










ORIGINAL

Study on the relationship between social capital, Instagram usage, and mental health among students

Estudio sobre la relación entre capital social, uso de Instagram y salud mental entre estudiantes

Jagdish Gohil¹ , Rakesh Mohanty² , Ankit Punia³ , Shikhar Gupta⁴ , RenukaJyothi S⁵ , Sonia Mehta⁶ , Nelson Nishant Kumar Lyngdoh⁷ 

¹Parul Institute of Medical Sciences and Research, Parul University. Vadodara, Gujarat, India.

²IMS and SUM Hospital, Siksha 'O' Anusandhan (Deemed to be University), Department of Psychiatry. Bhubaneswar, Odisha, India.

³Centre of Research Impact and Outcome, Chitkara University. Rajpura, Punjab, India.

⁴Chitkara Centre for Research and Development, Chitkara University. Himachal Pradesh, India.

⁵JAIN (Deemed-to-be University), Department of Biotechnology and Genetics. Bangalore, Karnataka, India.

⁶School of Nursing, Noida International University. Greater Noida, Uttar Pradesh, India.

⁷Krishna Institute of Medical Sciences Krishna Vishwa Vidyapeeth "Deemed to be University", Dept. of FMT. Taluka-Karad, Dist-Satara, Maharashtra, India.


Cite as: Gohil J, Mohanty R, Punia A, Gupta S, RenukaJyothi S, Mehta S, et al. Study on the relationship between social capital, Instagram usage, and mental health among students. Health Leadership and Quality of Life. 2024; 3:.415. <https://doi.org/10.56294/hl2024.415>

Submitted: 17-03-2024

Revised: 05-08-2024

Accepted: 12-11-2024

Published: 13-11-2024

Editor: PhD. Prof. Neela Satheesh 

ABSTRACT

Social media networks (SMNs) are becoming some of the basic necessities in the daily life, and thus, new publications appear that discuss effects of these networks on users' mental status and their behaviours. The most common context in which research is carried out the effects resulting from the interactions on the SMN's include Facebook and Instagram. Research aims to investigate the relationships between Instagram use, social capital, and life satisfaction. Online questionnaires that measured the participants' use of Insta, social capital (SC), and level of happiness were given to them. The Instagram Activity Survey (IAS), a behavioral report instrument created especially for this research based on the Facebook Usage Questionnaire (FUQ), was used to gauge Insta usage. In both populations, the results showed consistent evidence of a positive relationship between the using Insta and SC factors. Particularly, compared to those who used Insta more passively, those who indicated higher levels of active use showed higher degrees of connecting and bridging social capital (BSC). The use of a restricted Trial population and the dependence on self-report measures are just two of the investigation's limitations that must be acknowledged. Future studies should overcome these restrictions and look into additional variables that can affect the connection between the usage of Insta and psychological well-being.

Keywords: Self-Esteem; Social Platforms; Facebook; Insta; Social Capital.

RESUMEN

Las redes de medios sociales (SMNs) se están convirtiendo en una de las necesidades básicas en la vida diaria, y por ello, aparecen nuevas publicaciones que discuten los efectos de estas redes sobre el estado mental de los usuarios y sus comportamientos. Los contextos más habituales en los que se investigan los efectos derivados de las interacciones en las SMN son Facebook e Instagram. La investigación tiene como objetivo investigar las relaciones entre el uso de Instagram, el capital social y la satisfacción con la vida. Se entregaron a los participantes cuestionarios en línea que medían el uso de Insta, el capital social (CS) y el nivel de felicidad. Para medir el uso de Insta se utilizó el Instagram Activity Survey (IAS), un instrumento de informe de comportamiento creado especialmente para esta investigación y basado en el Facebook

Usage Questionnaire (FUQ). En ambas poblaciones, los resultados mostraron evidencias consistentes de una relación positiva entre el uso de Insta y los factores SC. En particular, en comparación con los que utilizaban Insta de forma más pasiva, los que indicaron mayores niveles de uso activo mostraron mayores grados de capital social de conexión y de puente (CS). El uso de una población de prueba restringida y la dependencia de medidas de autoinforme son sólo dos de las limitaciones de la investigación que deben reconocerse. Futuros estudios deberían superar estas restricciones e investigar variables adicionales que puedan afectar a la conexión entre el uso de Insta y el bienestar psicológico.

Palabras clave: Autoestima; Plataformas Sociales; Facebook; Insta; Capital Social.

INTRODUCTION

Social connections, self-perception, and mental health are just a few areas of our lives that have been significantly impacted in recent years by the ubiquity of social media platforms. Insta is one website that has become very popular, particularly with students. Insta has dramatically influenced the social life of many young people due to its emphasis on sharing visual content and social networkin.⁽¹⁾ Along with its advantages, Insta usage has how it can affect mental health, especially among students. To better comprehend the intricate interactions between these factors, researchers have started looking into the relationship between Insta usage, SC, and mental health.⁽²⁾ The resources and connections people have within their social networks are called SC, a term with sociological roots. It includes the social support, trust, and sense of community people experience due to their interactions. Because SC affects access to opportunities, resources, and psychological support, it can greatly impact someone's mental health.⁽³⁾

Insta provides users with chances for social engagement, self-expression, and the creation of online communities as a networking platform. By making it easier to maintain and grow social networks, they have the potential to increase SC. Insta's platform, characterized by carefully controlled and frequently idealized depictions of people's lives, may also generate comparisons between people, feelings of inadequacy, and low self-esteem, potentially hurting mental health.⁽⁴⁾ It is essential to comprehend this link because it can guide the creation of interventions and initiatives to support student populations' good mental health outcomes. Additionally, it was discovered that Insta and WhatsApp were the platforms where people communicated their positive emotions the most, while Insta was the least popular platform.⁽⁵⁾

The initially is to use a new measurement tool as an accurate and legitimate gauge of Insta activity. Additional, the links between Insta use and SC and general well-being.

Social networking sites are bad for people's mental health, psychological wellbeing, and academic performance. These outcomes highlight the importance of paying close attention to development and its consequences.⁽⁶⁾ The expectations of student's impact Instagram addictions by bringing the moderating role of psychological health into account. For a deeper understanding of Insta addiction, Long-term research is necessary.⁽⁷⁾ Investigate youth involvement in disaster risk reduction are gathered from various levels. The methodologies are utilized for Photo voice project are described in the article. Dismantling power disparities, fostering participation, and ensuring meaningful result distribution are all important factors to consider when employing strategy to involve kids.⁽⁸⁾ Compares user profiles, behaviours, and digital SC across two different SNS, namely FB, and LinkedIn. Furthermore, it analyzes how TAL may be affected by online SC. The findings add significant comparative research to the SNS research and provide fresh insights.⁽⁹⁾ Additionally, it has important ramifications for commercial enterprises, SNS, and educational institutions. A sizable Trial of Twitter and Insta users will be used in the research. To evaluated the relationships among character, psychological variables, and internet behaviors. Research provides the individual differences among users and non-users on different SNS sites, which is valuable.⁽¹⁰⁾

Evidence from various long-term data sources that indicate that the impacts of social media on well-being vary over platforms and population groupings. The Research providesspatiotemporal insights into the connection betweeninternet and social media use and community health through open and private data.⁽¹¹⁾ proposed model of relationships among social media usage causes, social media interaction categories, and physiological pleasure and health has been evaluated. These results support the uses and gratifications hypothesis and forward the research of how this theory might be used in the context of social media.⁽¹²⁾

To promote older persons' SC and well-being, better understands the potential advantages of Social Communication Services (SCS). Older adults will be able to interact with and participate in our fast-changing world while maintaining confidence and independence by receiving digital literacy training and encouragement.⁽¹³⁾ In order to evaluate a speculative model and the potential mediating function of SNS addiction, To design a structural equation modeling (SEM) strategy. It is advised to examine young adults in other sociocultural contexts to provide additional light on the research association.⁽¹⁴⁾

The rest of this article's content is divided into subsequent sections. Part 2 of this research introduces the associated work, the suggested methodologies are discussed in Part 3, the experiments are described in Part 4 with an emphasis on mental health performance evaluation, and the process is finally concluded in Part 5.

The relevant work and important methods used by the previous researcher are covered in this part to research the connection between student mental health, Insta use, and SC.

METHOD

These are the methods on the relationship between SC, Insta usage, and mental health among students.

Participants

Using the Statistical Power Analysis Tool (SPSS), the required sample for a valid trial before data collection was estimated. An a priori effect size of 0,30 was used in the a priori power analysis. The idea was reached that 85 participants should be included in the trial.

Trials

The 195 participants from the first Trial 1, 125 women and 70 men, were Insta users. Age was 25,82 on average (SD: 5,64). Most individuals (41,33 %) studied psychology, making up 93,20 % of the participants.

The 350 people were included in Trial 2, but 40 of them were eliminated when the validation items were not accurately completed or the information set was not full. A total of 310 participants 70 men and 240 women made up the final Trial. Age was 23,06 on average (SD: 6,96). Again, students comprised almost all participants (91,70 %), with 55,60 % of them studying psychology. Participants in Trial 2 were limited to those with an Insta account. Insta usage statistics were gathered, including daily and overall usage durations. 88,20 percent of the participants regularly utilized Insta. The usage varied from 2 to 12 minutes per day (11,60 %) to greater than 3 hours of activity per day (1,65 %) but was generally between 11 and 31 hours per day (35,40 %) for participants.

Evaluations

Despite the possible exception of the FUQ, It was utilized in Trial 1 and the subsequent questions were used in both Trials. The FUQ, a Likert scale with a maximum score of 5, assessed FB activity, with one denoting "strongly agree " and Five denoting "strongly disagree" usage. The current analysis found good internal consistency with "viewing," "exciting," and "drama," as well as reasonably substantial amounts of overall FB engagement.

The IAS is a Likert scale with a range of one to Five, where one is " strongly agree " and five is " strongly disagree " Higher ratings reflect a higher evaluation of Insta activity frequency. Particularly, 38 products based on particular services offered by Insta were used. To distinguish between dynamic and static domains of Insta use, the exploratory factor modelling (EFM) produced 31 IAS-items, comprising 19 and 12 products, respectively.

We also discovered how much time people spend on Insta, but only in Trial 2. As predicted, these measures positively correlated substantially with both Insta-use domains. The validity of the Insta-Activity Scale was verified using several analyses. For Trial 1, there was a correlation between the IAS and the three FUQ domains of viewing, exciting, and drama. The emergence of extremely strong relationships between the two measures of Insta use and the three areas of FB use suggests that the findings have convergent validity. The areas where people actively use Insta and FB show the strongest correlation coefficient.

Procedure

Research will utilize a cross-sectional survey design to gather data from two distinct samples of students. The first sample will consist of undergraduate students recruited through campus announcements and social media platforms, ensuring a diverse representation across various fields of research. The second sample will include graduate students selected via departmental email lists to capture a more mature demographic. Participants will complete a structured questionnaire assessing their social capital through validated scales, their Instagram usage patterns regarding frequency and content type, and their mental health status using data will be analysed to explore correlations between the variables.

SC

A questionnaire that assesses two types of SC—BSC and BSC was developed for evaluating Internet-specific SC. To make things even more explicit, "Insta" was substituted for "online/offline." Another way to measure SC is the sustained SC subscale, one of the four items on the fourteen-item scale.

However, because the way people utilize SMNs has evolved over the past ten years, only the binding and bridges categories of social wealth were used in the current analysis. With former relationships might be less vital when utilizing SMNs today. A Likert scale with five points was used to rate the items. Higher ratings on this scale reflect greater perceptions of SC. Participants in the two Trials of this research showed reasonably

high scores for all three SC subscales, with bridging SC having the highest values. With both scales, reliability evaluations revealed good internal consistency coefficients.

Mathematical assessment

The SPSS from IBM 26 was utilized for data analysis. Engage in cross-site comparison by assessing criteria, assembling information, analysing results, and offering directions for use together with limitations. This kind of analysis is useful in discovering relationships between the objects of comparison, and can have implications to their attributes or actions analyse variable relationships using correlation coefficients, interpret findings, visualize results, and consider limitations to draw meaningful conclusions. Mediation is the process of resolve an issue while the opposing parties work with the assistance of an unbiased third party to identify appropriate channels of communication.

RESULTS

Comparative analysis of Trials

To determine whether the gender and percentage of students in the two Trials varied, additional χ^2 -analyses were run. T-tests were also utilized to compare the Trials ages as well as the survey's indicators of Insta usage, SC, and life satisfaction. Figure 1 presents to descriptive statistics for Trial 1.

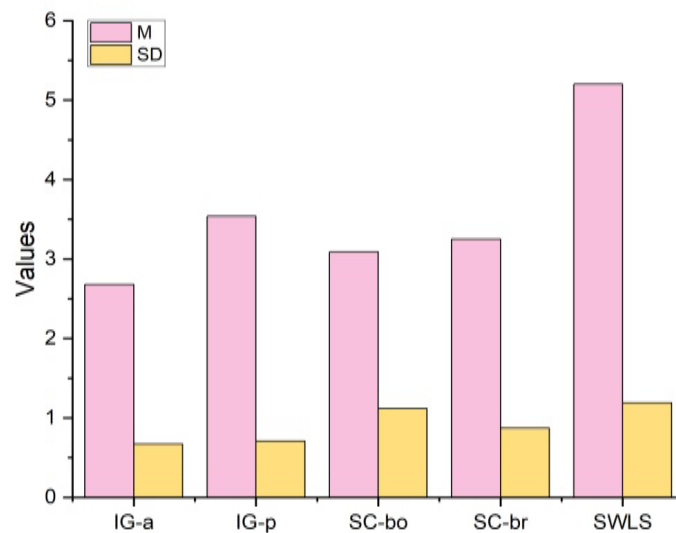


Figure 1. Descriptive Statistics for Trials 1

Figure 2 was utilized to compare the Trials' ages and the survey's indicators of Insta usage SC and life satisfaction.

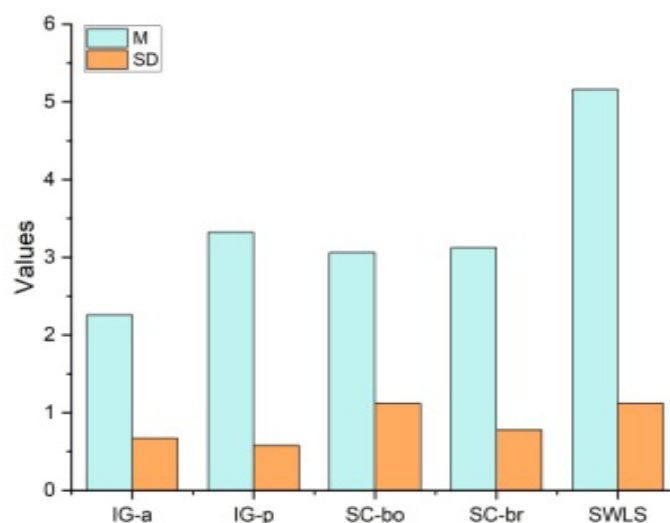


Figure 2. Descriptive Statistics for Trials 2

Inter-correlations

All of the variables in Trial 1 and 2 had a roughly normal distribution. In Trial 2, only passive Insta use was not evenly distributed. As a result, using non-parametric correlation factor of Spearman is employed for this rule instead of Pearson's correlation factor. Table 1 provides a summary of the associations. Sizes of the effects $r_{xy}=0,11$ were designated by means of modest properties, 0,20 as moderate effects, and 0,40 as high effects by Cohen.

| Measures | Trials | IG-a | IG-p | SC-bo | SC-br |
|----------|--------|----------|----------|----------|-------|
| SWLS | 1 | -0,126 | 0,103 | 0,297*** | 0,074 |
| | 2 | -0,062 | 0,065 | 0,134* | 0,076 |
| SC-br | 1 | 0,436*** | 0,482*** | 0,405*** | - |
| | 2 | 0,428*** | 0,429*** | 285*** | - |
| SC-bo | 1 | 0,222** | 0,319*** | - | - |
| | 2 | 0,158** | 0,226*** | - | - |
| IG-p | 1 | 0,532*** | - | - | - |
| | 2 | 0,464*** | - | - | - |
| IG-a | 1 | - | - | - | - |
| | 2 | - | - | - | - |

Significantly clear correlations between Insta use in both categories and SC were found. In contrast to the linkages between both types of Insta and bridge SC usage, to moderate impacts were discovered for the relationship between utilizing Insta and BSC. The relationship between inactive use of Insta and bridge SC was shown to be most positively correlated. H1a-d was subsequently confirmed.

In addition, the concepts of using Insta and social influence were both thought of as two-dimensional. The considerable positive correlation between active and passive Insta usage for both populations indicated powerful impacts. Additionally, there was a moderately good correlation between the two SC areas. The inactive and active categories for Insta use showed a meaningful link with life happiness. H2a-b was not verified as a result.

T-test

T-tests was utilized to evaluate the age distributions of the Trials as well as the survey variables of SC, life satisfaction, and Insta use. Participants' ages are not significantly varied among these two populations, according to the T-test, $t(353) = 3,58$, $p = 0,065$. T-tests showed that while Insta use varied considerably between the two populations, SC and life satisfaction showed no significant differences between the Trials. Insta use, both active and passive, was judged to be more prevalent in Trial 1 than in Trial 2. It was therefore determined that both Trials were different in terms of Trials traits and Insta usage. The hypotheses were examined independently in each Trial due to these Trial differences. Figure 3 Displays T-tests where Insta use varied considerably between the two populations, SC and life satisfaction showed no significant variations between the Trials.

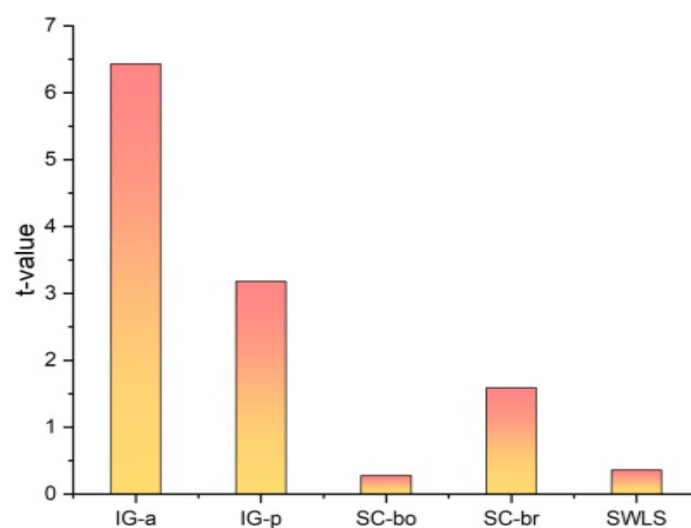


Figure 3. Result of T-test value

To determine whether the gender and percentage of students in the two trials differed, additional analyses were executed. T-tests were also utilized to compare the Trials ages as well as the survey's measures of Insta use, SC, and life satisfaction. IG-a indicates Instagram is active. IG-p" refers to Instagram's passive mode. SC-bo indicates SCbonding while SC-br indicates SC bridging. SWLS: Satisfaction with Life Scale. Table 2 presents the results of the investigation.

| Table 2. Result of p value | | |
|----------------------------|-------|-----------|
| Measure | p | Cohen's d |
| SWLS | 0,725 | 0,06 |
| IG-a | 0,002 | 0,66 |
| SC-br | 0,115 | 0,18 |
| IG-p | 0,004 | 0,38 |
| SC-bo | 0,788 | 0,05 |

Mediation

The fourth version of the Scripts PROCESS was used to conduct mediation studies based on H4. With extra parameters that can be supplied for executing the analysis, Model 4 is typically utilized for performing a straightforward mediation analysis. This process is based on additional bootstrapping comments and OLS-regression analysis (Trial size $r = 9000$). Liberty, linearity, distribution normality, homoscedasticity, and residual independence are prerequisites for mediation analysis. These circumstances have been verified and tested. For both Trials, figure 4 summarizes the mediation model.

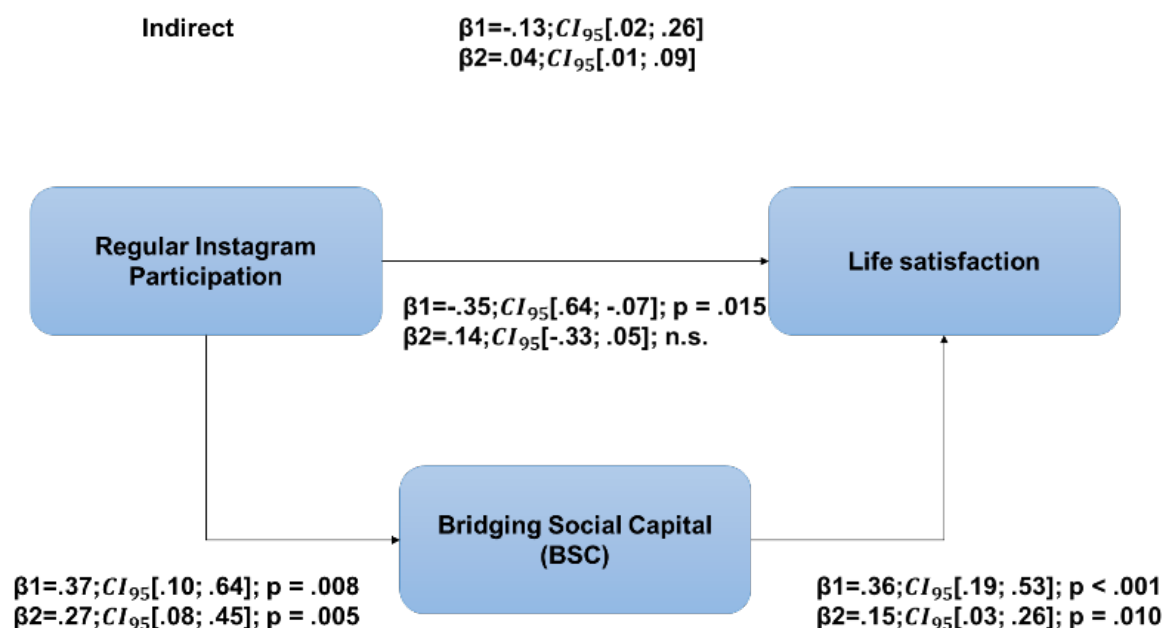


Figure 4. Active Instagram Model for Both Trials

The fact that the trust range did not include 0 for Trial 1 made the indirect and direct paths important. Even the effect of indirectness was significant for Trial 2. The findings suggested that SC bonds positively influence the relationship between frequent Insta use and life satisfaction.

DISCUSSION

Research aimed at examining the correlation between Insta usage, and perceived social pressure, and self-annihilating health. Generalization of the outcomes across trials was statistically significant, the best results were received when comparing two kinds of Insta usage and bridging SC; however, the positive connections in development of SC were also distinguished, though they were minor.

The passive Insta usage lowers life satisfaction, and active Insta usage increases it. However, it was observed that there were no considerable relationships between Insta use and life satisfaction predicted positive relation between BSC and life satisfaction and the results supported this expectation while there was no such positive relation between BS and life satisfaction. The disagreement on bridging SC is perhaps attributable to participants' different assessment of life satisfaction under current conditions was supported, thus showing

that BSC moderates the connection between active Instagram use and life fulfillment. Research correlational nature makes it impossible to generate causal correlations, only that BSC may be vital in explaining how the use of active social media has a positive impact on well-being. Positive relations with others are found to impact positively in the Instagram feeds hence the need to pursue BSC for an improved quality of life.

CONCLUSIONS

In conclusion, our social media analysis found connections between Insta use, social influence, and life happiness that partially confirm earlier research findings and delve into uncharted theoretical and empirical waters. A new Insta usage measurement was established to expand the investigation's scope. This IAS was validated and shown to be trustworthy. The usage of the IAS extends above the subjective assessment of preferences by providing more objective data because it is built upon behavioral reports resulting from frequency analysis. Further research on Insta use is expected to be greatly aided by such a behavior measure that separates active service from passive use.

The majority of Insta users are, however, fairly young. Thus, there may be little distortion regarding respondents' age and Insta use. However, more research should attempt to replicate the findings using a bigger, more representative population. Another area for improvement with the Trial is that a significant portion of the participants (up to 55 %) were psychology students, which may have limited the generalization of the findings.

Furthermore, it was novel to propose that SC bonds serve as an intermediary between frequent use of Insta and life happiness. The mediation model's validation revealed a connection between Insta use and life satisfaction that is compatible with the idea of SC theory. A potential solution to the differences in past studies' conclusions is found in verifying the pertinent mediator model in two Trials. The inclusion of BSC as a variable facilitator also highlighted the need to consider a different passive causal connection between active consumption of Insta and life satisfaction via BSC, even though the results contradicted the theory that there are immediate associations between Insta use and life satisfaction.

BIBLIOGRAPHIC REFERENCES

1. Foroughi B, Griffiths MD, Iranmanesh M, Salamzadeh Y. Associations between Instagram addiction, academic performance, social anxiety, depression, and life satisfaction among university students. *International Journal of Mental Health and Addiction*. 2022 Aug;20(4):2221-42. <https://doi.org/10.1007/s11469-021-00510-5>
2. Hussenoeder FS. The bright side of social network sites: On the potential of online social capital for mental health. *Digital Health*. 2022 Apr;8:20552076221093133. <https://doi.org/10.1177/20552076221093133>
3. Thomas L, Orme E, Kerrigan F. Student loneliness: The role of social media through life transitions. *Computers & Education*. 2020 Mar 1;146:103754. <https://doi.org/10.1016/j.compedu.2019.103754>
4. Mahfud T, Triyono MB, Sudira P, Mulyani Y. The influence of social capital and entrepreneurial attitude orientation on entrepreneurial intentions: the mediating role of psychological capital. *European Research on Management and Business Economics*. 2020 Jan 1;26(1):33-9. <https://doi.org/10.1016/j.iedeen.2019.12.005>
5. Spottswood EL, Wohn DY. Online social capital: recent trends in research. *Current opinion in psychology*. 2020 Dec 1;36:147-52. <https://doi.org/10.1016/j.copsyc.2020.07.031>
6. Dong J, Lee S, Wang CH, Shannon DM. Impact on social capital and learning engagement due to social media usage among the international students in the US. *Education and Information Technologies*. 2023 Jul;28(7):8027-50. <https://doi.org/10.1007/s10639-022-11520-8>
7. Ponnusamy S, Iranmanesh M, Foroughi B, Hyun SS. Drivers and outcomes of Instagram Addiction: Psychological well-being as moderator. *Computers in human behavior*. 2020 Jun 1;107:106294. <https://doi.org/10.1016/j.chb.2020.106294>
8. Pickering CJ, Al-Baldawi Z, Amany RA, McVean L, Adan M, Baker L, Al-Baldawi Z, O'Sullivan T. Photovoice and Instagram as strategies for youth engagement in disaster risk reduction. *Qualitative health research*. 2022 Oct;32(12):1897-906. <https://doi.org/10.1177/10497323221116462>
9. Reimann LE, Ozimek P, Rohmann E, Bierhoff HW. Post more! The mediating role of social capital between Instagram use and satisfaction with life. *Current Psychology*. 2023 May;42(14):12175-89. <https://doi.org/10.1007/s12144-021-02579-6>

10. Umegaki Y, Higuchi A. Personality traits and mental health of social networking service users: A cross-sectional exploratory study among Japanese undergraduates. *Computers in Human Behavior Reports*. 2022 May 1;6:100177. <https://doi.org/10.1016/j.chbr.2022.100177>
11. Jaidka K. Cross-platform-and subgroup-differences in the well-being effects of Twitter, Instagram, and Facebook in the United States. *Scientific reports*. 2022 Feb 28;12(1):3271. <https://doi.org/10.1038/s41598-022-07219-y>
12. Jarman HK, Marques MD, McLean SA, Slater A, Paxton SJ. Motivations for social media use: Associations with social media engagement and body satisfaction and well-being among adolescents. *Journal of Youth and Adolescence*. 2021 Dec;50(12):2279-93. <https://doi.org/10.1007/s10964-020-01390-z>.
13. Simons M, Reijnders J, Peeters S, Janssens M, Lataster J, Jacobs N. Social network sites as a means to support personal social capital and well-being in older age: An association study. *Computers in Human Behavior Reports*. 2021 Jan 1;3:100067. <https://doi.org/10.1016/j.chbr.2021.100067>
14. Diefenbach S, Anders L. The psychology of likes: Relevance of feedback on Instagram and relationship to self-esteem and social status. *Psychology of Popular Media*. 2022 Apr;11(2):196. <https://psycnet.apa.org/doi/10.1037/ppm0000360>

FINANCING

No financing.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

AUTHORSHIP CONTRIBUTION

Data curation: Jagdish Gohil, Rakesh Mohanty, Ankit Punia, Shikhar Gupta, RenukaJyothi S, Sonia Mehta, Nelson Nishant Kumar Lyngdoh.

Methodology: Jagdish Gohil, Rakesh Mohanty, Ankit Punia, Shikhar Gupta, RenukaJyothi S, Sonia Mehta, Nelson Nishant Kumar Lyngdoh.

Software: Jagdish Gohil, Rakesh Mohanty, Ankit Punia, Shikhar Gupta, RenukaJyothi S, Sonia Mehta, Nelson Nishant Kumar Lyngdoh.

Drafting - original draft: Jagdish Gohil, Rakesh Mohanty, Ankit Punia, Shikhar Gupta, RenukaJyothi S, Sonia Mehta, Nelson Nishant Kumar Lyngdoh.

Writing - proofreading and editing: Jagdish Gohil, Rakesh Mohanty, Ankit Punia, Shikhar Gupta, RenukaJyothi S, Sonia Mehta, Nelson Nishant Kumar Lyngdoh.