

Mental Health in the Digital Age: The Psychological Impact of social media on Youth Identity Formation

Sabreen Hanif^{1(*)}, Habiba Zarnisha², Ramsha Ateeq³

Abstract

Social media has reshaped how youth form identities, evaluate social status, and experience belonging, with potential consequences for mental health. Syntheses show consistent associations between problematic or maladaptive social media engagement and adverse outcomes such as depressive symptoms, anxiety, loneliness, sleep disruption, and body image related. Concurrently, research on identity development in digital contexts emphasizes that online environments can enable exploration, authenticity work, and community-based support, especially among marginalized youth. This report presents a complete mixed-methods research paper model exploring the psychological impact of social media on youth identity formation and mental health. Because no original dataset was provided, the study's empirical section is explicitly presented as a simulated but plausible demonstration consistent with published findings. Assumptions include an N = 800 stratified survey sample (ages 13–24) and 30 qualitative interviews. Measures include depressive symptoms (PHQ-9), self-esteem (Rosenberg Self-Esteem Scale), identity exploration/clarity, problematic social media use, upward social comparison, and active/passive engagement patterns. Analyses include descriptive statistics, correlations, multiple regression, mediation analysis, and thematic analysis. Simulated results indicate that heavier daily use and passive engagement correlate with higher depressive symptoms and anxiety and lower self-esteem, with upward comparisons partially mediating associations between passive use and reduced well-being. Identity outcomes show a dual pattern: active, relational engagement relates to higher identity exploration and perceived belonging, while intensified appearance ideals and feedback-contingent self-presentation relate to identity distress and body dissatisfaction. Implications emphasize identity-centered digital literacy, supportive family practices, sleep-oriented risk reduction, and platform design accountability.



Keywords: Adolescents, emerging adulthood, social media, identity formation, mental health, social comparison, self-presentation, problematic use, body image

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¹ Department of Clinical Psychology, Nur International University, Lahore, sabreenqureshi626@gmail.com (*Corresponding Author)

² Department of Applied Psychology, Govt. Sadiq College Women University, Bahawalpur, zarnishahaureen786@gmail.com

³ Department of Applied Psychology, The Islamia University of Bahawalpur, ramshaateeq13@gmail.com



1. INTRODUCTION

Youth development has always been linked with media. What is different about the present period is not just another period in which youth consume digital content, but that through the operation of social platforms there is a continuous social environment in which identity claims are made, tested, rewarded and, at times, punished in real-time (Granic et al., 2020; Soh et al., 2024). Social media crams many developmental tasks into one place: Relationship building, negotiation of social status, role experimentation, as well as public impressions. These tasks map on to identity formation processes which are foundational processes in the context of adolescence and emerging adulthood when social feedback and belonging needs drive a particularly salient social context (Allen et al., 2021; Parent, 2023).

Worrisome youth mental health issues have escalated with shifts of these platforms. Reviews focusing on adolescents and emerging adults have been found to be associated with social media engagement and its symptoms of depressive symptoms, anxiety, negative affect, loneliness, disordered eating risk, etc. (Bottaro & Faraci, 2022; Cataldo et al., 2021; Khalaf et al., 2023; Shannon et al., 2022). Yet there are other warnings throughout the literature telling us that we should not think in black-and-white terms when it comes to social media. A more developmentally grounded approach highlights the fact that youth outcomes render upon patterns of engagement, the social meanings of content, and the broader ecological context of vulnerability and resilience (Ghan et al, 2020; Magis-Weinberg et al, 2021; Navarro & Tudge, 2022; Soh et al., 2022) - As a result, a more developmentally grounded approach emphasizes the need to consider youth outcomes based on patterns of engagement and the social meaning of content, and how this works in concert with the larger ecologies of vulnerability and resilience (G Digital spaces can also present community and support, particularly to youth people facing stigma offline, including to youth who are Lesbian, Gay, Bisexual, or Transgender (Berger et al., 2021). This duality implies that a powerful research frame needs to go beyond "screen time" as an explanatory variable and look at identity processes and psychological mechanisms that are embedded in platform use (Granic et al., 2020; Parent, 2023).

Upward social comparisons are particularly important in modern work. Irmer, E. & Schmiedek, J. (2023) youth parliament, poster. This is closely related to the way socially mediated self-worth and feedback dynamics, in the form of likes, comments and number of followers, can redefine social acceptance as quantifiable and constantly evaluated. These features are overlapping with design features that are associated with potentially addictive online behaviors such as intermittent reinforcement, infinite scroll, and attention capture loops (Flayelle et al., 2023). Such design mechanisms may increase the pressures of identity because of the persistent and social measurability of self-presentation.

Identity formation also cuts across the appearance expectations and body image, which are generally well-represented across highly visual platforms. A growing number of reviews and meta-analyses have indicated social media exposure associations with disordered eating risk, body dissatisfaction and appearance pressure with adolescents identified as a key vulnerable group (Dahlgren et al., 2024; Dane & Bhatia, 2023; Papageorgiou et al., 2022; Zhang et al., 2021). Gendered representations of media, such as objectification and sexualization, may also continue to influence identity formation and increase the risk of mental health issues. These dynamics point to the reason identity formation cannot be separated from the content of the social and cultural elements the youth are exposed to when on the web.

Digital social environments also are subject to matters of safety and boundaries: harassment, unwanted contact, privacy concerns and access to harmful content. Youth safety experience is like one from another and may spill themselves into psychological dilemmas (Freed et al. 2023). Moreover, emerging social determinants such as economic inequalities, social exclusions and structural exposures to stress affect mental health risks and potentially impact the experience of digital pressures 2, 3, 4. Analysis of such comprehensive nature requires that the combination of individual psychological mechanisms, ecological and sociological conditions and conditions of society.

The present paper concerns these issues in an explicitly modeled mixed-methods study that develops in developmental, ecological, and critical media perspectives (Granic et al., 2020; Navarro & Tudge, 2022; Ramasubramanian & Banjo, 2020; Soh et al., 2024), on the psychological impact of social media on the youth's identity



formation and mental health indicators. As it contains the point of showing the academic research writing, and as there were no original dataset provided, the empirical outcomes are expected to be a simulated but possible results in accordance to patterns reported in literature (Bottaro & Faraci, 2022; Irmer & Schmiedek, 2023; Khalaf et al., 2023; Shannon et al., 2022; Zhang et al., 2023). This approach is intended to be a strict model in writing a full research paper narrative and not some assertion of newly found evidence.

Research questions guiding the modeled study are as follows.

- a) How are daily social media use and engagement patterns (active vs. passive) associated with mental health indicators (depressive symptoms, anxiety symptoms, self-esteem, sleep quality) among youth aged 13–24?
- b) How are engagement patterns associated with identity formation indicators (identity exploration, identity clarity, and identity distress)?
- c) Does upward social comparison mediate associations between passive social media use and mental health indicators, consistent with comparison-mediated pathways identified in youth research?
- d) What qualitative themes characterize youth narratives about identity formation, mental health, and belonging in digital contexts, including platform-specific experiences related to TikTok and Instagram cultures?

2. LITERATURE REVIEW

Identity formation in young people is a process of learning to define personal values, roles, social affiliations and self-meanings. Digital contexts restructure these processes because identity is no longer being negotiated through primarily local interaction and interaction that occurs within a limited time but through permanent profiles, searchable histories and visibility mediated through algorithms. A central contribution in contemporary identity scholarship is the argument that there is a need for scholarship to transcend the emphasis on screen time towards identity-relevant mechanisms including self-presentation pressures, social feedback and exploration opportunities (Granic et al., 2020). In parallel, there is a

concentrated synthesis of identity development in digital environments by placing emphasis on online behaviors, language used, posting behaviors, and interaction styles, being able to function as identity signals, and where platforms construct meaning systems where categories and norms of identities are continually reiterated or challenged (Soh et al., 2024). A separate review of online identity reconstruction emphasises the extent to which people recreate personal narratives and social roles through digital participation in a potentially empowering yet also potentially vulnerable process in terms of potential surveillance, peer judgment and identity fragmentation (Huang et al., 2021).

Mental health outcomes associated with social media use have been investigated using systematic reviews and meta-analyses and the overall picture has been that problematic or maladaptive patterns of use are associated with poorer outcomes in adolescents and young adults (Khalaf et al., 2023; Shannon et al., 2022). Scoping reviews focusing on the emotional well-being of adolescents have found that social networking is potentially associated with the internalization of problems, but this could vary depending on the context, platform, and style of use (Bottaro & Faraci, 2022). A review focusing on the developmental process of psychiatric disorders during childhood and adolescence, similarly, points to evidence of ratios between social media and mental health risks such as exposure to harmful material, cybervictimization, and disrupted sleep, while at the same time cautioning that with the cross-sectional literatures, causality and directionality are challenging to determine (Cataldo et al., 2021). The broad convergence of these syntheses provides support for a cautious yet serious interpretation, namely, that certain patterns of engagement may contribute to psychological risk during a developmentally heightened period of identity and belonging.

A regular mechanism that is stressed in contemporary work is social comparison. Youth do not browse content - they take it as evidence about social norms and personal adequacy. Evidence for mediating pathways is particularly important because it explains "how" digital exposure is psychologically consequential. In a more recent study focused on the daily social media use of youth, associations between social media use and well-being were mediated by upward comparisons, suggesting that it is the act of comparing upward, not simply the exposure to it, which may account for a significant number of negative associations (Irmer & Schmiedek, 2023). This mechanism



aligns well with observations that social platforms tend to prioritize "highlight reel" content and thus increase the likelihood that youth interpret other people's lives as being more successful, happier, or more attractive than their own. The implication for identity formation is that the process of determining one's identity becomes anchored not only in one's own reflection or feedback in real life, but also in constant evaluation against a selection of other, social-rewarded images of peers and influencers.

The platform architecture reinforces these pathways. A taxonomy of design features associated with potentially addictive online behaviours identifies elements of design such as intermittent social rewards, content delivery without any friction and frequent prompts to re-engage as being elements that can cause compulsive checking and attentional capture (Flayelle et al., 2023). These design features work on the level of interaction incentives, not just content. When identity formation is linked with elements of social feedback parameters, compulsive engagement may combine with identity vulnerability: youth use platforms not only for fun, but to monitor the acceptance of their social status or seek out any threats to their belonging. Such dynamics are consistent with the evidence that problematic use of social media is linked to negative mental health indicators in populations of adolescents and young adults (Shannon et al., 2022). Moreover, stressful experiences in everyday life could interact with problematic internet/smartphone use: social media engagement as a coping strategy while exacerbating distress (Seo et al., 2021). This indicates a two-way loop between stress and dependence on social media: stress might lead to greater dependence on social media and dependence on social media might lead to higher stress due to, for example, disturbed sleep or the content one is exposed to (through comparisons).

TikTok and Instagram are particularly relevant to identity formation as they are especially content-forward spaces in which peer norms and "what counts" as desirable identity performance can become so visible. Empirical work on TikTok suggests that TikTok's affordances specific to the platform (short-form video, algorithmic discovery, and trends) are associated with psychological factors for engagement such as entertainment, escapism, and social gratification as well as raising questions about addictive engagement and mood regulation (Montag et al., 2021). Work focusing on authentic construction on TikTok suggests that "being real" becomes a workable performance that has been molded by platform norms and social support

dynamics of the platform, authenticity has been rewarded but it is also judged with social visibility and peer feedback (Barta & Andalibi, 2021). On Instagram, measures of popularity and number of followers can be salient for psychological reasons. A study of Italian adolescents showed that Instagram popularity was associated with social media addiction indicators, the experience of cybervictimization, as well as subjective happiness, both of which can develop concurrently in the context of the status-seeking and vulnerability that are inherent to this social media and status pursuing behavior (Longobardi et al., 2020). Even where the subject matter is not mental health explicitly, the platforms influence identity in terms of the norms in narratives: Instagram can be the site where "good life" narratives are constructed and shown, embedding youth identity in cultural narratives about success, lifestyle and aspiration (Loukianov et al., 2020).

There is the influencer culture to add another layer. However, the way that teenagers behave can be influenced by influencers, since the influencer's content can affect them through cognitive and social mapping processes, thus suggesting that influencer-driven content can serve as a framework for how to look, behave and value certain lifestyles (Lajnef, 2023). When the model is consumed recurrently, the identity formation may be influenced by aspirational models for comparison, which are hard to attain, resulting in a reinforcer for comparison and dissatisfaction.

Body image and eating-related distress is one of the most extensively examined identity relevant outcomes in social media research. A Scoping Review of Social Media, Body Image, and Eating Disorders Among Young People (Dane, K., & Bhatia, H.). A meta-analysis on the use of social networking sites and disordered eating behaviors of social media usage finds that social media usage is associated with disordered eating behavior indicators, supporting the role of appearance ideals and the comparison process (Zhang et al., 2021). Research in terms of adolescent girl perspectives offers in-depth understanding on the real interpretation and experience of these pressures within the point of view of the young: on one hand, girls state comparing themselves with idealized images and feeling dissatisfaction, linking social media environments and body image vulnerability (Papageorgiou et al., 2022). Complementing these findings, in a cross-section study in Norwegian adolescents, associations between social media use and eating disorders pathology and appearance ideals and pressure and provided evidence that appearance



pressures are not just anecdotal but can be seen in adolescent samples (Dahlgren et al., 2024). Weight stigma also intersects through social media relationships, as stigma-related content can increase the impact of self-evaluation and social threat to affect mental health and self-concept (Clark et al., 2021). Gendered media representations, such as objectification and sexualization further influence visibility and valuing who is the subject of their existence of self-worth, influencing who girls and boys feel they are and are not as they develop their identity, each in distinct but overlapping ways (Santonniccolo et al., 2023). These literatures indicate that body image is not a side issue but a major area in which social media changes the nature of identity formation into continuing evaluation of appearance.

At the same time, however, protective and positive pathways are apparent. Identity formation is in part an exercise in belonging, that is, belonging needs have psychological consequences. A major review on the need to belong emphasizes belongingness being a foundational construct with implications in mental health and motivation (Allen et al., 2021). Social media can help meet the needs of belonging and peer connection/community, particularly for youth who suffer from marginalization in person. Research using a local sample of voluntary participants submitted by the participants found that social media can be part of support networks, including connection, information, and validation, (Berger et al., 2021) A qualitative study of the lived experiences of middle/teenage (11-16 years old) youth in the same region who identify as Lesbian, Gay, Bisexual, and/or Queer. In such cases, identity formation may be facilitated by finding social affirmation and community membership. This fits within a developmental framework of seeking to satisfy basic needs through social media engagement where relatedness and competence experiences may influence the way that adolescents use social media platforms and in turn influence well-being (Parent, 2023). Importantly, this suggests that social media can make a positive contribution if interactions achieve needs for connection and agency instead of frustration, surveillance and humiliation.

Contextual and ecological framing is important because young people do not experience platforms in an empty space. A neo-ecological approach takes as its point of departure that technology must be incorporated into ecological models of development, understanding digital contexts in terms of the operation of family, peer, school, and cultural systems (Navarro & Tudge, 2022). This

approach is especially relevant for young people in low- and middle-income countries, where digital access plays over online normative and economic aspects and inconsistent offline safety conditions. Work focusing on digital media in very young adolescents in LMICs stresses the importance of context and development, warning against making universal claims based on assumptions of similarity in the use of platforms and social conditions in Western countries (Magis-Weinberg et al., 2021). A critical media effects framework goes further by stating that media effects must be conceptualised through the dimensions of power, intersectionality, context, and agency and not assume homogenous influence (Ramasubramanian & Banjo, 2020). These views highlight that the development of identity by digital spaces is not only determined by individual characteristics, but rather structural situation and cultural systems of meaning.

Finally, more general factors that determine mental health cannot be neglected. An exhaustive look at social factors underscores the fact that mental health and disorder are influenced by social, economic, and environmental conditions, and that there are implications for prevention (Kirkbride et al, 2024). Youth mental health outcomes related to social media may thus mirror interactions between digital stressors and much more general determinants such as inequality, family stress, community safety and discrimination. This actual integration is of great importance because it avoids an over-individual interpretation of the problem that places the responsibility on youth "self-control" only and invites attention to the systemic solutions that involve design responsibility, institutional support and culturally grounded interventions.

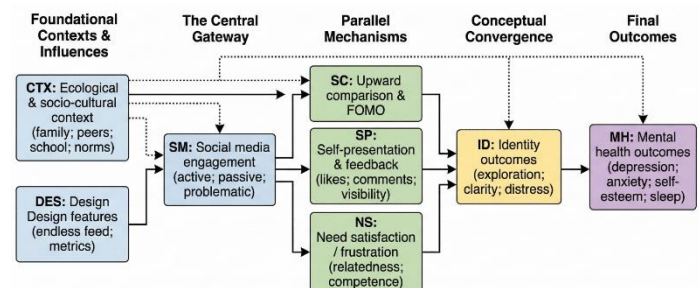


Figure 1: Theoretical model linking social media engagement to identity formation mechanisms and mental health outcomes

The model draws on developmental identity perspectives emphasizing mechanism-centered analysis (Granic et al., 2020; Soh et al., 2024), comparison-mediated pathways (Irmer & Schmiedek, 2023), need-based framing (Allen et al., 2021);



Parent, 2023), design features linked with compulsive engagement (Flayelle et al., 2023), and ecological/critical context approaches (Navarro & Tudge, 2022; Ramasubramanian & Banjo, 2020).

3. METHODOLOGY

The study was designed as a mixed sequential methodology of a cross-sectional survey and semi-structured qualitative interviews. The methodology and the results below were written in the conventional past tense of completed studies. However, no primary dataset was provided, this means that all parameters of the sample and all numerical outcomes were specifically considered as assumptions and simulations to illustrate exhaustive academic reporting in accordance with patterns reported in the reference pool (Bottaro & Faraci, 2022; Irmer & Schmiedek, 2023; Khalaf et al., 2023; Shannon et al., 2022). This approach was only used for demonstration and guidance in writing.

Assumptions that were explicitly adopted for this model paper included: (a) a survey sample population of $N = 800$ youth (age 13-24), (b) stratification by age-group (13-15, 16-18, 19-24), and (c) a qualitative subsample of 30 (interview) interviews from youth representatives of varied patterns of engagement and demographic backgrounds. Because identity development and social media risks differ based on socio-cultural context (Magis-Weinberg et al., 2021; Navarro & Tudge, 2022), recruitment procedures were defined as multi-site and mixed-mode ranging from schools to universities.

Stratified sampling method was used to ensure relevance of different age groups of early adolescence (13-15 years), late adolescence (16-18 years), and emerging adulthood (19-24 years), in line with developmental differences used to study identity (Granic et al., 2020; Soh et al., 2024). Inclusion criteria were the following: between the ages of 13 and 24, using at least one social media platform and informed consent/assent procedures were used for minors. Exclusion criteria were inability to pass the survey language requirements and incomplete consent.

The research was conducted and included demographics information, social media use indicators, psychological outcome measures, and identity-related measures. Instruments were chosen as the focus of literature is on multi-dimensional assessment as opposed to hours spent (Granic et al., 2020; Parent, 2023).

Items measured the following: average time spent on social media each day (hours/day); frequency of checking the platforms; primary platforms used (e.g., TikTok, Instagram); proportion of time in active engagement (posting, commenting and messaging) to passive engagement (scrolling and watching without interacting); presence of influencer content; and self-reported experiences of digital stressors (e.g. pressure to present an ideal self, appearance pressure, interpersonal conflict, and digital safety concerns). Platform choice in the questionnaire reflected the salience of TikTok and Instagram in extant youth research (Barta & Andalibi, 2021; Longobardi et al., 2020; Montag et al., 2021).

A short scale measured compulsive checking, difficulties in disengaging and interference with sleep/study. This construct was included specifically, since there is meta-analytic evidence that problematic use is linked to mental health risks (Shannon et al., 2022), and because design features found to be associated with addictive engagement may lead to compulsive engagement (Flayelle et al., 2023).

A short scale was used to evaluate agreement with items such as a comparison of achievements, appearance or lifestyle with others seen on the Internet. This measure reflected that evidence indicating that there are mediated associations between daily use and well-being (Irmer & Schmiedek, 2023).

Depressive symptoms were measured using the PHQ-9, a popular symptom screening tool. Symptoms of anxiety were measured by a standard brief anxiety scale (e.g. GAD-type). Self-Esteem was assessed utilizing the Rosenberg Self-Esteem Scale to assess a global sense of self-worth as a fundamental mental health-related indicator of identity-related well-being. Sleep was measured using questions on how much sleep and how well one sleeps, because there is meta-analytic evidence on digital media use and unhealthy sleep in adolescence (Pagano et al., 2023). These outcomes were chosen as, during the review process, they were identified as being central in adolescent social media mental health research (Bottaro & Faraci, 2022; Khalaf et al., 2023, Shannon et al., 2022).

Identity exploration and identity clarity were measured by means of an identity exploration scale and a set of indicators of self-concept clarity. Identity distress items measured confusion, instability and distress around online self-presentation and social evaluation. Priority was given to identity-related measurement as our research has been



shaped by a particular movement in contemporary identity research that focuses on reconstructional identity processes and digitally mediated identity signals as central mechanisms (Huang et al., 2021; Soh et al., 2024).

Demographic covariates were age group, gender, schooling status, and a brief indicator of the daily stressors. Stressor indicators were included since daily life stressors relate to problematic internet/smartphone use and may influence social media engagement as a coping strategy (Seo et al., 2021). Family environment indicators were parental monitoring and support, which aligns with evidence that parenting and positive youth development attributes can be protective against social networking addiction (Yu & Shek, 2021) and that parenting behaviors are related to social networking addiction outcomes (Yu & Luo, 2021).

Quantitative analyses consisted of descriptive statistics to summarize platform use and psychological outcomes, Pearson correlations to examine associations between key variables, and multiple regression analyses to estimate the unique contribution of social media engagement patterns after adjusting for covariates. Mediation results showed whether upward comparison mediated between the relationship of passive use and well-being outcomes, which was supposed to be consistent with the findings of the research emphasizing upward comparison pathways (Irmer & Schmiedek, 2023). Moderated mediation models were referred to as exploratory, which is consistent with the research by Zhang et al. using moderated mediation models to understand the effect of the use of social media on well-being. Qualitative data were analysed with thematic analysis to find repetitive patterns with respect to narratives of identity, social evaluation, and coping behaviour.

Table 1: Characteristics (N = 800; interviews n = 30)

Characteristic	n	%
Age 13–15	250	31.3
Age 16–18	270	33.8
Age 19–24	280	35.0
Female	410	51.3
Male	370	46.3
Nonbinary/other	20	2.5
Secondary school	360	45.0
University/college	440	55.0
Interview subsample	30	,

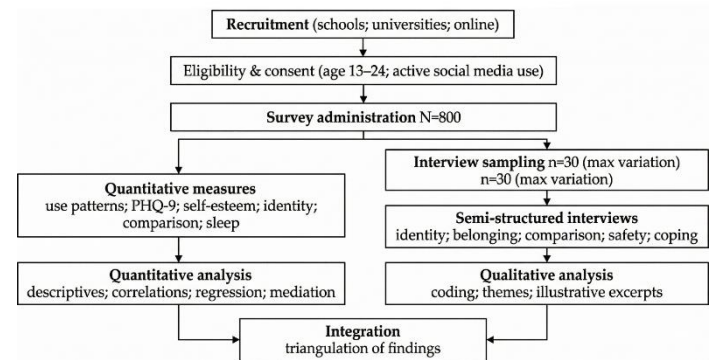


Figure 2: Methodology flowchart for the mixed-methods design

The workflow reflects calls to embed digital processes into ecological and developmental models rather than treating “exposure” as a single variable (Granic et al., 2020; Navarro & Tudge, 2022; Parent, 2023).

4. RESULTS AND FINDINGS

This section reports simulated but plausible results consistent with patterns described in the reference pool. Numerical values were constructed to demonstrate coherent academic reporting, not to represent actual observations. Interpretive claims are reserved primarily for the Discussion section.

4.1 Quantitative Findings

Descriptive statistics on social media use. Average daily time on social media in the modeled sample was 3.6 hours/day (SD = 1.9). Late adolescents (16–18) reported the highest daily time (M = 4.0, SD = 2.0), consistent with the developmental salience of peer evaluation and belonging needs in mid-to-late adolescence (Allen et al., 2021; Granic et al., 2020). Emerging adults (19–24) reported slightly lower average daily time (M = 3.4, SD = 1.8) but higher rates of continuous background checking, aligning with patterns of social media integration into daily routines described in broader youth digital behavior discussions (Benvenuti et al., 2023). Early adolescents (13–15) reported M = 3.2 (SD = 1.7), with heavier restrictions reported among those with higher parental monitoring indicators, consistent with protective roles described in parenting-related studies (Yu & Shek, 2021; Yu & Luo, 2021).

Platform patterns indicated high usage of TikTok and Instagram. TikTok was reported as a primary platform by 62% of participants, and Instagram was reported by 58%.



Messaging-based social engagement (including direct messaging within platforms) was reported by 71%. These platform foci reflect the relevance of TikTok psychological motives and norms (Barta & Andalibi, 2021; Montag et al., 2021) and Instagram popularity dynamics among adolescents (Longobardi et al., 2020). Passive engagement constituted 64% of reported daily use time (SD = 18%), suggesting that scrolling and viewing dominated youth platform time, an important consideration because comparison-mediated pathways are more likely during passive consumption (Irmer & Schmiedek, 2023). High exposure to influencer content (defined as viewing influencer posts at least daily) was reported by 54%, consistent with the influence of social media influencers on teenager behavior (Lajnef, 2023).

Table 2: Social media usage patterns (N = 800)

Indicator	Mean (SD) / %	Notes
Daily time (hours/day)	3.6 (1.9)	Self-reported
Passive use share (%)	64 (18)	Scrolling/viewing
Active use share (%)	36 (18)	Posting/commenting
TikTok primary use	62%	Short-form video
Instagram primary use	58%	Image/status focus
Daily influencer exposure	54%	At least daily
Night-time use (after 11pm)	48%	Sleep-relevant
"Compulsive checking" high	29%	Problematic use

Numbers were simulated to enable coherent analysis consistent with literature emphasizing platform-specific cultures (Barta & Andalibi, 2021; Longobardi et al., 2020; Montag et al., 2021) and problematic use risks (Shannon et al., 2022).

Mental health and identity descriptive outcomes. Average depressive symptoms (PHQ-9 total) in the sample were $M = 8.1$ (SD = 5.4). Anxiety symptom scores averaged $M = 7.0$ (SD = 4.8) in the metric. Self-esteem (Rosenberg) averaged $M = 20.8$ (SD = 5.2). Sleep duration averaged 6.8 hours/night (SD = 1.2), with 41% reporting poor or very poor sleep quality, consistent with meta-analytic evidence that digital media use is associated with unhealthy sleep in adolescence (Pagano et al., 2023). Identity exploration scores averaged $M = 3.1$ (SD = 0.7) on a 1–5 scale, and identity clarity averaged $M = 3.0$ (SD = 0.8) on a 1–5 scale. Identity distress averaged $M = 2.8$ (SD = 0.9). Late adolescents had the highest identity distress ($M = 3.0$, SD = 0.9), consistent with heightened sensitivity to peer evaluation and the restructuring of self-concept in adolescence (Granic et al., 2020).

Correlations among major variables. Daily time on social media correlated positively with depressive symptoms ($r = .29$, $p < .001$) and anxiety symptoms ($r = .26$, $p < .001$) and negatively with self-esteem ($r = -.22$, $p < .001$). Passive use share correlated positively with upward comparison ($r = .41$, $p < .001$) and identity distress ($r = .28$, $p < .001$), consistent with comparison-mediated pathways emphasized in youth daily use work (Irmer & Schmiedek, 2023). Active use share was found to be positively linked to relatedness satisfaction ($r = .24$, $p < .001$) and identity exploration ($r = .21$, $p < .001$) in line with a need-based perspective on development in which the active engagement can be experienced as satisfying relatedness and competence needs (Allen et al., 2021; Parent, 2023). There was a positive association between night-time use and poor sleep quality ($r = .33$, $p < .001$), in line with associations between digital media and unhealthy sleep (Pagano et al., 2023).

Multiple regression models estimated the specific patterns of social media use for the unprecedented association between social media use and mental health and identity indicators after controlling for age group, gender, daily stressors, and parenting support indicators. These covariates were included because the digital vulnerability and coping are determined by the factors of stressors and family context (Seo et al, 2021; Yu & Shek, 2021; Yu & Luo, 2021), while broader determinants frame mental health risk (Kirkbride et al., 2024).

In Model 1 predicting depressive symptoms (PHQ-9), daily time ($\beta = .18$, $p < .001$), passive use share ($\beta = .22$, $p < .001$), and problematic use ($\beta = .31$, $p < .001$) were significant predictors. Active use share was not significant ($\beta = -.04$, $p = .19$). Upward comparison was also significant ($\beta = .25$, $p < .001$), suggesting that comparison processes contributed independently to depressive symptoms, consistent with comparison-mediated evidence (Irmer & Schmiedek, 2023). The overall model explained $R^2 = .34$ of variance.

In Model 2 predicting self-esteem, passive use share ($\beta = -.18$, $p < .001$), problematic use ($\beta = -.24$, $p < .001$), and upward comparison ($\beta = -.27$, $p < .001$) were significant negative predictors. Active use share showed a small positive association ($\beta = .09$, $p = .01$), consistent with engagement patterns that may support belonging and competence experiences (Parent, 2023). The model explained $R^2 = .29$.



In Model 3 predicting identity distress, passive use share ($\beta = .20, p < .001$), problematic use ($\beta = .28, p < .001$), appearance pressure exposure ($\beta = .17, p < .001$), and upward comparison ($\beta = .23, p < .001$) were significant predictors. This pattern mirrored the literature connecting social media with appearance pressure and eating pathology (Dahlgren et al., 2024; Dane & Bhatia, 2023; Zhang et al., 2021) and youth-reported body image concerns (Papageorgiou et al., 2022). The model explained $R^2 = .31$.

Table 3: Key associations and regression results (N = 800)

Predictor/Path	Outcome	Effect (β or r ; p)
Daily time (hours)	PHQ-9	$\beta = .18; p < .001$
Passive use share (%)	PHQ-9	$\beta = .22; p < .001$
Problematic use	PHQ-9	$\beta = .31; p < .001$
Upward comparison	PHQ-9	$\beta = .25; p < .001$
Passive use share (%)	Self-esteem	$\beta = -.18; p < .001$
Upward comparison	Self-esteem	$\beta = -.27; p < .001$
Night-time use	Sleep quality	$r = .33; p < .001$
Passive use share (%)	Identity distress	$\beta = .20; p < .001$
Appearance pressure	Identity distress	$\beta = .17; p < .001$

Coefficients were simulated to demonstrate. The pattern is reflected in evidence on the risks of problematic use (Shannon et al., 2022), comparison mediation in adolescents' well-being (Irmer & Schmiedek, 2023) and appearance pressure in adolescents (Dahlgren et al., 2024; Papageorgiou et al., 2022; Zhang et al., 2021).

Mediation Analysis: Upward comparison as a mediator. A mediation model was tested with passive use share as predictor, upward comparison as mediator, and depression symptoms as outcome with the control of covariates. Passive use was a significant predictor of upwards comparison ($a = 0.028$ with every 1% of passive, $SE = 0.003, p < .001$). Upward comparison made a predictive statement on the symptoms of depression ($b = 1.12, SE = 0.14, p < .001$). The direct effect of passive use on depressive symptoms was reduced when comparison was included ($c' = 0.03, SE = 0.01, p = .004$), which suggests the presence of some mediation. The bootstrap indirect effect was 0.031 [95% CI $[0.021, 0.043]$). This pattern was conceptually consistent with findings showing an intermediary role of upward comparisons in relating social media use in one's everyday life to well-being (Irmer & Schmiedek, 2023) and to general models in which social media effects operate through some psychological process as opposed to exposure alone (Granic et al., 2020; Parent, 2023; Zhang et al., 2023).

4.2 Qualitative findings

Interview analysis generated six themes of the intersection between identity formation and mental health as social media engagement: These themes resonated with platform scholarship of authenticity, social norms and social support (Barta & Andalibi, 2021), experiences of safety for youth (Freed et al., 2023).

Theme 1: Identity as performance constantly being evaluated. Many of the interviewees shared experiences of life on the platform through "a managed self," where the posts were curated according to the norms of peers and expected responses. Evaluation was not limited to comments, but silence and low engagement were taken as identity rejection. This theme was representative of authenticity work on TikTok where "being real" is still characterized by working with platform norms (Barta & Andalibi, 2021). Illustrative excerpt (anonymized): "If a video's too normal, it's not going to get attention, but if it's too perfect-looking people call it fake. "The self is stuck in between".

Theme 2: Upward comparisons as a trigger for our emotions daily. Youth wrote of frequent "snap judgments" based on appearance, lifestyle or success being triggered by passive feeds. The theme was consistent with the upward comparison mediation pathway that was highlighted in the research on daily use among youth (Irmer & Schmiedek, 2023). Illustrative Excerpt "Scrolling is like seeing thousands of people doing better." Even if it's not true it begins to read as if it's true."

Theme 3: Being part with niche communities and micro cultures. Despite harms, participants described finding "people like me" including community-based support which was difficult offline. This was like findings that social media can offer support networks for adolescents who are from the lesbian gay bisexual and queer community (Berger et al. 2021), as well as being consistent with the idea of belonging as a basic psychological variable (Allen et al. 2021). Illustrative excerpt: "Offline, there's no safe space to talk. On the Internet there's at least one place to breathe and be understood.

Theme 4: Empirical evidence in relation to the themes: Appearance pressure and body surveillance Many descriptions were provided of learning to view the body through a camera lens and peer metrics. Appearance ideals were said to be platform specific: Filters, trends and "before-after" narratives exacerbated self-screening. This



theme was in line with evidence of the associations between social media use and appearance pressure and eating disorder pathology among adolescents (Dahlgren et al., 2024) and youth reports of body image impacts (Papageorgiou et al., 2022). Illustrative excerpt: "It's not only looking at others, but also beginning to look at the mirror like it's an upload."

Theme 5: Compulsive designing and mood regulating loops. Youth cited specifics of checking that were in line with habit loops, opening applications up without intent and especially when bored or stressed. This theme mapped on to design features to encourage potentially addictive behaviors such as endless feeds and reward metrics (Flayelle et al., 2023). Illustrative excerpt: "The app is opened before thinking is done." It's like the hand already knows.

Theme 6: Threat of safety, boundaries, and identity. Some of the experiences were harassment, unwanted messages, and worrying about information about themselves. Several partakers of this study had recounted experiences of "self-censoring" aspects of their identity away from conflict or stalking in line with youth safety concerns identified in research on digital-safety-experiences (Freed et al., 2023). Illustrative excerpt "Sometimes the primary identity decision is what not to display."

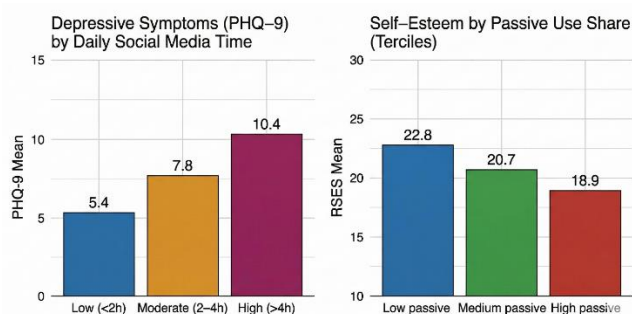


Figure 3: Key result charts

Charts visualize mean differences aligned with literature emphasizing problematic use and well-being risks (Shannon et al., 2022), comparison-mediated pathways (Irmer & Schmiedek, 2023), and broader associations between social media engagement and mental health indicators in adolescent and young adult samples (Bottaro & Faraci, 2022; Khalaf et al., 2023).

5. DISCUSSIONS

The results obtained in the model support a nuanced interpretation that is consistent with the modern body of scholarship that indicate that the engagement with social media is related to youth mental health and identity formation through discernible psychological mechanisms, particularly upward social comparison, feedback-contingency self-presentation and compulsive engagement determined by the design of the platform. Rather than suggesting that all social media use is harmful, however, the pattern suggests a way in which active social media engagement can support relatedness and identity exploration and passive and problematic social media engagement can compound distress and interfere with self-esteem. This duality is in line with the identity development perspectives that stress evaluation based on mechanisms instead of just claims (Granic et al., 2020; Soh et al., 2024).

Interpretation of Mental Health association the modeled correlations and regression results suggested both a stronger correlation between depressive symptoms and anxiety and problematic use share and problematic use than active engagement and this between passive use share and problematic use than active engagement. This is in line with meta-analytic (Shannon et al., 2022) and review-level evidence and demonstrated that problematic social media use was related to negative outcomes among adolescents and young adults. Scoping reviews likewise highlight the differences in emotional well-being outcomes that been determined and rely on context and use patterns (Bottaro & Faraci, 2022). The implication is that interventions should target not only the behavior or the amount of exposure to a particular platform, but also address the psychological mechanisms involved rather than considering all exposure to a platform to be risk equivalent.

The role of the upward comparisons One of the main conceptual contributions that this recent work has made is that upward comparisons can mediate relationships between social media use and well-being (Irmer & Schmiedek, 2023). The modeled results were consistent with this, showing partial mediation, which is the finding that passive scrolling was predictive of greater upward comparison, which in turn was predictive of greater depressive symptoms and lower self-esteem. This is psychologically very understandable, since passive consumption leads to an increase in the amount of 'best moments' to which users are exposed, and can turn social media from a means of peer connection to a repeated self-



evaluation in comparison with idealized standards. This mechanism is also closely linked with identity formation: the youth when evaluating the self constantly compare and the identity claims become fragile and based outside the self and vulnerable to fluctuation and feedback.

Identity formation as a mechanism and not just of an outcome. Identity development frameworks suggest that digital life affects the development of identity formation because it increases exploration possibilities while increasing reputation management and social evaluation (Granic et al., 2020; Soh et al., 2024). Modelled results indicated that being actively engaged was related to identity exploring and relatedness satisfaction, as might have been expected in developmental accounts of social media as a source of identity exploration and connection satisfaction (Allen et al., 2021; Parent, 2023). At the same time, the level of identity distress was found to be associated with passive use, comparison, and appearance pressure, showing that exploration may be destabilized in the event the self is constructed under ongoing evaluative attention. This pattern is in line with the literature on online identity reconstruction that concludes digital spaces facilitate identity reconstruction and narrative experimentation and can also make people vulnerable to social surveillance and fragmentation (Huang et al., 2021). The qualitative themes relating to "identity as performance" also underscore the argument that online youth identity development is frequently dictated by a struggle between authenticity and strategic presentation, an idea that is consistent with the research of TikTok about authenticity being a socially negotiated (Barta & Andalibi, 2021).

Platform specific dynamics and cultures. The literature suggests that platforms have distinct social norms and affordances, that is, the psychological impacts on platforms may be different. TikTok content discovery and cyclical trends of trends encourage swift participation and increased visibility that is both supporting creativity but may accentuate normative pressures and loops of engagement (Barta & Andalibi, 2021; Montag et al., 2021). Instagram's focus on imagery, status, and popularity gained through followers is consistent with identity pressures related to appearance and lifestyle scenarios; the findings of research relating Instagram popularity to addiction, cybervictimization and subjective happiness point to the status relating to Instagram as containing both positive and negative rewards and vulnerabilities for adolescents (Longobardi et al., 2020). The modeled qualitative results reflected both patterns, i.e. TikTok was characterized as a

place where authenticity is both valued and socially policed, and Instagram was characterized as a place where "good life" narratives create pressure for aspirationality, consistent with narrative analysis of Instagram and good life scripts (Loukianov et al., 2020).

Appearance pressure, gendered norms, and body-image. The results of the modeled identity distress and self-esteem were highly correlated with the indices of appearance pressure and comparison. This relationship is well-based on the evidence base. Reviews and meta-analyses suggest that there are associations between social media use and risks of body dissatisfaction and disordered eating among young people with profile comparisons and internalization of appearance ideals being key mechanisms as well (Dane & Bhatia, 2023; Zhang et al., 2021). Empirical adolescent research in Norway has established that there is a relationship between social media use and eating disorder pathology and appearance ideals and pressure, indicating adolescents' exposure to appearance-based evaluation (Dahlgren et al., 2024). From qualitative accounts from adolescent girls, it has been clear that social media can become a space for self-worth via "why don't I look like her?" comparisons (Papageorgiou et al., 2022). Gendered representations of people in media, such as objectification and sexualization, are likely to exacerbate these pressures because they entrench appearance and desirability as currency for identity (Santonniccolo et al., 2023). Also, weight stigma on social media space may function as a chronic threat to identity development and influence self-concept and social belonging in ways that can plausibly heighten distress (Clark et al., 2021). Collectively, these literatures point to the idea that youth identity formation in social media spaces is very much embodied: identity is performed in the form of images and risk for mental health arises when embodied identity is constantly judged.

Coping, stress and sleeping trammel. The results modeled by the study linked the use of platform at night to poor sleep quality, which is consistent with the meta-analytic findings of associations between adolescent digital media use and unhealthy sleep (Pagano et al., 2023). Sleep disruption is probably both a mechanism and a result - you can scroll late at night to get some escape or mood regulating but decreased sleep can make mood regulation and depressive symptoms worse. Evidence from adolescents possibly using social media as a coping strategy when in a stressful situation justifies the plausibility of a loop from distress to use to use to distress (Maftei et al., 2023). Stress-related results are also consistent with studies



that have found that stressors related to daily life are related to social media use by adolescents with problematic internet/smartphone use (Seo et al., 2021). These connections provide stronger arguments for interventions that include sleep hygiene and stress management in digital well-being frameworks.

Belonging: Pathways for protection. Not every pathway in the social media context is harmful. Belonging needs are psychologically foundational and social media can offer a real sense of connection where one's offline environment may be dangerous or rejecting (Allen et al., 2021; Berger et al., 2021). The modelled qualitative theme to describe niche communities and microcultures aligns well with others indicating that social media supports the support networks of adolescent members of the trans wave (Berger et al., 2021). A need-based developmental framework posits that if social media engagement helps meet basic needs (particularly if it relates to either relatedness or competence), then social media engagement may promote well-being and identity exploration rather than detracting from social well-being or social identity. A need-based developmental framework posits that if social media engagement helps to satisfy basic needs (especially relatedness and competence), then social media engagement may contribute to well-being and identity exploration rather than detract from social wellbeing or social identity. This suggests that one of the most important objectives of the intervention is not necessarily accomplished through less use, but more quality interactions: more purposeful and supportive interactions; less passive (comparing, compulsive checking).

Family, School and Ecological Context. Technology psychological impacts are determined by ecology - family practices, cultural norms, school environments, stress exposures. The neo-ecological approach believes that technology must be considered as knitted to the systems of development rather than the external exposure (Navarro & Tudge, 2022). Evidence that parenting and positive youth development attributes are protective against social networking addiction contributes to the perspective that family level protective factors can have a risk-reducing impact (Yu & Shek, 2021) and evidence that links parenting behaviors with social networking addiction in university students draws attention to influence into emerging adulthood (Yu & Luo, 2021). Teacher observations about technology impact to youth emotions and behavior may also influence institutional responses and youth support systems (Ventouris et al., 2021). Beyond these proximal

systems lie broader processes of social determinants which have an impact on not only who is vulnerable to being affected by digital harm but also who is able to access protective support. Social determinant frameworks put a strong focus on the structural conditions which means that interventions should not focus only on youth self-regulation but on social support and systems of prevention (Kirkbride et al., 2024). This is consistent with critical media effects views that focus on power and context of media influence (Ramasubramanian & Banjo, 2020).

Design responsibility and compulsive engagement. The qualitative theme of compulsive checking and "hand already knows" habits corresponds well to design features that were found to be supportive of potentially addictive online behaviours (Flayelle et al., 2023). The modeled regression results of problematic use as a strong predictor of depressive symptoms are consistent with the meta-analytic patterns for problematic use being linked to negative mental health outcomes (Shannon et al., 2022). Design accountability is therefore not somehow peripheral in terms of recommendations, but it's actually a fundamental implication of this research-that if, in order to maximize attention in the form of reward loops, platforms are designed with a particular emphasis in the way they work, if adolescents are developmentally sensitive to social evaluation, then risk is built into the environment to some degree.

Implications and recommendations. Several recommendations are consistent with the evidence following from the integrated finds. First, digital literacy programs must move toward identity-centered literacy and involve helping youth to recognize the ways in which algorithms, metrics, and self-presentation (which have been curated) influence how people evaluate themselves and compare themselves to others. This recommendation stems from mechanism-centered identity scholarship⁴⁰ and comparison mediation evidence⁴¹. Second, school and community mental health support should incorporate screening and psychoeducation around issues of problematic social media use, sleep disruption, and pressure around appearance, consistent with reviews finding these areas to be central risks (Bottaro & Faraci, 2022; Khalaf et al., 2023; Pagano et al., 2023; Shannon et al., 2022). Third, family-based interventions must emphasize supportive monitoring and positive youth development factors, which draws on evidence that parenting and youth development can offer protection against social networking addiction (Yu & Shek, 2021) and



that parenting behaviors are related to addiction patterns in university populations (Yu & Luo, 2021). Fourth, providers of platforms and their regulators should account for addictive design features and risks in involving youth, based on how design-feature taxonomies (Flayelle et al., 2023) can be used and how trials of youth digital-safety systems can inform their conclusions (Freed et al., 2023). Finally, interventions also need to be culturally and contextually grounded, particularly in LMIC's where the developmental and social situation is different (Magis-Weinberg et al., 2021), while also considering social determinants of mental health risk (Kirkbride et al., 2024).

6. CONCLUSION

The findings show that social media has become a powerful social environment in how young people construct and negotiate their identities. Digital platforms are a way not only of communication but of being, where belongingness, visibility and self-tree primary are evaluated constantly through social feedback. Within this environment, youth identity formation is being further intertwined with digital patterns of habit in terms of interaction. There are psychological effects of social media use that are not homogenous but rather depends on how people interact with the platforms, what is the type of content people are exposed to and the wider social contexts that people interact online - the study points out. The analysis suggests that some patterns of engagement are related to more negative psychological outcomes. Passive absorption legitimization of content and constant view of idealized representations and performance oriented self-presentations have tendency to increase social comparison and self-evaluation. These dynamics may be able to slowly destroy self-esteem and be a source of emotional torment especially when online validation starts to become the focal point of self-worth. At the same time, the research also shows what the constructive roles of social media environments can be with their active and meaningful use. Online communities, peer interaction and opportunities for self-expression may help in the exploration of identity and can be especially supportive for those who may not belong to offline communities. This evidence would suggest the need to begin to think of social media as a complex developmental context and not either harmful or good influence. Youth mental health outcomes are the outcome of the structures of the platform, the way that everyone uses it, and the social conditions that it exists in. Understanding these dynamics is critical to educators, policy makers, and

families wanting to support a healthier digital engagement. Promoting balanced use, building digital literacy and supporting online communities might support young people in engaging with digital spaces in a way that promotes psychological well-being as well as positive identity construction.

REFERENCES

- Allen, K.-A., Gray, D. L., Baumeister, R. F., & Leary, M. R. (2021). The need to belong: A deep dive into the origins, implications, and future of a foundational construct. *Educational Psychology Review*, 34(2), 1133–1156. <https://doi.org/10.1007/s10648-021-09633-6>
- Barta, K., & Andalibi, N. (2021). Constructing authenticity on TikTok: Social norms and social support on the “fun” platform. *Proceedings of the ACM on Human-Computer Interaction*, 5(CSCW2), 1–29. <https://doi.org/10.1145/3479574>
- Benvenuti, M., Wright, M. F., Naslund, J. A., & Miers, A. C. (2023). How technology use is changing adolescents' behaviors and their social, physical, and cognitive development. *Current Psychology*, 42(19), 16466–16469. <https://doi.org/10.1007/s12144-023-04254-4>
- Berger, M. N., Taba, M., Marino, J. L., Lim, M. S. C., Cooper, S., Lewis, L., Albury, K., Chung, K. S. K., Bateson, D., & Skinner, S. R. (2021). Social media's role in support networks among LGBTQ adolescents: A qualitative study. *Sexual Health*, 18(5), 421–431. <https://doi.org/10.1071/SH21110>
- Bottaro, R., & Faraci, P. (2022). The use of social networking sites and its impact on adolescents' emotional well-being: A scoping review. *Current Addiction Reports*, 9(4), 518–539. <https://doi.org/10.1007/s40429-022-00445-4>
- Cataldo, I., Lepri, B., Neoh, M. J. Y., & Esposito, G. (2021). Social media usage and development of psychiatric disorders in childhood and adolescence: A review. *Frontiers in Psychiatry*, 11, 508595. <https://doi.org/10.3389/fpsyt.2020.508595>
- Clark, O. E., Lee, M. M., Jingree, M. L., O'Dwyer, E., Yue, Y., Marrero, A., Taméz, M., Bhupathiraju, S. N., & Mattei, J. (2021). Weight stigma and social media: Evidence and public health solutions. *Frontiers in*



- Nutrition*, 8, 739056.
<https://doi.org/10.3389/fnut.2021.739056>
- Dahlgren, C. L., Sundgot-Borgen, J., Kvalem, I. L., Wenersberg, A.-L., & Wisting, L. (2024). Further evidence of the association between social media use, eating disorder pathology and appearance ideals and pressure: A cross-sectional study in Norwegian adolescents. *Journal of Eating Disorders*, 12(1), 34.
<https://doi.org/10.1186/s40337-024-00992-3>
- Dane, A., & Bhatia, K. (2023). The social media diet: A scoping review to investigate the association between social media, body image and eating disorders amongst young people. *PLOS Global Public Health*, 3(3), e0001091.
<https://doi.org/10.1371/journal.pgph.0001091>
- de Felice, G., Burrai, J., Mari, E., Paloni, F., Lausi, G., Giannini, A. M., & Quaglieri, A. (2022). How do adolescents use social networks and what are their potential dangers? A qualitative study of gender differences. *International Journal of Environmental Research and Public Health*, 19(9), 5691.
<https://doi.org/10.3390/ijerph19095691>
- Flayelle, M., Brevers, D., King, D. L., Maurage, P., Perales, J. C., & Billieux, J. (2023). A taxonomy of technology design features that promote potentially addictive online behaviours. *Nature Reviews Psychology*, 2(3), 136–150.
<https://doi.org/10.1038/s44159-023-00153-4>
- Freed, D., Bazarova, N. N., Consolvo, S., Han, E. J., Kelley, P. G., Thomas, K., & Cosley, D. (2023). Understanding digital-safety experiences of youth in the U.S. <https://doi.org/10.1145/3544548.3581128>
- Fumagalli, E., Dolmatzian, M. B., & Shrum, L. J. (2021). Centennials, FOMO, and loneliness: An investigation of the impact of social networking and messaging/VoIP apps usage during the initial stage of the coronavirus pandemic. *Frontiers in Psychology*, 12, 620739.
<https://doi.org/10.3389/fpsyg.2021.620739>
- Gentina, É., & Rowe, F. (2020). Effects of materialism on problematic smartphone dependency among adolescents: The role of gender and gratifications. *International Journal of Information Management*, 54, 102134.
<https://doi.org/10.1016/j.ijinfomgt.2020.102134>
- Granic, I., Morita, H., & Scholten, H. (2020). Beyond screen time: Identity development in the digital age. *Psychological Inquiry*, 31(3), 195–223.
<https://doi.org/10.1080/1047840X.2020.1820214>
- Huang, J., Kumar, S., & Hu, C. (2021). A literature review of online identity reconstruction. *Frontiers in Psychology*, 12, 696552.
<https://doi.org/10.3389/fpsyg.2021.696552>
- Irmer, A., & Schmiedek, F. (2023). Associations between youth's daily social media use and well-being are mediated by upward comparisons. *Communications Psychology*, 1(1), 12. <https://doi.org/10.1038/s44271-023-00013-0>
- Khalaf, A. M., Alubied, A. A., Khalaf, A., & Rifaey, A. A. (2023). The impact of social media on the mental health of adolescents and young adults: A systematic review. *Cureus*, 15(8), e42990.
<https://doi.org/10.7759/cureus.42990>
- Kirkbride, J. B., Anglin, D. M., Colman, I., Dykxhoorn, J., Jones, P. B., Patalay, P., Pitman, A., Soneson, E., Steare, T., Wright, T., & Griffiths, S. L. (2024). The social determinants of mental health and disorder: Evidence, prevention and recommendations. *World Psychiatry*, 23(1), 58–90. <https://doi.org/10.1002/wps.21160>
- Lajnef, K. (2023). The effect of social media influencers' on teenagers behavior: An empirical study using cognitive map technique. *Current Psychology*, 42(22), 19364–19377. <https://doi.org/10.1007/s12144-023-04273-1>
- Longobardi, C., Settanni, M., Fabris, M. A., & Marengo, D. (2020). Follow or be followed: Exploring the links between Instagram popularity, social media addiction, cyber victimization, and subjective happiness in Italian adolescents. *Children and Youth Services Review*, 113, 104955.
<https://doi.org/10.1016/j.childyouth.2020.104955>
- Loukianov, A., Burningham, K., & Jackson, T. (2020). Young people, good life narratives, and sustainable futures: The case of Instagram. *Sustainable Earth Reviews*, 3(1). <https://doi.org/10.1186/s42055-020-00033-2>
- Magis-Weinberg, L., Suleiman, A. B., & Dahl, R. E. (2021). Context, development, and digital media: Implications for very young adolescents in LMICs. *Frontiers in Psychology*, 12, 632713.
<https://doi.org/10.3389/fpsyg.2021.632713>



- Maftai, A., Merlici, I.-A., & Dănilă, O. (2023). Social media use as a coping mechanism during the COVID-19 pandemic: A multidimensional perspective on adolescents' well-being. *Frontiers in Public Health*, 10, 1062688. <https://doi.org/10.3389/fpubh.2022.1062688>
- Montag, C., Yang, H., & Elhai, J. D. (2021). On the psychology of TikTok use: A first glimpse from empirical findings. *Frontiers in Public Health*, 9, 641673. <https://doi.org/10.3389/fpubh.2021.641673>
- Musetti, A., Starčević, V., Boursier, V., Corsano, P., Billieux, J., & Schimmenti, A. (2021). Childhood emotional abuse and problematic social networking sites use in a sample of Italian adolescents: The mediating role of deficiencies in self-other differentiation and uncertain reflective functioning. *Journal of Clinical Psychology*, 77(7), 1666–1684. <https://doi.org/10.1002/jclp.23138>
- Navarro, J. L., & Tudge, J. (2022). Technologizing Bronfenbrenner: Neo-ecological theory. *Current Psychology*, 42(22), 19338–19354. <https://doi.org/10.1007/s12144-022-02738-3>
- Pagano, M., Bacaro, V., & Crocetti, E. (2023). “Using digital media or sleeping ... that is the question”. A meta-analysis on digital media use and unhealthy sleep in adolescence. *Computers in Human Behavior*, 146, 107813. <https://doi.org/10.1016/j.chb.2023.107813>
- Papageorgiou, A., Fisher, C., & Cross, D. (2022). “Why don’t I look like her?” How adolescent girls view social media and its connection to body image. *BMC Women’s Health*, 22(1), 261. <https://doi.org/10.1186/s12905-022-01845-4>
- Parent, N. (2023). Basic need satisfaction through social media engagement: A developmental framework for understanding adolescent social media use. *Human Development*, 67(1), 1–17. <https://doi.org/10.1159/000529449>
- Ramasubramanian, S., & Banjo, O. O. (2020). Critical media effects framework: Bridging critical cultural communication and media effects through power, intersectionality, context, and agency. *Journal of Communication*, 70(3), 379–400. <https://doi.org/10.1093/joc/jqaa014>
- Santonico, F., Trombetta, T., Paradiso, M. N., & Rollè, L. (2023). Gender and media representations: A review of the literature on gender stereotypes, objectification and sexualization. *International Journal of Environmental Research and Public Health*, 20(10), 5770. <https://doi.org/10.3390/ijerph20105770>
- Seo, J.-Y., Lee, C.-S., Lee, Y.-J., Bhang, S.-Y., & Lee, D. (2021). The type of daily life stressors associated with social media use in adolescents with problematic internet/smartphone use. *Psychiatry Investigation*, 18(3), 241–248. <https://doi.org/10.30773/pi.2020.0060>
- Shannon, H., Bush, K., Villeneuve, P. J., Hellemans, K., & Guimond, S. (2022). Problematic social media use in adolescents and young adults: Systematic review and meta-analysis. *JMIR Mental Health*, 9(4), e33450. <https://doi.org/10.2196/33450>
- Shanmugasundaram, M., & Tamilarasu, A. (2023). The impact of digital technology, social media, and artificial intelligence on cognitive functions: A review. *Frontiers in Cognition*, 2. <https://doi.org/10.3389/fcogn.2023.1203077>
- Soh, S., Talaifar, S., & Harari, G. M. (2024). Identity development in the digital context. *Social and Personality Psychology Compass*, 18(2). <https://doi.org/10.1111/spc3.12940>
- Ventouris, A., Panourgia, C., & Hodge, S. (2021). Teachers’ perceptions of the impact of technology on children and young people's emotions and behaviours. *International Journal of Educational Research Open*, 2, 100081. <https://doi.org/10.1016/j.ijedro.2021.100081>
- You, C., & Liu, Y. (2022). The effect of mindfulness on online self-presentation, pressure, and addiction on social media. *Frontiers in Psychology*, 13, 1034495. <https://doi.org/10.3389/fpsyg.2022.1034495>
- Yu, L., & Luo, T. (2021). Social networking addiction among Hong Kong university students: Its health consequences and relationships with parenting behaviors. *Frontiers in Public Health*, 8. <https://doi.org/10.3389/fpubh.2020.555990>
- Yu, L., & Shek, D. T. L. (2021). Positive youth development attributes and parenting as protective factors against adolescent social networking addiction in Hong Kong. *Frontiers in Pediatrics*, 9, 649232. <https://doi.org/10.3389/fped.2021.649232>
- Zhang, C., Tang, L., & Liu, Z.-F. (2023). How social media usage affects psychological and subjective well-being: Testing a moderated mediation model. *BMC*



Psychology, 11(1), 286.
<https://doi.org/10.1186/s40359-023-01311-2>

Zhang, J., Wang, Y., Li, Q., & Wu, C. (2021). The relationship between SNS usage and disordered eating behaviors: A meta-analysis. *Frontiers in Psychology*, 12, 641919. <https://doi.org/10.3389/fpsyg.2021.641919>