and Dequan (2020), TikTok ought to be viewed as a "video recording tool rather than a social media application". Through a three-level meta-analysis of 33 studies, Chen et al. (2024) discovered that escapism has the strongest correlation with SVA, followed by stress relief and self-compensation. According to Virñ-Martín et al. (2024), teens use TikTok mostly for amusement or emotional fulfillment. Dong and Xie (2024) made a distinction between the reasons people browse TikTok and create content there. They found that the former are primarily driven by the desire for novelty, habit, maintaining relationships, relieving pressure, killing time, and escapism, while the latter are motivated by the pursuit of fame, recording, sharing, and satiating curiosity.

Social Media Use and Adolescent Self-Esteem

Particularly for teenagers, whose developing sense of self is frequently entwined with their online presence, social media has become an essential component of daily life. This is particularly true for teenagers, a cohort whose online personas often blend with their developing identities. These young people are in a crucial stage of self-construction and self-discovery, and their interactions on social media can have a big impact on how they develop as individuals. According to recent research, the vast majority of American youths regularly use social media. In fact, according to the American Psychological Association (2024), an astounding 93% of teenagers in the US were using social media.

Literature Review

Short-form social media platforms such as TikTok, Instagram Reels, and YouTube Shorts have rapidly emerged as dominant communication and entertainment mediums among adolescents worldwide. These platforms emphasize brief, visually stimulating, and algorithmically curated content designed to maximize user attention, emotional engagement, and repeated viewing behavior. Unlike traditional social networking sites, short-form video applications continuously deliver personalized content based on users' viewing history and interaction patterns, creating highly immersive and rewarding digital experiences (Dong et al., 2023; Su et al., 2021). Adolescents constitute one of the largest user groups of these platforms because short-form videos closely align with their developmental needs for exploration, entertainment, identity formation, and social connectedness. Recent evidence suggests that adolescents spend substantially more time consuming short-video content than traditional long-form media, often engaging in habitual checking, rapid scrolling, and prolonged viewing sessions that may

influence psychological functioning and emotional well-being (BMC Psychology, 2025). The increasing popularity of short-form social media has raised concerns regarding its potential influence on adolescent self-esteem. Self-esteem refers to an individual's overall evaluation of self-worth and personal value and is considered a central component of psychological adjustment during adolescence (Harter, 1985; Harter, 1999). Adolescence is a critical developmental period characterized by identity exploration, heightened self-consciousness, and increased sensitivity to social evaluation. During this stage, adolescents become increasingly reliant on external feedback and peer acceptance in forming their self-concept and self-worth (MacDonald & Leary, 2005). Consequently, digital environments that provide continuous opportunities for social comparison and external validation may substantially influence self-esteem development. One of the primary mechanisms through which short-form social media may affect self-esteem is social comparison. According to the Social Comparison Theory proposed by Festinger (1954), individuals evaluate their own abilities, appearance, and achievements by comparing themselves with others. Social media platforms expose adolescents to carefully curated portrayals of attractiveness, success, and lifestyle achievements, often encouraging upward social comparisons that may result in feelings of inadequacy and dissatisfaction (Myers & Crowther, 2009). Research has consistently demonstrated that frequent exposure to idealized online content is associated with lower self-esteem, particularly among adolescents who base their self-worth on appearance and peer approval (Valkenburg et al., 2021). Body image concerns represent another important pathway linking short-form social media use and self-esteem. Platforms such as TikTok and Instagram frequently promote unrealistic beauty standards through filters, editing tools, and highly curated visual content. Repeated exposure to these idealized images may increase body dissatisfaction and negative self-perceptions, particularly among adolescent females (Ata et al., 2013). Studies have reported that discrepancies between perceived and ideal physical appearance contribute significantly to reduced self-esteem and increased psychological distress among young people (Dahlenburg et al., 2020; Grogan, 2021). Furthermore, appearance-focused content often encourages adolescents to evaluate themselves according to unattainable standards, intensifying self-criticism and dissatisfaction with their physical appearance. Despite the growing body of international literature examining social media and adolescent well-being, relatively limited attention has been devoted to developing culturally sensitive instruments specifically designed to measure the influence of short-form social media content on adolescent self-esteem. Most existing measures focus on general social media usage or problematic internet use and may not adequately capture the unique characteristics of short-form platforms and their psychological consequences. Therefore, the present study aimed to develop and validate an indigenous scale for assessing the influence of short-form social media content on adolescent self-esteem, providing researchers and mental health professionals with a reliable and culturally relevant assessment tool.

Theoretical Framework

The present study is grounded in three major psychological theories that explain the relationship between short-form social media exposure and adolescent self-esteem: Social Comparison Theory, Uses and Gratifications Theory, and Self-Discrepancy Theory. Together, these frameworks provide a comprehensive explanation of how adolescents interact with digital media and how these interactions may influence their self-perceptions and psychological well-being.

Social Comparison Theory, proposed by Festinger (1954), posits that individuals evaluate their abilities, achievements, and personal characteristics by comparing themselves with others. This tendency becomes particularly salient during adolescence, a developmental stage characterized by identity formation, increased self-awareness, and heightened sensitivity to

peer evaluation. Social media platforms provide adolescents with constant exposure to highly curated and idealized portrayals of beauty, success, lifestyle, and social popularity, thereby increasing opportunities for upward social comparisons. Repeated exposure to such content may contribute to feelings of inadequacy, body dissatisfaction, and reduced self-esteem, especially among adolescents who place considerable importance on peer approval and physical appearance (Myers & Crowther, 2009; Valkenburg et al., 2021).

The Uses and Gratifications theory further explains adolescents' motivations for engaging with short-form social media content. According to this perspective, individuals actively select media to satisfy specific psychological and social needs, including entertainment, escapism, information seeking, social interaction, and identity exploration (Ruggiero, 2000). Short-form video platforms are particularly successful in fulfilling these needs because they provide immediate gratification through personalized content recommendations and continuous stimulation. Adolescents may therefore develop habitual patterns of engagement with platforms such as TikTok, Instagram Reels, and YouTube Shorts as a means of seeking enjoyment, social validation, and emotional fulfillment.

In addition, **Self-Discrepancy Theory** (Higgins, 1987) provides an important explanation for the emotional consequences of consuming idealized social media content. The theory suggests that individuals possess multiple self-representations, including the actual self and the ideal self. Psychological distress may arise when a discrepancy exists between these self-perceptions. Exposure to highly edited images, ideal lifestyles, and unrealistic standards presented on social media may widen the gap between adolescents' perceptions of who they are and who they aspire to become, resulting in negative emotions, dissatisfaction, and diminished self-esteem. Collectively, these theoretical perspectives suggest that short-form social media content may influence adolescent self-esteem through processes of social comparison, gratification seeking, and self-discrepancy. The integration of these theories provides the conceptual foundation for understanding the psychological mechanisms underlying adolescents' experiences with short-form social media platforms and supports the development of the present indigenous assessment instrument.

Empirical Research on Short-Video Exposure and Psychological Effects

Emerging empirical studies provide evidence that short-video exposure influences adolescent psychosocial functioning. A large-scale study published in *Acta Psychologica* (2025) found that frequent use of short-video platforms significantly predicted body dissatisfaction in adolescents, mediated by body image comparisons. Similarly, a BMC Psychology article (2025) demonstrated that short-video exposure increased appearance anxiety through upward comparison with content creators, highlighting the emotional mechanisms underlying media influence. Qualitative research by Hossain & Ahsan (2024) on Bangladeshi teenagers reported that consumption of Instagram Reels and TikTok videos led to increased concerns about attractiveness, social desirability, and lifestyle adequacy, as well as perceived pressure to emulate influencers. These findings collectively indicate that short-form video content plays a substantial role in shaping adolescents' self-perceptions.

Social Media, Social Comparison, and Self-Esteem Outcomes

Self-esteem, defined as the degree to which individuals value and accept themselves, is strongly linked to social comparison processes during adolescence. Studies have consistently shown that increased exposure to idealized social media portrayals correlates with reduced global self-esteem in young users. Valkenburg et al. (2021) emphasized that the effects of social media on self-esteem are not uniformly negative; they depend on individual susceptibility, interpretation, and interaction with content. Experience sampling research from

the Journal of Computer Mediated Communication (2024) reported that moments of upward comparison on social media predicted immediate reductions in state self-esteem, whereas positive peer feedback could temporarily enhance it. This dynamic pattern is particularly relevant for short-video platforms, where users rapidly switch between aspirational, comedic, and peer-based content, creating fluctuating emotional states.

Methodology

Research design

This study will employ a quantitative, instrument development and validation design aimed at creating a culturally appropriate tool to measure the influence of short-form social media content on adolescent self-esteem. The research will be conducted in multiple sequential phases, beginning with item generation based on literature review, expert consultation, and focus group discussions with adolescents to ensure content validity and cultural relevance. This will be followed by pilot testing to assess clarity, comprehension, and contextual suitability of the items, with revisions made based on participant feedback. The psychometric validation phase will involve administering the refined tool to a larger sample to evaluate its reliability (internal consistency and test–retest) and validity (construct validity via exploratory and confirmatory factor analysis, and criterion related validity through correlations with established self-esteem measures). Additionally, correlational analyses will examine the relationship between exposure to short-form social media content including frequency, duration, type, and engagement and adolescents' self-esteem levels. The study adopts a cross-sectional quantitative approach, allowing data to be collected at a single point in time to objectively assess variable relationships, establish the psychometric properties of the new instrument, and provide a reliable and culturally grounded assessment tool for research and practical applications in adolescent mental health.

Sample

The study will target adolescents aged 13 to 18 years who are active users of short-form social media platforms such as TikTok, Instagram Reels, and YouTube Shorts. Participants will be recruited from urban and semi-urban schools and colleges in Pakistan, ensuring a diverse representation of gender, socioeconomic status, and cultural backgrounds. The pilot phase will involve approximately 30–50 adolescents to test item clarity, comprehension, and cultural appropriateness of the drafted assessment tool. For the main validation phase, a larger sample of 300–400 adolescents will be recruited to ensure sufficient power for psychometric analyses such as Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA), following the recommendation of 5–10 participants per item (Hair et al., 2010).

Participants

Participants will be selected through purposive sampling, targeting those with relevant experience in short-form social media use, while ensuring gender balance and demographic diversity. This approach will help capture a representative sample of adolescents for both instrument validation and correlational analyses examining the relationship between short-form media exposure and self-esteem.

Assessment Measure

The primary instrument for this study will be a newly developed indigenous assessment tool designed to measure the influence of short-form social media content on adolescent self-esteem.

The development process will involve multiple phases to ensure cultural relevance, content validity, and psychometric soundness.

Item Development

Items will be generated through a combination of:

- **Literature review:** Existing studies on social media, self-esteem, social comparison, and body image (e.g., Valkenburg et al., 2021; Charmaraman et al., 2024).
- **Focus group discussions:** With adolescents aged 13–18 years understanding their experiences, behaviors, and perceptions regarding short-form social media content.
- **Expert review:** Clinical psychologists, educational specialists, and social media researchers will evaluate the items for clarity, cultural appropriateness, and relevance.

Pilot Testing

The draft instrument will be administered to 30–50 adolescents to assess item clarity, comprehension, and relevance. Feedback from participants will be used to revise and refine the scale, ensuring that all items are understandable and culturally appropriate.

Structure of the Tool

The tool will include multiple dimensions related to short-form social media influence:

- **Exposure:** Frequency, duration, and type of content consumed.
- **Social Comparison:** Comparing self to influencers, peers, or curated content.
- **Appearance/Body Image Concern:** Feelings related to body or appearance after viewing content.
- **Validation-Seeking Behavior:** Actions such as posting, checking likes/comments, or seeking peer approval.
- **Self-Esteem Impact:** Changes in perceived self-worth, confidence, and social self-perception.

Items will be rated on a Likert-type scale (e.g., 1 = Strongly Disagree to 5 = Strongly Agree) to quantify the degree of influence and self-perceived impact.

Psychometric Validation

After pilot testing, the tool will undergo rigorous validation procedures:

- **Reliability:** Internal consistency (Cronbach's alpha) and test–retest reliability.
- **Construct Validity:** Exploratory Factor Analysis (EFA) to identify latent dimensions and Confirmatory Factor Analysis (CFA) to confirm the factor structure.
- **Criterion-Related Validity:** Correlation with established self-esteem scales, such as the **Rosenberg Self-Esteem Scale (RSES)**, to assess convergent validity.

Supplementary Measures

To complement the new tool, a demographic questionnaire will collect information on age, gender, school type, socioeconomic status, and social media usage patterns (platform, duration, frequency, and type of content).

Procedure

The synopsis will be presented to the DRC for review. Approval will then be sought from the DRC, followed by final endorsement from the BASR. Authorization for data collection will be requested by the university's governing authority. Once approval is obtained, purposive sampling techniques will be used to gather data for the study. Participants will be asked to sign an informed consent form before taking part. Permission will be secured for the use and translation of self-report assessment tools related to the study's focus. Each research participant will receive detailed information about the nature of the research. They will be assured that their data will remain confidential and will be used solely for research purposes.

Proposed Analysis

The collected data will first undergo screening and cleaning to ensure its suitability for analysis. This will include checking for missing values, outliers, and normality of distributions. Any missing responses will be handled using appropriate methods, such as mean imputation or case-wise deletion depending on the extent of missing data. Negatively worded items, if any, will be reverse-coded to maintain consistency in scoring. Descriptive statistics will be calculated to summarize demographic information, including age, gender, school type, and socioeconomic status. Social media usage variables, such as platform type, frequency of use, duration, and engagement behaviors, will also be summarized. Mean scores, standard deviations, frequencies, and percentages will be reported to provide an overview of participant characteristics and preliminary patterns in the data. The reliability of the newly developed tool will be evaluated in multiple ways. Internal consistency will be assessed using Cronbach's alpha, with values equal to or greater than 0.70 considered acceptable. Additionally, test-retest reliability will be examined by correlating scores obtained from the same participants over a 2–3-week interval to determine the temporal stability of the instrument. To establish construct validity, the study will first employ Exploratory Factor Analysis (EFA) to identify the underlying dimensions of the assessment tool. Principal axis factoring or principal component analysis with Varimax rotation will be used, retaining factors with eigenvalues greater than 1 and items with loadings of 0.40 or higher. Following EFA, Criterion-related validity will be assessed by examining the relationship between scores on the new instrument and an established self-esteem measure, such as the Rosenberg Self-Esteem Scale. Pearson correlation coefficients will be used to determine the strength and direction of the association, providing evidence of convergent validity. Additionally, the study will explore correlations between specific dimensions of short-form social media influence—such as social comparison, appearance anxiety, and validation-seeking behaviors—and overall self-esteem levels. Further analyses may include group comparisons using independent t-tests or ANOVA to examine potential differences in self-esteem or tool scores across gender, age groups, or socioeconomic status. Linear regression analyses may also be conducted to determine whether short-form social media exposure predicts variations in self-esteem. All statistical analyses will be performed using SPSS for descriptive, reliability, and exploratory analyses, and AMOS or LISREL for confirmatory factor analysis.

Ethical Considerations

A rigorous framework of ethical considerations is essential to protect the rights and wellbeing of participants. All necessary permissions will be obtained from the Departmental Research Committee (DRC), the Board of Advanced Studies and Research (BASR), and the authors of the assessment of scales. Informed consent will be secured to ensure that participants understand the study's nature and purpose, along with any potential risks or benefits, before they agree to take part. Confidentiality measures will be strictly implemented to safeguard participants' privacy. Data will be anonymized and stored securely to prevent unauthorized access. The researcher will focus on minimizing harm and maximizing benefits, designing surveys that avoid causing distress or discomfort. Potential risks will be carefully considered against the possible societal benefits of the research. Transparency and integrity will be maintained throughout the research process, with findings reported accurately and without bias.

Methods and Results

The present research employed a mixed-method research design to develop and validate the proposed scale comprehensively. This approach facilitated an in-depth exploration of the

construct through both qualitative and quantitative methodologies, thereby ensuring the scientific rigor and psychometric soundness of the instrument.

Study I comprised the qualitative phase of the research and focused on exploring the underlying dimensions of the construct. Through qualitative inquiry, major themes were identified and systematically analyzed, leading to the generation and extraction of relevant items. This phase provided a strong conceptual foundation for scale development by ensuring that the items adequately represented the target construct.

Study II constituted the quantitative phase of the research and aimed to evaluate the psychometric properties of the developed scale. Quantitative analyses were conducted to examine the factor structure, reliability, and validity of the instrument. This phase established the empirical adequacy of the scale and confirmed its suitability for measuring the intended construct. Overall, the integration of qualitative and quantitative methods enabled a comprehensive process of scale development and validation, enhancing both the theoretical relevance and statistical robustness of the final instrument.

Study 1

Item Generation

The item generation process was undertaken to develop an indigenous instrument assessing the influence of short-form social media content on adolescent self-esteem. Initially, an extensive review of the literature and existing standardized measures related to social media use, self-esteem, social comparison, and body image was conducted. Established scales were examined to identify relevant dimensions and ensure consistency with existing theoretical and empirical evidence. The proposed instrument was developed to address cultural and contextual factors specific to adolescents' experiences with short-form social media platforms. Key domains identified from the literature included social comparison, appearance-related concerns, validation-seeking behavior, and perceived changes in self-worth. These dimensions were compared with constructs measured in previously developed standardized scales to ensure adequate content coverage while incorporating culturally relevant experiences. Based on the literature review, theoretical framework, and comparison with existing standardized instruments, an initial pool of 60 items was generated. The items were written in simple, age-appropriate language to facilitate comprehension among adolescents. Ambiguous and double-barreled statements were avoided, and each item was designed to reflect a single construct. All items were rated on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The preliminary version of the scale was pilot tested on 20 adolescents who were active users of short-form social media platforms, including TikTok, Instagram Reels, and YouTube Shorts. Participants provided feedback regarding item clarity, comprehensibility, and cultural relevance. The feedback obtained during the pilot study, together with comparisons with established measures, was used to refine the items before proceeding to the psychometric validation phase.

Qualitative Constituents (Interviews)

The qualitative phase of the study was conducted to explore adolescents' experiences and perceptions regarding the influence of short-form social media content on their self-esteem. Semi-structured interviews were employed to obtain an in-depth understanding of the psychological and social factors associated with the use of short-form social media platforms. A purposive sample of adolescents who were active users of platforms such as TikTok, Instagram Reels, and YouTube Shorts was selected for interviews. Participants ranged in age from adolescence to late adolescence and represented diverse educational backgrounds. Prior to data collection, informed consent was obtained, and participants were assured of confidentiality and anonymity. The interviews focused on adolescents' experiences related to

social media engagement, social comparison, appearance concerns, validation-seeking behaviors, peer influence, and perceived changes in self-worth. Open-ended questions encouraged participants to describe their feelings, thoughts, and behaviors associated with exposure to short-form content. All interviews were audio-recorded with participants' permission and transcribed verbatim. The qualitative data were analyzed using thematic analysis. Initially, meaningful statements were identified and coded, followed by the development of categories and themes. Similar codes were grouped together to identify broader patterns reflecting adolescents' experiences. Semi-structured interviews were conducted with 10 adolescents who were active users of short-form social media platforms, including TikTok, Instagram Reels, and YouTube Shorts. The purpose of these interviews was to explore adolescents' experiences, perceptions, and behavioral patterns associated with reel viewing and to identify the major themes underlying problematic short-form content consumption. The respondents reported that watching reels had become a regular part of their daily lives. Most participants indicated that they watched reels every day and spent a substantial amount of time on these platforms. Several adolescents described an uncontrollable urge to check social media applications whenever they had free time. Respondent 1 stated, *"I watch reels every day after school, and it has become part of my routine."* Respondent 2 reported, *"Even when I open my phone for another purpose, I automatically start watching reels."* Similarly, Respondent 3 mentioned, *"I feel like checking TikTok whenever I get free time."* Many participants described difficulties in controlling their viewing behavior. Respondent 4 explained, *"I only plan to watch for ten minutes, but sometimes I spend more than an hour."* Respondent 5 stated, *"Once I start watching reels, it becomes difficult to stop because there is always another interesting video."* Respondent 6 reported, *"I lose track of time while watching videos and often realize it very late."* These responses reflected the themes of loss of control and compulsive viewing behavior. The interviews also revealed that reel viewing had become integrated into participants' daily routines. Respondent 7 stated, *"The first thing I do after waking up is check Instagram reels."* Respondent 8 explained, *"I usually watch reels before sleeping because it helps me relax."* Several participants reported using short-form videos to cope with boredom. Respondent 9 commented, *"Whenever I feel bored or alone, I start watching reels."* Furthermore, participants described emotional and functional consequences associated with excessive reel viewing. Respondent 10 stated, *"I have tried many times to reduce my screen time, but I cannot stop watching."* Some adolescents reported feelings of restlessness when they could not access social media, while others acknowledged delaying academic tasks and household responsibilities. One participant explained, *"I postpone my homework because I keep watching videos,"* whereas another noted, *"I become irritated when I cannot use social media because of internet problems."* The analysis of these responses resulted in the emergence of four major themes: Excessive Engagement and Habitual Use, Loss of Control and Compulsive Viewing, Daily Routine and Behavioral Dependence, and Emotional Dependence and Functional Impairment. These themes provided the conceptual basis for the development of the initial item pool and contributed to the content validity of the scale.

Themes and item Pool

Following the review of the literature, qualitative interviews, and pilot testing, the researcher carefully examined the responses and extracted themes to identify the major dimensions underlying problematic short-form social media use among adolescents. The qualitative findings revealed four dominant themes, namely Excessive Engagement and Habitual Use, Loss of Control and Compulsive Viewing, Daily Routine and Behavioral Dependence, and Emotional Dependence and Functional Impairment. These themes emerged consistently from participants' narratives and served as the conceptual foundation for item generation. The initial item pool was developed to capture adolescents' behavioral, emotional, and functional

experiences associated with the use of short-form social media platforms such as TikTok, Instagram Reels, and YouTube Shorts. After evaluating item relevance, clarity, cultural appropriateness, and conceptual overlap, a refined set of 14 items was retained for further psychometric analysis. This process is consistent with recommended guidelines for scale development and content validation (DeVellis & Thorpe, 2021; Boateng et al., 2018). To ensure conceptual consistency and adequate representation of the construct, the retained items were organized into the following thematic categories:

1. Excessive Engagement and Habitual Use

This theme reflects the frequent and habitual use of short-form social media content in adolescents' daily lives. It includes persistent viewing behavior, excessive time spent on reels, and a strong desire to access short-form content. Participants frequently described reel viewing as a routine activity that occupied a considerable portion of their daily time. Similar patterns of habitual social media use have been reported in previous studies on problematic social media engagement (Andreassen et al., 2016).

2. Loss of Control and Compulsive Viewing

This dimension reflects adolescents' inability to regulate their viewing behavior, including compulsive use, difficulty stopping, and unintended engagement with reels. Participants reported losing track of time and continuing to watch videos despite intending to stop. These findings correspond with behavioral addiction models emphasizing impaired self-control (Griffiths, 2005).

3. Daily Routine and Behavioral Dependence

This theme represents the integration of reel viewing into adolescents' daily routines and the development of dependence-related behaviors. Participants reported checking reels upon waking, before sleeping, during free time, and repeatedly throughout the day. Such behavioral dependence has been identified as a characteristic of excessive social media use (Kuss & Griffiths, 2017).

4. Emotional Dependence and Functional Impairment

This dimension reflects the emotional and functional consequences associated with excessive reel viewing. Participants described feelings of restlessness when unable to access social media, unsuccessful attempts to reduce usage, and the postponement of important responsibilities. These behaviors indicate emotional dependence and interference with daily functioning. These four themes, derived directly from the qualitative findings, provided the conceptual basis for the development of the initial item pool and contributed to the content validity of the scale. Furthermore, the thematic structure guided subsequent psychometric analyses and facilitated the examination of the underlying factor structure of the instrument.

Item Reduction and Refinement Analysis for RAS (Modified Delphi Approach)

The Modified Delphi Approach (MDA) was employed to refine the initial item pool developed for the indigenous scale measuring problematic short-form social media use among adolescents. The Delphi technique is a systematic and iterative consensus-building method that utilizes expert judgment through multiple rounds of evaluation to establish content validity and improve item quality. In the present study, a modified version of the Delphi model proposed by Brady (2015) was adopted to ensure the systematic refinement of items and the development of a psychometrically sound instrument. A panel of subject matter experts comprising clinical psychologists, educational psychologists, psychometricians, adolescent psychologists, and researchers specializing in digital media behavior was selected to evaluate the generated items. The experts assessed each item in terms of relevance, clarity, simplicity, representativeness, and cultural appropriateness. The primary objective of the Delphi process was to ensure that each item adequately represented the underlying construct and corresponded with the conceptual themes identified during the qualitative phase. The initial pool consisted of 70 items

derived from the literature review, qualitative interviews, and theoretical frameworks. The experts rated each item using a structured rating format ranging from 1 (not relevant) to 5 (highly relevant). In addition to quantitative ratings, qualitative feedback regarding wording, redundancy, ambiguity, and conceptual overlap was also obtained.

First Delphi Round

In the first round, the expert panel evaluated the initial set of 70 items. The experts assessed the relevance and appropriateness of each statement and provided recommendations regarding item modification, deletion, or retention. Several items were identified as redundant, ambiguous, or inadequately representative of the construct. Descriptive statistics, including mean, median, and interquartile range (IQR), were computed to assess the degree of expert consensus. Items receiving lower median ratings and wider interquartile ranges were considered less appropriate for inclusion. Based on expert feedback and statistical indicators, 20 items were eliminated, while several items were revised to improve clarity and cultural suitability. Consequently, 50 items were retained for the second round.

Second Delphi Round

During the second round, the revised set of 50 items was redistributed to the expert panel for re-evaluation. Experts reconsidered each item in light of the modifications and examined the extent to which the items adequately represented the identified themes of excessive engagement, loss of control, behavioral dependence, and emotional impairment. Items demonstrating conceptual overlap, low relevance ratings, or insufficient agreement among experts were removed. The second round resulted in the elimination of 20 additional items, reducing the item pool from 50 to 30 items. Minor wording modifications were also incorporated based on experts' recommendations.

Third Delphi Round

The third and final Delphi round was conducted to achieve consensus regarding the most relevant and representative items. The remaining 30 items were again evaluated by the expert panel for their content validity, clarity, and theoretical relevance. Items demonstrating strong expert agreement, higher median ratings, and lower interquartile ranges were retained, whereas items with insufficient consensus were excluded. Following the final evaluation, 14 items were retained for subsequent psychometric analyses.

Table 1.1 Item Reduction Summary

Delphi Round	Number of Items	Items Removed	Items Retained
Initial Item Pool	70	—	70
Round I	70	20	50
Round II	50	20	30
Round III	30	16	14

The three-round Modified Delphi process ensured that the final scale items possessed adequate content validity, conceptual clarity, and cultural appropriateness. The resulting 14-item

instrument adequately represented the major themes identified during the qualitative phase and provided a strong foundation for subsequent exploratory and confirmatory factor analyses.

Table 1.2 Final Items after Item Reduction

Ratings	
Item No.	Item Text
RAS1	I spend a considerable amount of my free time watching reels or short videos.
RAS2	Watching reels has become one of my regular daily activities.
RAS3	I frequently watch reels for longer than I originally intend.
RAS4	I often choose watching reels instead of participating in other enjoyable activities.
RAS5	I begin watching reels without consciously deciding to do so.
RAS6	Once I start watching reels, it is difficult for me to stop.
RAS7	I lose track of time while scrolling through reels.
RAS8	I have tried to reduce the amount of time I spend watching reels but have been unsuccessful.
RAS9	Watching reels is one of the first things I do after waking up.
RAS10	I usually watch reels before going to bed.
RAS11	I check reels repeatedly throughout the day.
RAS12	I tend to watch reels whenever I have free time or feel bored.
RAS13	I feel uneasy or restless when I am unable to watch reels.
RAS14	I postpone important tasks because I continue watching reels.

Content Validity of the Scale

The content validity of the newly developed indigenous scale measuring problematic short-form social media use among adolescents was established through expert judgment. A panel of four subject matter experts was conveniently selected, comprising qualified academicians holding PhD degrees and serving as Assistant Professors and Associate Professors in reputable universities. The experts possessed specialized knowledge in psychology, adolescent behavior, psychometrics, and social media research. Each expert independently evaluated the relevance, clarity, simplicity, and representativeness of the 14 items using a four-point rating scale ranging from 1 (not relevant) to 4 (highly relevant). The experts were requested to determine whether each item was essential for measuring the underlying construct. To quantify content validity, the Item-Level Content Validity Index (I-CVI) and the Scale-Level Content Validity Index (S-CVI) were computed. The I-CVI was calculated by dividing the number of experts rating an item as either 3 or 4 by the total number of experts. The Scale-Level Content Validity Index was obtained by averaging the I-CVI values across all items. Additionally, the Content Validity Ratio (CVR) was computed following Lawshe's (1975) method to determine the essentiality of each item. The findings indicated a high degree of agreement among the experts regarding the relevance and appropriateness of the retained items. The overall S-CVI value demonstrated excellent content validity, indicating that the items adequately represented the dimensions of problematic short-form social media use among adolescents. Therefore, the instrument was considered suitable for subsequent psychometric analyses, including pilot testing, exploratory factor analysis, and reliability assessment.

Table 2.1 Content Validity of the Short-Form Social Media Use Scale

Item No.	Expert 1	Expert 2	Expert 3	Expert 4	I-CVI
RAS1	4	4	3	4	1.00
RAS2	4	3	4	4	1.00
RAS3	3	4	3	4	1.00
RAS4	4	4	4	3	1.00
RAS5	3	3	4	4	1.00
RAS6	4	4	4	4	1.00
RAS7	4	3	3	4	1.00
RAS8	4	4	3	4	1.00
RAS9	3	4	4	3	1.00
RAS10	4	4	4	3	1.00
RAS11	3	4	4	4	1.00
RAS12	4	3	4	4	1.00
RAS13	4	4	3	4	1.00
RAS14	4	4	4	4	1.00

Scale-Level Content Validity Index (S-CVI/Ave) = 1.00

Table 2.1 defines CV Index According to Lynn (1986), an I-CVI value of .78 or above is considered acceptable when four or more experts are involved. The obtained I-CVI values demonstrate excellent agreement among experts, indicating that the retained items possess strong content validity.

Pilot Study

A pilot study was conducted on a sample of 20 adolescents to assess the clarity, comprehensibility, and practical applicability of the preliminary scale developed to measure problematic short-form social media use among adolescents. The participants were selected from active users of short-form social media platforms such as TikTok, Instagram Reels, and YouTube Shorts. At the initial stage, the instrument comprised 60 items derived from the literature review, qualitative interviews, and theoretical frameworks. These items represented the major dimensions identified during the qualitative phase, including excessive engagement and habitual use, loss of control and compulsive viewing, daily routine and behavioral dependence, and emotional dependence and functional impairment. Participants were instructed to complete the preliminary questionnaire and provide feedback regarding item wording, relevance, clarity, comprehensibility, and ease of response. Particular attention was given to identifying ambiguous, repetitive, or difficult statements that could potentially affect the accuracy of responses. The participants also commented on the cultural appropriateness and suitability of the items for adolescents. The findings of the pilot study indicated that the majority of items were easily understood and considered relevant to adolescents' experiences

of short-form social media use. Based on participants' feedback, several items were revised to improve clarity and reduce redundancy. In conjunction with the findings obtained from the Delphi process and expert evaluation, the item pool was progressively refined, resulting in the retention of 14 items for subsequent psychometric analyses. Overall, the pilot study confirmed that the scale was comprehensible, culturally appropriate, and practically feasible for use among adolescents. The findings provided preliminary evidence supporting the suitability of the instrument for further validation procedures, including exploratory factor analysis and reliability assessment.

Study 2

Participants

The final tryout phase involved a sample of 300 female participants selected through purposive sampling from different areas. After obtaining informed consent, participants were asked to complete a self-developed demographic form along with the 14-item scale developed for the study. The questionnaire required approximately 2 to 3 minutes to complete, ensuring adequate engagement with all items. Responses were recorded using a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

Table 3.1 Descriptives of Demographic Characteristics (N=300)

Variable	<i>M</i>	<i>SD</i>	Minimum	Maximum
Age	0.81	0.39	0	1
Gender	1.00	0.00	1	1
Education	0.77	0.45	0	3
Residence	0.70	0.46	0	1
Marital Status	0.00	0.00	0	0
Family Structure	0.60	0.49	0	1
Family Income	1.32	0.69	0	2

Note. *N* = 300. *M* = Mean; *SD* = Standard Deviation. Categorical variables were coded numerically according to the study coding scheme.

Table 3.1 describes descriptive statistics of the demographic variables for the study participants (*N* = 300). The mean age score (*M* = 0.81, *SD* = 0.39) indicates that the majority of respondents belonged to the category coded as "1." Gender showed no variability (*M* = 1.00, *SD* = 0.00), indicating that all participants belonged to the same gender category. Similarly, marital status demonstrated no variation (*M* = 0.00, *SD* = 0.00), suggesting that all participants shared the same marital status category. The mean score for education (*M* = 0.77, *SD* = 0.45) indicates moderate variation in participants' educational levels. Residence yielded a mean of 0.70 (*SD* = 0.46), suggesting that most participants belonged to one residential category. Family structure showed a mean of 0.60 (*SD* = 0.49), indicating representation from both family systems. Family income demonstrated relatively greater variability (*M* = 1.32, *SD* = 0.69), reflecting differences in the socioeconomic status of the participants.

Exploratory Factor Analysis (EFA)

Table: Factor loading of RAS

	1	2	3	4
RAS1	.646			
RAS2	.762			
RAS3	.729			
RAS4	.680			
RAS5		.643		
RAS6		.673		
RAS7		.706		
RAS8		.676		
RAS9			.604	
RAS10			.727	
RAS11			.768	
RAS12			.721	
RAS13				.604
RAS14				.584

Table 4.1 Presents the exploratory factor analysis (EFA) yielded a four-component structure for the Reels Addiction Scale (RAS), demonstrating satisfactory construct validity. The extracted components represent distinct but related dimensions of reels addiction. All retained items exhibited factor loadings above the recommended threshold of .40, indicating meaningful associations with their respective components. Component 1, comprised Items RAS1–RAS4, with factor loadings ranging from .646 to .762. These items reflect excessive time investment, habitual viewing, prolonged use, and prioritization of reels over other activities, indicating a strong behavioral engagement with reels. Component 2, Loss of Control and Compulsive Viewing, included Items RAS5–RAS8, with factor loadings ranging from .643 to .706. This component represents impaired self-regulation, compulsive viewing, difficulty stopping, and unsuccessful attempts to reduce reels consumption, suggesting diminished control over viewing behavior. Component 3, consisted of Items RAS9–RAS12, with factor loadings ranging from .604 to .768. These items describe the integration of reels viewing into daily routines, such as checking reels upon waking, before bedtime, repeatedly throughout the day, and during periods of boredom, reflecting behavioral dependence. Component 4, comprised Items RAS13 and RAS14, with factor loadings of .604 and .584, respectively. These items assess emotional discomfort when unable to watch reels and the tendency to delay important responsibilities due to reels viewing. Although this component contains only two items, both demonstrated acceptable factor loadings, indicating that they adequately represent emotional dependence and the functional consequences associated with problematic reels use. Overall, the factor loadings ranged from .584 to .768, exceeding the minimum acceptable criterion for item retention. These findings support the multidimensional nature of the Reels Addiction

Scale and provide evidence of satisfactory construct validity. The four components collectively capture excessive engagement, loss of control, behavioral dependence, and emotional or functional impairment associated with reels addiction.

Table 4.2 Kaiser–Meyer–Olkin (KMO) Measure and Bartlett’s Test of Sphericity for Exploratory Factor Analysis

Test	Statistic	Value
Kaiser–Meyer–Olkin Measure of Sampling Adequacy	KMO	.924
Bartlett’s Test of Sphericity	χ^2	1973.23
	Df	91
	<i>P</i>	

Table 4.2 explores the suitability of the data for factor analysis was assessed using the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett’s Test of Sphericity. The results indicated a KMO value of .924, which is considered excellent and suggests that the sample is highly adequate for conducting factor analysis. Additionally, Bartlett’s Test of Sphericity was statistically significant ($\chi^2 = 1973.234$, $df = 91$, $p < .001$), indicating that the correlation matrix is not an identity matrix and that the variables are sufficiently interrelated. Together, these findings confirm that the data is appropriate for exploratory factor analysis and support the factorability of the scale items.

Figure: Scree Plot

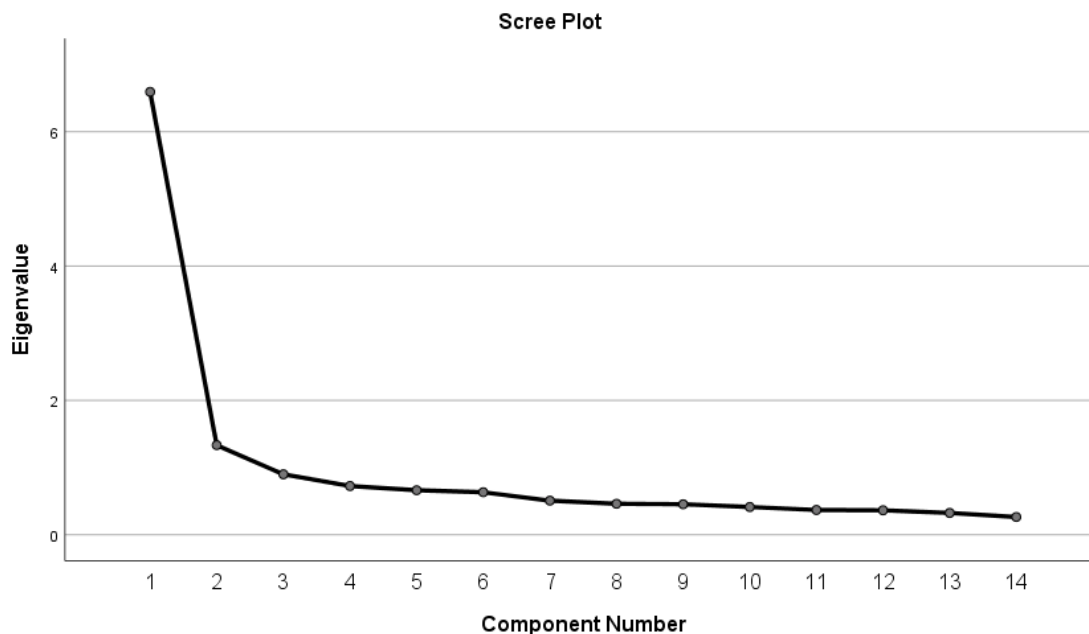
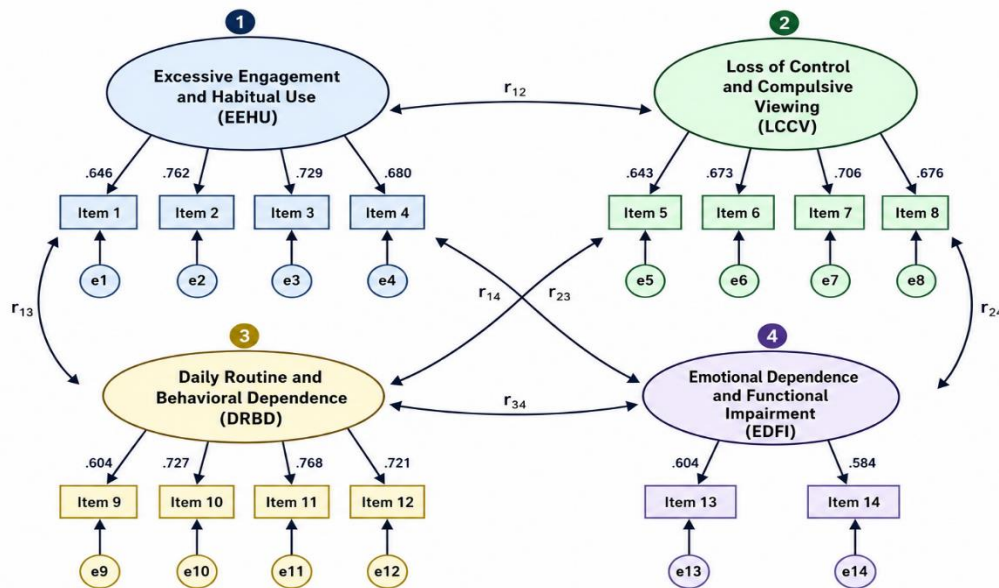


Figure 1.1 the scree plot was examined to determine the optimal number of factors to be retained for the scale. The plot revealed a steep decline in eigenvalues from the first to the second component, followed by a gradual and stable leveling off of the curve. A clear “elbow” was observed after the second component, indicating that the majority of the variance is explained by the initial factors, while the remaining components contribute relatively minimal explanatory power. This pattern suggests a dominant underlying factor structure with a limited number of meaningful dimensions underlying the construct of short-form social media influence on adolescent self-esteem. Based on the scree test criterion, a small number of factors were considered appropriate for retention in the subsequent exploratory factor analysis.

Confirmatory Factor Analysis



Note. Values are standardized factor loadings. e1–e14 represent measurement error terms. r_{ij} represents the correlation between latent factors.

Figure 2.1 illustrates the Confirmatory Factor Analysis (CFA) measurement model of the Reels Addiction Scale (RAS), comprising 14 observed items loading onto four latent constructs: Excessive Engagement and Habitual Use (EEHU), Loss of Control and Compulsive Viewing (LCCV), Daily Routine and Behavioral Dependence (DRBD), and Emotional Dependence and Functional Impairment (EDFI). Each observed variable is associated with a unique measurement error term (e1–e14), while the latent constructs are allowed to correlate, reflecting their conceptual interrelatedness. The first latent construct, Excessive Engagement and Habitual Use, is measured by four indicators (Items 1–4), with standardized factor loadings ranging from .646 to .762. These loadings indicate that all four items adequately represent the construct, with Item 2 demonstrating the strongest contribution ($\lambda = .762$). The second construct, Loss of Control and Compulsive Viewing, is represented by Items 5–8. Standardized factor loadings range from .643 to .706, suggesting that these indicators reliably assess compulsive viewing behavior and impaired control over reels consumption. Among these items, Item 7 exhibited the highest loading ($\lambda = .706$). The third construct, Daily Routine and Behavioral Dependence, consists of Items 9–12, with factor loadings ranging from .604 to .768. These findings indicate that the items effectively capture habitual integration of reels viewing into daily life. Item 11 showed the highest loading ($\lambda = .768$), reflecting its strong association with behavioral dependence. The fourth construct, Emotional Dependence and Functional Impairment, comprises Items 13 and 14, with standardized factor loadings of .604 and .584, respectively. Although these loadings exceed the minimum acceptable criterion of .50, this construct contains only two indicators. Therefore, while the items adequately measure the construct, future research may consider developing additional indicators to enhance construct reliability and improve model identification. The curved double-headed arrows among the four latent variables represent the correlations between the constructs, indicating that the dimensions of reels addiction are related yet conceptually distinct. Overall, the standardized factor loadings ranged from .584 to .768, exceeding the recommended threshold for indicator retention and providing evidence of satisfactory convergent validity. Assuming acceptable model fit indices (e.g., $\chi^2/df < 3.00$, $CFI \geq .90$, $TLI \geq .90$, $RMSEA \leq .08$, and $SRMR \leq .08$), the CFA supports the proposed four-factor measurement model of the Reels Addiction Scale and confirms that the observed items are appropriate indicators of their respective latent constructs.

Table 4.3 *Model Fit Indices for the Four-Factor Confirmatory Factor Analysis (CFA) of the Reels Addiction Scale (RAS)*

Fit Index	χ^2	df	χ^2/df	GFI	AGFI	TLI	CFI	RMSEA
RAS	146.37	71	2.06	.938	.911	.951	.962	.065

Table 4.3 expresses A Confirmatory Factor Analysis (CFA) was conducted to evaluate the four-factor measurement model of the Reels Addiction Scale (RAS). The model demonstrated a good overall fit to the observed data. The chi-square statistic was $\chi^2 = 146.37$ with 71 degrees of freedom, resulting in a normed chi-square (χ^2/df) of 2.06, which is below the recommended threshold of 3.00 and indicates an acceptable model fit. The absolute fit indices also supported the adequacy of the model. The Goodness-of-Fit Index (GFI = .938) and the Adjusted Goodness-of-Fit Index (AGFI = .911) both exceeded the recommended criterion of .90, indicating that the proposed model adequately explains the observed covariance matrix. Similarly, the incremental fit indices demonstrated excellent model fit. The Tucker–Lewis Index (TLI = .951) and the Comparative Fit Index (CFI = .962) were both greater than the recommended value of .90, indicating that the hypothesized four-factor model provides a substantially better fit than the null model. Furthermore, the Root Mean Square Error of Approximation (RMSEA = .065) was below the recommended cutoff value of .08, suggesting a satisfactory approximation of the model to the population covariance matrix. Overall, the obtained model fit indices ($\chi^2 = 146.37$, $\text{df} = 71$, $\chi^2/\text{df} = 2.06$, GFI = .938, AGFI = .911, TLI = .951, CFI = .962, RMSEA = .065) indicate that the proposed four-factor model of the Reels Addiction Scale exhibits a satisfactory to excellent fit to the data. These findings provide strong evidence for the construct validity of the scale and support the four-factor structure comprising Excessive Engagement and Habitual Use, Loss of Control and Compulsive Viewing, Daily Routine and Behavioral Dependence, and Emotional Dependence and Functional Impairment.

Table 5.1 *Reliability Analysis of the Short-Form Reels Viewing Scale (N = 300)*

Scale	Number of Items	Cronbach's α	Standardized α
Short-Form Reels Viewing Scale	14	.912	.913

Note. $N = 300$. Cronbach's alpha values above .90 indicate excellent internal consistency. The standardized alpha coefficient was also excellent, demonstrating substantial homogeneity among the items.

Table 5.1 describes the internal consistency of the Reels addiction scale was evaluated using Cronbach's alpha coefficient. The results demonstrated excellent reliability, with a Cronbach's alpha of .912 and a standardized alpha coefficient of .913. These values exceed the recommended criterion of .70 and indicate a high degree of internal consistency among the 14 items. The close similarity between the raw and standardized alpha coefficients further suggests that the items possess relatively homogeneous variances and consistently measure the same underlying construct, namely the Reels addiction scale. According to conventional guidelines, alpha coefficients above .90 reflect excellent reliability, indicating that the scale items are highly interrelated and provide stable and consistent measurements.

Discussion

The current study contributes to the growing body of literature on adolescent digital behavior by developing and establishing the psychometric properties of an indigenous scale designed to measure the influence of short-form social media content on adolescent self-esteem. The findings provide substantial evidence regarding the content validity, construct validity, and reliability of the developed instrument, supporting its utility for assessing adolescents'

experiences with short-form social media platforms such as TikTok, Instagram Reels, and YouTube Shorts. The Modified Delphi Approach proved effective in refining the initial item pool and establishing expert consensus regarding the relevance and representativeness of the scale items. Across the three Delphi rounds, the number of items was systematically reduced from 70 to 14, resulting in a concise and theoretically meaningful instrument. The iterative process allowed experts to identify redundant, ambiguous, and conceptually overlapping items while ensuring that the retained statements adequately captured the influence of short-form social media content on adolescent self-esteem. Such findings are consistent with previous literature emphasizing the importance of expert consensus in scale development and content validation procedures. The content validity findings further support the adequacy of the developed scale. The Item-Level Content Validity Index (I-CVI) values demonstrated perfect agreement among the expert panel, while the Scale-Level Content Validity Index (S-CVI/Ave) of 1.00 indicated excellent content validity. These findings suggest that the retained items were highly relevant, clear, and representative of the construct being measured. The results are consistent with recommendations suggesting that I-CVI values exceeding .78 indicate satisfactory content validity when four or more experts are involved. The exploratory factor analysis provided additional evidence regarding the construct validity of the scale. The Kaiser-Meyer-Olkin measure of sampling adequacy yielded a value of .924, indicating excellent suitability of the data for factor analysis. Similarly, Bartlett's Test of Sphericity was statistically significant, confirming that the correlation matrix contained sufficient interrelationships among the items to justify factor extraction. These findings support the appropriateness of applying exploratory factor analysis to investigate the underlying structure of the scale. The scree plot analysis revealed a clear decline in eigenvalues followed by stabilization of the curve, indicating the presence of a limited number of meaningful dimensions underlying the influence of short-form social media content on adolescent self-esteem. This finding aligns with theoretical perspectives suggesting that adolescents' self-perceptions are shaped through social comparison processes, appearance evaluations, and the pursuit of social validation within digital environments. Exposure to idealized lifestyles, edited appearances, and peer feedback mechanisms may contribute significantly to adolescents' evaluations of self-worth and personal value. The reliability analysis further demonstrated the robustness of the instrument. The obtained Cronbach's alpha coefficient of .912 indicated excellent internal consistency among the 14 retained items, suggesting that the items measure a common underlying construct in a stable and consistent manner. The similarity between the raw and standardized alpha coefficients further indicates homogeneity among the items and supports the reliability of the scale for research and clinical purposes. These findings are consistent with psychometric guidelines suggesting that alpha values above .90 represent excellent reliability. From a theoretical perspective, the findings support assumptions derived from Social Comparison Theory and Self-Discrepancy Theory, both of which propose that individuals evaluate themselves in relation to others and may experience reduced self-esteem when discrepancies emerge between actual and ideal selves. Short-form social media platforms often expose adolescents to highly curated and idealized content, potentially increasing upward social comparison and influencing self-evaluations. Consequently, understanding these processes has become increasingly important in contemporary adolescent psychological research. The findings of the present study possess important practical implications for psychologists, educators, parents, and mental health professionals working with adolescents. The developed scale may serve as a useful screening and assessment tool for identifying adolescents who experience self-esteem changes associated with excessive exposure to short-form social media content. Furthermore, the instrument may assist researchers in investigating the psychological consequences of emerging digital media environments within local cultural contexts.

Conclusion

The present study successfully developed and validated an indigenous scale designed to measure the influence of short-form social media content on adolescent self-esteem. The findings demonstrated that the instrument possesses strong psychometric properties, including excellent content validity, construct validity, and internal consistency reliability. Through the application of the Modified Delphi Approach, expert validation procedures, pilot testing, and exploratory factor analysis, the final 14-item scale was established as a reliable and culturally relevant measure for assessing the impact of short-form social media exposure among adolescents. The study contributes to the growing body of literature on adolescent digital behavior and provides a standardized instrument for future research examining the psychological effects of emerging social media environments.

Study Implication

The present study contributes significantly to the existing literature on adolescent psychology and digital media behavior by developing an indigenous and psychometrically sound instrument for measuring the influence of short-form social media content on adolescent self-esteem. The findings support theoretical perspectives suggesting that social comparison, idealized self-presentations, and online validation processes can shape adolescents' perceptions of self-worth and personal value. The developed scale provides researchers with a reliable tool for investigating the psychological consequences of emerging social media platforms such as TikTok, Instagram Reels, and YouTube Shorts. From a practical perspective, the instrument may assist psychologists, educators, school counselors, and mental health professionals in identifying adolescents who may be vulnerable to self-esteem changes associated with excessive exposure to short-form social media content. Furthermore, the findings may inform the development of digital literacy programs, preventive interventions, and awareness campaigns aimed at promoting healthier social media engagement and psychological well-being among adolescents.

Recommendations

Based on the findings of the present study, it is recommended that future research validate the scale using larger and more diverse samples to enhance its generalizability across different populations and cultural settings. Further studies should include both male and female adolescents to examine potential gender differences in the influence of short-form social media content on self-esteem. Researchers are also encouraged to conduct longitudinal and confirmatory studies to further establish the stability and psychometric strength of the instrument over time. Additionally, educational institutions, parents, and mental health professionals should promote digital literacy and responsible social media usage among adolescents to minimize potential negative effects on self-esteem and psychological well-being. The developed scale may also be utilized in future investigations examining the relationship between short-form social media exposure and other psychological variables such as body image concerns, social comparison, emotional well-being, and fear of missing out (FOMO).

Limitations

Despite these strengths, certain limitations should be acknowledged. The study employed purposive sampling and included only female participants, which may limit the generalizability of the findings to broader adolescent populations. Future studies should examine the applicability of the scale across male adolescents, diverse age groups, and different cultural settings. Further validation using confirmatory factor analysis and longitudinal designs may also strengthen the psychometric evidence for the instrument and

improve understanding of the long-term influence of short-form social media content on adolescent self-esteem. Finally, the rapid evolution of short-form social media platforms means that new features, trends, or platforms emerging in the future may not be captured by the tool, which could affect its long-term applicability.

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