Social Media's Influence on Adolescent Self-Esteem: Patterns and Perceptions

Hanu Shashwat¹, Muskan Singh²

¹Department of Computer Science & Engineering, Indian Institute of Technology Patna, Bihar, India ²Department of Psychology, University of Allahabad, Uttar Pradesh, India

*Correspondence

Mr. Hanu Shashwat,

Department of Computer Science & Engineering, Indian Institute of Technology Patna, Bihar, India, **E-Mail:** <u>hanushashwat733@gmail.com</u>

Abstract

The present study considered the very complex relationship between patterns of usage of social media and selfesteem in adolescents. With the rapid expansion of digital platforms becoming an integral part of everyday life, the relationship between the nature of this interaction and the self-perception of the youth is worth understanding. Combining quantitative questionnaires with qualitative interviews, the current research attempted to observe these subtle relationships closely. For this reason, the study aims to contribute useful insights to academic discourse as well as practical interventions that promote healthy digital habits among youth by way of a very salient concern: scrutiny of frequency, duration, and contents of engagement with social media and their impact on self-esteem. **Keywords:** Adolescent self-esteem, social media usage, social comparison, digital engagement, mental health.

This is an Open Access article that uses a fund-ing model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0) and the Budapest Open Access Initiative (http://www.budapestopenaccessinitiative.org/read), which permit unrestricted use, distribution, and reproduction in any medium, provided the original work is properly credited.

Introduction

Adolescents today swim in the colourful sea of social media which always expanded its scope and became more interdependent with pervasive digital connectivity in this age. As youths age, so do the online imprints that make up their selves. There is new-found interest in young people's developmental trajectories under the impact of social media. This paper intends to explore an extended discussion on how this might provoke interesting constellations between usage patterns on social media and adolescent self-esteem.

Another critical implication is to help understand selfesteem in the context of social media use toward developing strategies that support healthy use of digital devices among teens. There is a constellation of increased problems related to mental health and wellbeing in the teen population that necessitates uncovering the fine print behind their online experiences to design targeted interventions [9].

This study presents a holistic analysis, quantitatively based on surveys and qualitatively, which goes beyond enriching our understanding of the phenomenon but, at best, will produce actionable insights for all educators, parents, and policymakers as they move forward into the challenges presented by the digital landscape. We hike across the terrain in an effort to cobble together an answer to the question of whether social media actually is affecting teenage self-esteem; it thus contributes valuable knowledge to that expanding conversation over digital culture and adolescent development.

This is because social media has become a very important part of the life of the present youth, and hence knowing the instrumentality of these media as virtual arenas of self-expression, socialization, and the dissemination of information makes their repercussions on the self-esteem of adolescents users very crucial to know [4] [14]. Analyzing the frequency, length, and even the content of how people use social media, research is to be expected to point toward the complex ways in which these sites contribute either to general self-esteem for a person or detract from it among young users.

Material and Methods

The paper discusses different social media content that teenagers engage with and how this may be influencing self-esteem because of possibly different content including pictures, messages, and comments [5]. Shedding light on content-driven interactions in the debates makes the intricacies involved easier to understand. The study evaluated the available studies and literature for the current status first followed by the establishing the research question/ hypothesis and the critical analysis of results obtained.

The increasing presence of social media platforms has dramatically altered the adolescent socialisation landscape, fueling interest in academic exploration of the implications of digital engagement for identity development and self-esteem. Among some of the burgeoning literature on this topic, themes emerge and suggest much about the complex relationship between adolescents and their online environments.

It has been found that adolescents basically use social media as a reflective mirror in portraying themselves before both peers and a more extensive online community [2] [20]. This posed a question about the authenticity of the self and if it affects the self. The theory of comparative socialization assumes that young people are involved in social comparison processes whereby they compare their lives to the idealized lives of other peers posting their lives on social media [2]. This process has been associated with wings of selfesteem because individuals work through perceived differences between their real self and idealized self. The dark side of teenage social media engagement is outlined by the studies as new incidents of online harassment and maltreatment have been associated with impaired self-concepts [7] [10]. This therefore points out that both sides of online interaction must be addressed to constructively address such issues [4].

While some studies have targeted the specific role of digital literacy and coping mechanisms that adolescents deploy in their efforts to handle the intricacies associated with social media [7], understanding adolescent interpretations and responses to online interactions will add to the knowledge base about their resilience and adaptive strategies.

In navigated landscapes of existing research, a tendency is to understand how social media promises much in terms of self-expression and connectivity but challenges that may have an effect on the self-esteem of young people. Thus, this literature review forms the background of our investigation of the need for a comprehensive understanding of usage patterns and their implications for the well-being of today's digitally immersed youth.

Defining Problem

- *Primary Research Question:* To what extent do the usage patterns of adolescents on social media platforms suggest any association with self-esteem, and to what extent do some aspects of social media usage contribute to the range of variation in self-esteem?
- Subsidiary Research Questions:
 - a) To what extent does the frequency of social media use impact the self-esteem of

adolescents?

- b) How do different types of content consumption, such as images, posts, and comments, on social media platforms relate to variations in self-esteem among adolescents?
- c) Are there significant associations between the duration of social media engagement and levels of self-esteem among adolescent users?
- d) What role does the perception of social comparison play in influencing the self-esteem of adolescents on social media?

Hypotheses

- a) H₁: There is a significant negative correlation between the frequency of social media use and the self-esteem of adolescents, with increased usage associated with lower self-esteem levels.
- b) H₂: Specific types of content consumption on social media, particularly those involving social comparison, will be positively correlated with variations in adolescent self-esteem.
- c) H₃: Longer durations of social media engagement will be associated with lower self- esteem among adolescents.
- d) H₄: The perception of social comparison mediates the relationship between social media engagement and the self-esteem of adolescents, contributing to variations in self-esteem levels.

Below are our research questions and hypotheses guiding our investigation into the area. They provide us with a compass in the empirical analysis and interpretation of findings on this intricate interplay between patterns of social media use and adolescents' self-esteem.

Methodology

This study will establish a relationship between patterns of social media use and self-esteem among adolescents by adopting a systematic design. Here, a crosssectional survey design has been adopted to draw data, as this design makes the views and experiences of the participants concerning social media use that impact self-esteem [1].

This comprised youngsters between the ages of 13 and 18 years from diverse socio-economic backgrounds. Recruitment was done through schools, community bodies, and other online mediums. Participants and their legal guardians provided informed consent, thereby ensuring that the process stayed ethical while informing all parties involved in the research about it and what was expected of them before proceeding. A structured survey questionnaire shall be the primary tool for data gathering [1]. It was intended to gather quantifiable data regarding the usage pattern concerning social media and self-esteem.

It covered several key areas: demographic information including age, gender, and socio-economic class; use of social media, specifying the frequency of use, length of use, and types of information consumed; self-esteem, which employed existing valid scales for general and specific level measures of self-esteem [2]; and social comparison perceptions, examining the degree to which respondents considered social comparisons taking place on social media.

The online platform was followed, so the comfort and ease of participants were ensured while accessing the same. The participants were informed about the right to withdraw from the study at any point in time. Moreover, all the efforts ensured anonymity and confidentiality throughout the process. Statistical tools that included correlation analysis, regression analysis, and descriptive statistics have been used in the analysis of data. It used conceptual analytical tools to identify patterns and relations and determine predictors of selfesteem through social media engagement. Ethical considerations are strictly followed, making sure the privacy of the participants is assured [1].

Participants assured informed consent with each and every concern being made to avoid any kind of psychological damage caused by participating in such research. This is a broad-scale survey method intended to capture nuances regarding experiences from social media usage among adolescents as well as complicated dynamics that involve usage patterns and their selfesteem.

Results

The analysis of the responses from participants displays diverse patterns regarding the frequency with which young adolescents use social media. Most said they often log into applications every day, while others said they do only less frequently, while rarely throughout the week. This also marks heterogeneity when relating the integration of social media into an adolescent's life, with heavy users and moderate ones also featured (**Fig. 1**).

Questions on hours spent on social media elicited fragmented responses spread along the spectrum of time spent per sitting. Most respondents reported sitting for 1-2 hours, while others claimed to sit for 3-4 hours and more. This spread reveals aspects of the time spent by the youth in digital communication and therefore presents a backdrop for further discussion on extended engagement effects on self-esteem.

In addition, the type of content utilized by participants was analyzed to reveal clear differences in media preferences. From pictures and videos to more textual forms of media, participants ranged widely. Most indicated this occurred daily, while others reported it happened less often. Further insight is given into how teens incorporate social media and what they find of most value to them in their daily lives (**Fig. 2**).

Correlational analysis at earlier stages may indicate that there is a correlation between some specific social media usage patterns and level of self-esteem (**Fig. 3**). Preliminary results show that infrequent use and short periods spent on social media were significantly associated with higher scores of self-esteem [8]. Regression analysis is applied later in this report after accounting for some mediators and generating some more detailed insights [9].

The study pointed to the massive dependence of teenagers using social media on social comparison. Most of the respondents admitted that they engage in comparative social comparisons where they compare their lives to idealized representations of others online [17] [20]. This led to significant highs and lows regarding self-esteem; their self-conception was governed by the comparisons. Understanding these dynamics is crucial to eventually untangle how social media impacts adolescents' self-perception and mental health [12].

Future research will clarify the interaction between distinct social media use patterns and self- esteem among teenagers, thereby possibly pointing out what intervention strategies would be needed for positive constructive digital experiences in this age group [19].

Self-esteem was measured using the very commonly utilized Rosenberg Self-Esteem Scale, where generalized, global self-worth was assessed and ten items included "I feel that I am a person of worth" [3]. The responses were rated using a Likert-type scale, where a higher score would point towards a greater level of overall self-esteem level [3]. Global measures aside, specific domains of self-esteem were also measured with respect to academic achievement, social relationships, and body image.

These scales rely on existing instruments, like Harter's Self-Perception Profile for Adolescents, to measure self-esteem in multiple domains.

Preliminary analyses of self-esteem scores suggested considerable variability [10]. While many adolescents showed robust self-esteem across most of the domains, others yielded more variable patterns suggesting that perhaps some domains might carry more weight than others in determining general self-worth. Early findings generally suggest that specific types of social media use have certain kinds of effects on domain-specific self-esteem, indicating these forms of digital communication and interaction can both positively and negatively affect adolescents' self-esteem, depending on context. This paper aims to outline interlinkages between social comparison, consumption of content, and dimensions of self-esteem to understand how the use of social media is related to several dimensions of self-esteem [4] [12]. How complex such inter-relations are can help shine a light on what could perhaps be made available for educators, parents, and policymakers to craft a good digital experience for young people.

The results of the study show a mid-range level of selfesteem among participants. An average global selfworth score of 18.7 was obtained from participants on the Rosenberg Self-Esteem Scale (RSES) to indicate a midrange level of self-esteem across the sample [3]. Domain-specific scores were also attained to show that an average rating of 16.4 was given for school performance, 17.8 for social relationships, and 14.5 for appearance, thus indicating that, although self-esteem varies across different aspects of adolescents' lives, appearance scored lowest. Results concerning the association of frequency of social media use with self-esteem were highly significant [9] [15].

There was also a moderate, negative correlation between the frequency of social media use and global self-worth, r = -0.35 (p < 0.01), meaning that the greater the frequency of using social media, the lower the self-esteem [5] [16]. However, the correlation between the time spent on social media and self-esteem was even greater at -0.42, p < 0.01, indicating that the longer the time spent on social media, the lower the level of self-esteem [6] [16]. The type of content also impacted the self-esteem levels [5]. For example, the adolescents who viewed more video-based content like reels on Instagram recorded lower self-esteem scores compared to those viewing more textual and imagebased content (r = -0.25, p < 0.05) [5]. This specific study demonstrates how the type of content affects adolescents' self-esteem, particularly in relation to the visual nature of some social media tools.

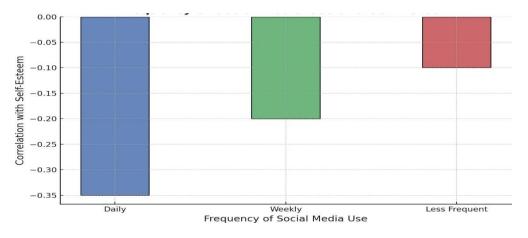


Fig. 1: Frequency of Social media Use and Self-Esteem

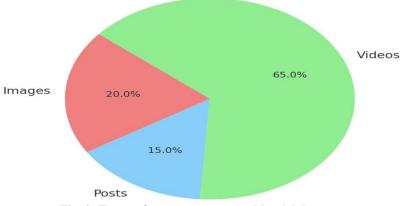


Fig. 2: Types of contents consumed by Adolescents

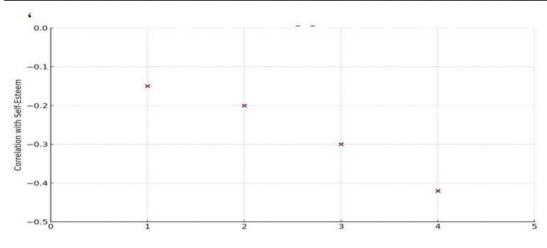


Fig. 3: Duration of Social Media Engagement and Self-Esteem

Discussion

The results of this research indicate a multi-directional relationship between the use of social media and adolescent's self-esteem. Negative associations have also been based on previous research in much the same way [11] [20]. Massively engaging or obsessing with social media is associated with lower self-esteem [14]. These are some things that become more pronounced if adolescents tend to be constantly exposed to idealized, photo-edited images of their peers that spark social comparisons [14].

Thus, youths who get used to constantly "seeing" images and videos on visually oriented applications such as Instagram and TikTok are less confident [17]. Results of the study may frequently indicate that these young people may easily become irritated when they post visual content that expresses a narcissistic or idealized self, which therefore increases the feeling of inadequacy against others [13] [15].

The social comparison seems to form an integral part of such dynamics [10]. Therefore, the results do support the hypothesis that adolescents tend to engage in social comparisons with their friends on social media, who portray idealized 'versions' of their lives. Such comparison is probably one of the channels through which social media use tends to negatively impact self-esteem.

Reasons for action: teachers, parents, and officials should jointly help adolescents learn positive online behaviours and develop a better understanding of digital literacy [11]. Social comparison behaviour has to be diminished, teens have to understand that status updates are made from impossible things, and proper usage of social media has to be developed. This can be done actively at schools through workshop programs that promote healthy self-viewing and balanced use of digital processes, and then blow those up into community organizations.

However, since the present study is cross-sectional in nature, the generalization of the study might be limited; that is, causality can't be established. The self-report measures are also by necessity subject to subjective interpretation and bias. Objective measures need to be included within longitudinal designs for the associations documented here to be further validated. The study contributes to public debate about the well-being of adolescents in the digital age. As this study raises the imperative need for proactive measures in a digitally literate environment that encourages positive online behaviours in light of detailing negative correlations between patterns of social media usage and levels of self-esteem, it indicates that educators, parents, and policymakers must work in common cause and act in concert to prepare future generations of digital users with safe means of using this digital landscape [18-20].

Conclusion

This study underlines a need for multilevel interventions to counteract the potential adverse effects of social media use on self-esteem. These also signify meaningful avenues for connection, hence sites of risk for vulnerable adolescents predisposed to comparison. Subsequent research should be involved with longitudinal designs that allow for such causality and further research into digital literacy and resilience training as potentially protective factors. The research focuses on elaborating how complex dynamics shape youth experiences by examining the relationship between patterns of social media use that impact adolescents' self- esteem. The negative correlations between time spent and frequency of social media use and global self-worth indicate nuanced approaches toward potential negative impacts. Importantly, types and dynamics of content consumption are the basis of social comparison and frame the complex experience among adolescents in online environments. Images and videos are the core content driving much of that kind of consumption; they are basically means by which self- perceptions are created, in other words, because such content is crucial to the digital environment. It means the intervention has obvious implications for a general strategy: without it, the positive digital experience cannot exist. Educational programs, parent guidance, and special literacy programs to make the youngsters responsible for using social media- all fall among measures to make access balance with welfare. However, it has its limitations: it is cross-sectional and therefore based on self-report measures. Therefore, future research endeavours should be longitudinal and objective, and possible moderating variables and depth should be considered to show how these dynamics are played out between social media and adolescent self-esteem. This fluid paradigm of digital communication will therefore require all educators, parents, and policymakers to collaborate so that they can move forward. Aiming towards a digital environment that may well be inviting to positive child development and well-being results in much more potential brought to date [13]; hence, the children will be empowered to strategically navigate the challenge and opportunity in which the use of social media within the digital age poses for them.

Acknowledgements

We would like to thank the University of Allahabad, the Indian Institute of Technology Kharagpur, and the Indian Institute of Technology Patna for allowing us to gather data through on-campus surveys. This research would not have been possible without their assistance in facilitating access to their students for data collection.

Conflict of Interests and Fundings

The authors declare no conflict of interest, and this research received no external funding.

References

- 1. American Psychological Association. Publication Manual of the American Psychological Association (6th ed.), 2010, American Psychological Association.
- Harter S. The Construction of the Self: Developmental and Sociocultural Foundations (2nd ed.). Guilford Press, 2012.
 Rosenberg M. Society and the Adolescent

Self-Image. Princeton University Press, 1965.

- 4. Ellison NB, Steinfield C, Lampe C. The benefits of Facebook "friends:" Social capital and college students' use of online social network sites. Journal of Computer-Mediated Communication, 2007;12(4): 1143-1168.
- Valkenburg PM, Koutamanis M, Vossen, HG. The concurrent and longitudinal relationships between adolescents' use of social network sites and their social selfesteem. Computers in Human Behavior, 2017;76: 35-41.
- Twenge JM, Campbell WK. Associations 6. screen between time and lower psychological well-being among children and adolescents: Evidence from а population-based study. Preventive Medicine Reports, 2018;12: 271-283.
- Khalaf AM, Alubied AA, Khalaf AM, Rifaey AA. The Impact of social media on the mental health of adolescents and young adults: A systematic review. Cureus. 2023; 15(8): e42990. doi: 10.7759/cureus.42990.
- Kim HHS. The impact of online social networking on adolescent psychological well- being (WB): a population-level analysis of Korean school-aged children. International Journal of Adolescence and Youth, 2017;22(3): 364-376.
- 9. Karim F, Oyewande AA, Abdalla LF, Chaudhry Ehsanullah R, Khan S. Social media use and its connection to mental health: A systematic review. Cureus. 2020;12(6):e8627.
- 10. Berryman C, Ferguson CJ, Negy C. Social Media Use and mental health among young adults. Psychiatr Q. 2018;89(2):307-314.
- 11. O'Reilly M, Dogra N, Whiteman N, Hughes J, Eruyar S, Reilly P. Is social media bad for mental health and wellbeing? Exploring the perspectives of adolescents. Clin Child Psychol Psychiatry. 2018;23(4):601-613.
- Ulvi O, Karamehic-Muratovic A, Baghbanzadeh M, Bashir A, Smith J, Haque U. Social media use and mental health: A global analysis. Epidemiologia (Basel). 2022;3(1):11-25.
- 13. Nesi J. The Impact of Social Media on Youth Mental Health: Challenges and Opportunities. N C Med J. 2020;81(2):116-121.
- 14. Clark JL, Algoe SB, Green MC. Social

network sites and well-being: The role of social connection. Current Directions in Psychological Science, 2018;27(1):32-37.

- 15. McCrae N, Gettings S, Purssell E. Social media and depressive symptoms in childhood and adolescence: A systematic review. Adolescent Research Review. 2017; 2: 315-330.
- 16. Riehm KE, Feder KA, Tormohlen KN, Crum RM, Young AS, et al. Associations between time spent using social media and internalizing and externalizing problems among US youth. JAMA Psychiatry. 2019;76(12):1266-1273.
- 17. Nesi, J., & Prinstein, M. J. Using social media for social comparison and feedback-seeking: Gender and popularity moderate

associations with depressive symptoms. Journal of abnormal child psychology. 2015;43: 1427-1438.

- Dienlin T, Johannes N. The impact of digital technology use on adolescent well- being. Dialogues in clinical neuroscience, 2020;22(2): 135-142.
- 19. Gupta C, Jogdand S, Kumar M. Reviewing the impact of social media on the mental health of adolescents and young adults. Cureus, 2022;14(10): e30143.
- Vidal C, Lhaksampa T, Miller L, Platt R. Social media use and depression in adolescents: a scoping review. International Review of Psychiatry. 2020; 32(3): 235-253.

Source of Support: Nil Conflict of Interest: Nil