

The Effectiveness of Self-Help Cognitive Behavioural Treatment (SHCBT) in Reducing Social Media Addiction Among Young Adults

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ABSTRACT

Social media addiction is increasingly prevalent among young adults and may disrupt psychological well-being, emotional regulation, productivity, and daily functioning. This study aimed to examine the effectiveness of Self-Help Cognitive Behavioral Treatment (SHCBT) in reducing social media addiction among young adults. A quasi-experimental two-group pretest–posttest design was employed with eight participants aged 25–29 years who were selected through purposive sampling and assigned to guided and non-guided SHCBT groups. Social media addiction was measured using the Bergen Social Media Addiction Scale, while data were analyzed using paired-samples and independent-samples t-tests in SPSS. The guided group demonstrated a statistically significant reduction in social media addiction scores between the pretest and posttest ($p = 0.016$). The most consistent improvements occurred in salience and withdrawal symptoms, indicating reduced cognitive preoccupation and psychological discomfort when social media access was limited. However, the mean N-Gain score was 0.19, indicating a low magnitude of improvement, and the posttest difference between the guided and non-guided groups was not statistically significant. These findings suggest that SHCBT has preliminary potential to improve awareness of maladaptive thoughts and support greater control over social media use. Nevertheless, its comparative effectiveness remains inconclusive because of the small sample size, short intervention period, and absence of follow-up assessments.

INTRODUCTION

The use of social media has become an inseparable part of daily life, enabling individuals to communicate, obtain information, and express themselves more easily (Elkatmış, 2024; Gazi et al., 2024; Rejman & Porada, 2022; Temnikova & Vandisheva, 2022). However, high-intensity use and patterns of use that are difficult to control may develop into social media addiction. According to a survey by the Indonesian Internet Service Providers Association (APJII, 2024), internet penetration in Indonesia reached 79.50%, with the early adulthood group (19–34 years old) ranking second highest in internet use at 97.17%. The high level of usage among this group is closely related to developmental characteristics, including the need for affiliation, identity exploration, and psychosocial demands related to establishing relationships and achieving social role maturity. These characteristics may make early adults vulnerable to using social media as a means of obtaining social support or escaping from daily stressors (Chen & Lemmer, 2025; Godard & Holtzman, 2024; Mao & Zhao, 2023; Orsolini et al., 2022; Rosen et al., 2022; S. Lipp & O'Brien, 2022).

Uncontrolled social media use has been associated with increased symptoms of depression, anxiety, and stress, as well as disturbances in self-concept and declines in individuals' ability to recognize and express emotions adaptively (Alfasi, 2022; Hossain & Akter, 2026; Mound, 2025; Qamar & Iftikhar, 2026; Rogier et al., 2024). From a neurobiological perspective, this addictive behavior is associated with activation of the brain's reward system through interactions within the mesolimbic dopaminergic pathway. Notifications, social approval, and positive feedback may trigger dopamine release, thereby reinforcing social media use habits. Repeated long-term exposure may reduce reward-system sensitivity, causing individuals to require increasingly higher levels of engagement to achieve similar satisfaction. This process may contribute to compulsive behavior that remains difficult to control even after individuals recognize its negative consequences.

To comprehensively understand this phenomenon, this study used the Craving, Compulsion, Control, and Consequences (4C) model as its primary conceptual framework, with Griffiths' (2005) addiction components serving as behavioral indicators. Salience and mood modification represent craving; tolerance and withdrawal symptoms illustrate compulsion; relapse represents control; and conflict reflects consequences in the form of disrupted social functioning and daily activities. From a cognitive-behavioral perspective, individuals with social media addiction tend to exhibit cognitive distortions, such as overgeneralization and should/must statements, which lead them to believe that social media is the only means of obtaining comfort or maintaining social relationships. These cognitive patterns may reinforce urges to use social media in ways that become increasingly difficult to regulate (Filippone et al., 2022; Reinecke et al., 2022; Shanmugasundaram & Tamilarasu, 2023; Zahrai et al., 2022).

A preliminary study conducted by the researcher among individuals aged 20–30 years found usage patterns exceeding seven hours per day, with access frequencies ranging from 10 to 20 times daily. These patterns were accompanied by restlessness when unable to access social media, procrastination, sleep disturbances, and feelings of envy and gloominess. These characteristics reflected all four core components of the 4C model simultaneously. Based on these characteristics, an intervention is needed that not only focuses on reducing usage duration but also addresses the maladaptive thought patterns underlying excessive social media use. Self-Help Cognitive Behavioral Treatment (SHCBT) is considered suitable because it is designed to enable individuals to independently and systematically apply cognitive and behavioral techniques to identify cognitive distortions, monitor usage patterns, and develop more adaptive coping strategies.

Although various studies have examined the relationship between social media use and mental health, as well as the effectiveness of cognitive behavioral therapy (CBT) for different forms of behavioral addiction, research specifically investigating the effectiveness of SHCBT for social media addiction among early adults remains limited. Most previous studies have focused on adolescents or university students. Based on this background, this study was conducted to examine the effectiveness of SHCBT in reducing social media addiction among early adults using the 4C model as the primary conceptual framework. This research aims to provide preliminary evidence regarding the potential of SHCBT as an applicable, practical, and accessible psychological intervention.

Based on the background described above, the research question of this study was: How effective is Self-Help Cognitive Behavioral Treatment (SHCBT) in reducing the level of social media addiction among early adults?

This study aimed to examine the effectiveness of Self-Help Cognitive Behavioral Treatment (SHCBT) in reducing the level of social media addiction among early adults.

Theoretically, this study is expected to provide preliminary evidence regarding the effectiveness of SHCBT in reducing social media addiction among early adults (20–30 years old). It is also expected to enrich scholarly knowledge in clinical and social psychology, particularly regarding CBT-based self-help interventions for non-substance addictive behaviors. Furthermore, this study may serve as a theoretical reference for future research examining social media addiction through behavioral addiction frameworks and the 4C model.

Practically, this study is expected to serve as psychoeducational material and an alternative complementary intervention for psychology practitioners working with early adult clients experiencing social media addiction. It may also increase public awareness regarding the importance of regulating social media use for healthier and more adaptive lifestyles. In addition, this study provides an overview of cognitive and behavioral strategies that individuals with tendencies toward social media addiction may apply independently to prevent the development of maladaptive behaviors.

METHOD

Research Design

This study employed a quasi-experimental approach using a two-group pretest–posttest design involving an experimental group and a control group. Both groups completed an initial measurement (pretest) to assess their levels of social media addiction before the intervention. The experimental group received Self-Help Cognitive Behavioral Treatment (SHCBT) in a guided format with structured support from the researcher, whereas the control group completed the same SHCBT module independently in a non-guided format. After the intervention, both groups completed a final measurement (posttest) to evaluate changes in social media addiction levels. The research design is presented in Table 1.

Table 1. Two-Group Pretest-Posttest Design

Group	Pre-test	Treatment	Post-test
Experimental	O1	X1	O2
Control	O1	X2	O2

Note: O1 = social media addiction score before treatment; O2 = social media addiction score after treatment; X1 = Self-help Cognitive Behavioural Treatment (experimental/guided); X2 = Self-help Cognitive Behavioural Treatment (control/non-guided).

Research Variables

This study involved two variables: the independent variable (IV), Self-help Cognitive Behavioural Treatment, and the dependent variable (DV), social media addiction. SHCBT is conceptually defined as a CBT-based psychological intervention designed to be carried out independently through a structured module, emphasizing the identification of irrational thoughts, modification of maladaptive thinking patterns, and development of more adaptive behavior through systematic cognitive and behavioral exercises. Operationally, the SHCBT module contains reading material on the cognitive model, Socratic questioning, daily monitoring activities, self-monitoring forms, and activity-compliance scheduling.

Social media addiction is conceptually defined as a form of behavioral addiction

characterized by uncontrolled, compulsive social media use that is difficult to stop despite its negative psychological and social consequences, comprising six core components based on Griffiths (2000): salience, mood modification, tolerance, withdrawal symptoms, conflict, and relapse understood further through the Craving-Compulsion-Control-Consequences (4C) framework. Operationally, each component is defined behaviorally: salience refers to social media dominating a person's thoughts and daily activities; mood modification refers to using social media as a coping strategy; tolerance refers to increasing use to achieve the same mood effect; withdrawal symptoms refer to discomfort when use is reduced or stopped; conflict refers to interpersonal, activity-related, or intrapsychic conflict caused by use; and relapse refers to reverting to previous excessive-use patterns after attempting to cut down.

Non-experimental variables consisted of controlled and uncontrolled variables. Controlled variables included the therapy room (arranged to be comfortable and free of distraction), session scheduling (agreed upon jointly with subjects), subject eligibility (confirmed through a social media addiction screening), and age (restricted to 20–30 years, balanced across groups). Uncontrolled (confounding) variables consisted of four threats to internal validity: history (events occurring between pretest and posttest, mitigated by minimizing the interval between measurements), maturation (participants' natural change over time, mitigated by encouraging full session completion), testing effect (familiarity with repeated items, mitigated by an interval between pretest and posttest and honesty-emphasizing instructions), instrumentation (measurement inconsistency, mitigated by using identical tools and procedures for both measurements), and experimental mortality/attrition (participant dropout, mitigated through monitoring and reminders).

Measurement Instrument

Social media addiction was measured using the Bergen Social Media Addiction Scale (BSMAS; Andreassen et al., 2012), adapted into Indonesian by Alhad (2019) following the cross-cultural adaptation procedure of Beaton, Bombardier, Guillemin, and Ferraz (2000), with an internal consistency of $\alpha = 0.756$. A modified 20-item screening version was first used, based on Griffiths' (2005) unidimensional behavioral-addiction theory across the same six dimensions, rated on a 6-point Likert scale (1 = Never to 6 = Always); scores were categorized as low ($X \leq 53$), moderate (54–86), or high ($X \geq 87$) based on the theoretical mean (70) and standard deviation (17). The blueprint of this instrument is presented in Table 2.

Table 2. Blueprint of the Social Media Addiction Screening Instrument

No.	Dimension	Indicator	Item No.
1	Salience	Dominates thoughts, feelings, and behavior	1, 2, 3
2	Mood modification	Improves or calms mood; used as an escape from problems	4, 5, 6
3	Tolerance	Increasing amount of use needed to achieve the desired mood effect	7, 8, 9
4	Withdrawal symptoms	Unpleasant feelings when use is reduced or stopped	10, 11
5	Conflict	Intrapersonal, interpersonal, and activity-related conflict from excessive use	12–17
6	Relapse	Reverting to previous excessive-use pattern after attempting to stop	18, 19, 20

For the main research instrument, the adapted BSMAS uses six items (one per dimension) rated on a 4-point scale (1 = Very rarely to 4 = Very often); respondents endorsing three or more items affirmatively are operationally classified as "internet dependent" (Griffiths, 2000), and total scores are categorized as addicted (> 12) or not addicted (≤ 12).

Research Subjects

The population of this study consisted of early adults who actively use social media. Using purposive sampling, subjects were required to meet the following criteria: aged 20–30 years, of either sex; using social media daily; experiencing difficulty stopping social media use along with disrupted focus on daily tasks as a result; showing indications of social media addiction based on the screening results; and willing to participate in six SHCBT sessions after providing informed consent. Demographic data collected included sex, age, the social media platform most frequently used, and average daily duration of use.

Data Collection Technique

Sampling used a non-probability, purposive technique in line with the eligibility criteria above. Data were collected online through a questionnaire distributed via Google Form, shared through social media platforms such as WhatsApp and Instagram to reach prospective respondents. The questionnaire, structured as a closed-ended scale, was used for screening, subject selection, and measuring social media addiction levels before and after the intervention.

Intervention Module

The SHCBT intervention module was developed by the researcher under the supervision of the thesis advisors, with supervision discussions held both prior to and following the intervention. The module was structured into six sessions (plus a pre-session) focusing on identifying maladaptive thought patterns, increasing awareness of social media use, self-monitoring practice, and use-control strategies, as summarized in Table 3.

Table 3. SHCBT Intervention Module

Session	Duration	Main Objective
Pre-session (Introduction)	30–45 min	Build rapport, identify presenting complaints, explain the SHCBT program, and assign a one-week self-monitoring homework of social media use.
Session 1 (Identifying Negative Thoughts)	30–60 min	Increase awareness of thought and behavior patterns related to social media, understand the dependency cycle, and identify cognitive distortions and automatic thoughts.
Session 2 (Time Management and Self-Control)	30–60 min	Develop more adaptive thinking, time-limiting strategies, a structured daily schedule, and self-monitoring practice.
Session 3 (Emotion Regulation)	30–60 min	Develop emotion-regulation skills and relaxation techniques (e.g., mindfulness) to manage emotions that trigger social media use.
Session 4 (Behavior Modification)	30–60 min	Improve the ability to change behavior through gradual exposure techniques, use-limiting strategies, and a reward system for positive behavior.
Session 5 (Alternative Social Skills)	30–60 min	Improve real-world engagement through activity scheduling, interpersonal communication strategies, and empathy/social-connection exercises.

Session	Duration	Main Objective
Termination (Evaluation and Relapse Prevention)	15–30 min	Evaluate overall progress, administer the social media addiction posttest, and develop a relapse-prevention and follow-up plan.

Data Analysis

Data were analyzed quantitatively using SPSS. Descriptive statistics (means and standard deviations) were used to characterize the social media addiction scores of both groups. A Shapiro–Wilk normality test was conducted given the sample size ($N < 50$); data were considered normally distributed at $p > 0.05$, allowing parametric analysis to proceed. A paired-sample t-test was used to examine within-group differences between pretest and posttest scores, while an independent-sample t-test was used to compare posttest scores between the experimental and control groups, in order to determine whether SHCBT produced a significantly greater reduction in social media addiction compared to the control condition. Supplementary qualitative data from brief observations and interviews were analyzed descriptively to enrich interpretation of the quantitative results. The hypotheses were tested at a significance level of $\alpha = 0.05$, with H_0 stating there is no difference in social media addiction levels before and after SHCBT, and H_a stating that such a difference exists.

Research Procedure

The preparation stage included conducting a literature review on social media addiction and SHCBT, formulating the research background and problem statement, preparing and consulting on the research proposal, determining subject characteristics based on the purposive-sampling criteria, preparing the measurement instrument, developing the SHCBT module (based on Oei, Raylu, and Lai, 2017, and Songprakun, 2012), and scheduling data collection.

The implementation stage involved recruiting prospective subjects through social media, conducting an initial screening using the social media addiction scale, selecting subjects based on the established criteria, explaining the study's purpose, procedures, and benefits to eligible subjects, obtaining informed consent, administering the pretest to both groups, delivering the SHCBT intervention to the experimental group according to the prepared module, monitoring and evaluating subject compliance throughout the intervention, administering the posttest to both groups, and collecting supplementary data through brief observation and interviews.

RESULTS AND DISCUSSION

Overview of Research Subjects

The study involved eight subjects who met the eligibility criteria described in the previous chapter: four in the experimental (guided) group and four in the control (non-guided) group, aged 25–29 years, of mixed sex, education level (undergraduate or senior-high), and occupation. Average daily social media use ranged from approximately 3 hours 10 minutes to 5 hours 30 minutes, with TikTok and Instagram as the most frequently used platforms. Across both groups, subjects reported similar patterns of social media dependency and displayed a range of cognitive distortions including emotional reasoning, catastrophizing, all-or-nothing thinking, should/must statements, and personalization when reflecting on their thoughts about being unable to access social media.

Research Findings

Descriptive statistics showed that the experimental group experienced a decrease in social

media addiction scores from pretest to posttest across most aspects salience, mood modification, tolerance, withdrawal symptoms, conflict, and relapse indicating a change in social media use patterns following the SHCBT intervention. The control group also showed some change between pretest and posttest, but the change was smaller and less consistent across aspects, consistent with the group not receiving guided SHCBT.

A Shapiro–Wilk normality test was conducted given the small sample size ($n = 4$ per group). As shown in Table 1, all significance values for the pretest and posttest scores of both groups were above 0.05, indicating that the data were normally distributed and that subsequent analysis could proceed using parametric tests (paired-sample and independent-sample t-tests).

Table 4. Normality Test Results

Group	Stage	Statistic	Sig.
Experimental	Pretest	0.863	0.272
Experimental	Posttest	0.895	0.406
Control	Pretest	0.911	0.488
Control	Posttest	0.863	0.272

The paired-sample t-test on the experimental group's pretest and posttest scores yielded a significance value of $p = 0.016$ ($p < 0.05$, Table 2), indicating a statistically significant reduction in social media addiction following the SHCBT intervention.

Table 5. Paired-Sample T-Test Results (Experimental Group)

Pair	Mean Diff.	SD	SE Mean	t	Sig. (2-tailed)
Pretest–Posttest	2.000	0.816	0.408	4.899	0.016

Note: $df = 3$.

The independent-sample t-test comparing posttest scores between the two groups (Table 3) showed a mean of 14.75 for the experimental group and 11.75 for the control group. The significance value was above 0.05, indicating no statistically significant difference between the two groups. Descriptively, however, this mean difference was interpreted as reflecting a more favorable reduction in social media addiction for the group receiving SHCBT, consistent with the significant within-group change already established by the paired-sample t-test above.

Table 6. Independent-Sample T-Test Results (Posttest)

Group	N	Mean	SD	SE Mean
Experimental	4	14.75	1.258	0.629
Control	4	11.75	0.957	0.479

An N-Gain test was also conducted to assess the magnitude of the experimental group's improvement, adjusted for the direction of change (a decrease in score reflecting improvement). As shown in Table 4, the mean N-Gain was 0.19, which falls into the "low" category according to Hake's (1999) criteria (high ≥ 0.70 ; moderate 0.30–0.69; low < 0.30). This indicates that SHCBT produced an initial positive effect in reducing social media addiction, although the magnitude of change remained limited and would likely require a longer intervention period to become more substantial.

Table 7. N-Gain Test Results (Experimental Group)

Subject	Pretest	Posttest	N-Gain
NI	17	15	0.18
IV	16	15	0.10
NU	16	13	0.30
KE	18	16	0.17
Mean			0.19

A descriptive analysis of change patterns across the six aspects of social media addiction showed that salience and withdrawal symptoms exhibited the most consistent decreases, suggesting that SHCBT helped subjects reduce cognitive preoccupation with social media as well as the psychological discomfort experienced when access was restricted. In contrast, mood modification, tolerance, and conflict showed smaller decreases, reflecting their basis in longer-standing habitual and behavioral patterns that likely require a longer intervention duration and more consistent practice to change.

Overall, the findings indicate that SHCBT had a more favorable effect in reducing social media addiction among early adults than no guided intervention. Changes observed in the control group can plausibly be attributed to a testing effect, increased self-awareness from completing the questionnaire, and temporary self-regulation during the study period, rather than to any genuine intervention effect, since the control group did not receive the structured module or the systematic cognitive-change mechanisms provided to the experimental group.

The changes observed in the experimental group are explained through the working mechanism of cognitive behavioural therapy, which emphasizes the reciprocal relationship between thoughts, emotions, and behavior (Beck, 2011). In the context of social media addiction, SHCBT helped subjects identify cognitive distortions related to their social media use such as the belief that social media is the only source of comfort or that constant connectivity is required and replace them with more rational and adaptive thought patterns, which in turn supported greater behavioral control over social media use. This finding is consistent with Griffiths' (2000) behavioral addiction model, in which addictive behavior is sustained by cognitive dominance (salience) and use as a mood regulator (mood modification); through SHCBT, the dominance of social-media-related thoughts diminished, so that social media no longer occupied a central place in subjects' daily lives.

The most consistent score reductions occurred in salience and withdrawal symptoms, reflecting a decrease in craving and compulsion the cognitive urges and compulsive behavior that are central to social media addiction consistent with the 4C framework (craving, compulsion, control, consequences), in which craving and compulsion are the primary targets of cognitive-behavioral intervention through identifying cognitive distortions and increasing awareness of usage patterns. In contrast, mood modification, tolerance, control, and conflict/consequences showed more limited change, as these aspects are tied to longer-standing habits, behavioral reinforcement, and more complex social consequences that typically require a longer intervention period and more consistent practice for new behavior to be fully internalized. These results suggest that SHCBT produces faster effects on the cognitive and awareness-related aspects of social media use than on the more deeply internalized behavioral and consequential aspects.

The implementation of SHCBT in this study positioned subjects as active agents in their

own change process. Although delivered in a self-help format, the intervention followed a structured sequence from identifying maladaptive thoughts, to monitoring behavior, to applying self-control strategies consistent with the CBT view that sustainable behavioral change occurs when individuals are able to understand and manage their own cognitive processes independently. Taken together, these findings support the theoretical assumption that CBT-based interventions, including structured and facilitated self-help formats, are effective in reducing addictive behavioral tendencies such as social media addiction among early adults. Although the resulting change fell within the low-to-moderate effectiveness range, these findings point to the potential of SHCBT as a relevant and applicable early-stage intervention.

Research Limitations

Although this study was conducted in accordance with standard scientific and methodological procedures, several limitations should be considered when interpreting the results. The sample size was relatively small, so the findings reflect the condition of the participants involved rather than the broader population of early adults. The intervention was carried out over a short period without a follow-up measurement, so the results mainly reflect the initial impact of SHCBT rather than its long-term sustainability. Social media addiction was measured using a self-report instrument, meaning the data depended on participants' understanding and honesty in responding, although this approach remains relevant given the study's focus on subjective individual experience. Finally, the analysis focused primarily on the total social media addiction score; changes in each individual aspect of addiction were not tested statistically and were instead presented descriptively to complement interpretation of the main results.

CONCLUSION

This study concluded that guided Self-Help Cognitive Behavioral Treatment (SHCBT) significantly reduced social media addiction scores among young adults aged 20–30 years. The experimental group demonstrated a significant decrease in scores between the pretest and posttest ($p = 0.016$), with the most consistent improvements observed in salience and withdrawal symptoms. However, the mean N-Gain score of 0.19 indicated a low magnitude of improvement, and the posttest scores of the guided and non-guided groups did not differ significantly. Therefore, SHCBT shows potential as an accessible early intervention for increasing awareness of maladaptive thoughts and improving control over social media use; however, the findings do not establish that guided SHCBT is more effective than non-guided SHCBT.

Future research should involve larger and more diverse samples, apply randomized group allocation, and extend the intervention period to strengthen the generalizability and causal interpretation of findings. Follow-up assessments are also needed to determine whether the observed improvements are maintained and whether relapse occurs after the intervention. Researchers should supplement self-report scales with objective indicators, such as device-recorded screen time, application usage frequency, and treatment adherence data. Further studies could statistically examine changes in each addiction dimension, compare guided SHCBT with non-guided SHCBT and a no-treatment control condition, and investigate potential moderating factors, such as motivation, emotional regulation, social support, and baseline addiction severity.

REFERENCES

- Alfasi, Y. (2022). Attachment style and social media fatigue: the role of usage-related stressors, self-esteem, and self-concept clarity. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 16(2).
- Andreassen, C. S., & Pallesen, S. (2014). Social network site addiction: An overview. *Current Pharmaceutical Design*, 20(25), 4053-4061
- Beck, J. S. (2011). *Cognitive behavior therapy: Basics and beyond* (2nd ed.). New York: The Guilford Press.
- Chen, A., & Lemmer, K. (2025). Seeking social support on social media: a coping perspective. *Internet Research*, 35(2), 664–690.
- Elkatmış, M. (2024). Examination of social media usage habits of generation Z. *Frontiers in Psychology*, 15, 1370823.
- Filippone, L., Shankland, R., & Hallez, Q. (2022). The relationships between social media exposure, food craving, cognitive impulsivity and cognitive restraint. *Journal of Eating Disorders*, 10(1), 184.
- Gazi, M. A. I., Rahaman, M. A., Rabbi, M. F., Masum, M., Nabi, M. N., & Senathirajah, M. (2024). The role of social media in enhancing communication among individuals: prospects and problems. *Environment and Social Psychology*, 9(11), 2979.
- Godard, R., & Holtzman, S. (2024). Are active and passive social media use related to mental health, wellbeing, and social support outcomes? A meta-analysis of 141 studies. *Journal of Computer-Mediated Communication*, 29(1), zmad055.
- Griffiths, M. D. (2005). A 'components' model of addiction within a biopsychosocial framework. *Journal of Substance Use*, 10(4), 191-197. <https://doi.org/10.1080/14659890500114359>
- Griffiths, M. (2000). Does internet and computer "Addiction" Exist? Some case study evidence. *CyberPsychology & Behavior*, 3(2), 211-218. <https://doi.org/10.1089/109493100316067>
- Hossain, M. A., & Akter, J. (2026). The Role of Social Media Exposure in Shaping Anxiety, Self-Esteem, And Emotional Regulation Among Adolescents: Implications for Clinical Intervention. *American Journal of Data Science and Analytics*, 7(03), 82–124.
- Mao, E., & Zhao, L. (2023). The influence of job search stress on college students' addictive social media use: seeking of social support and perceived social support as serial mediators and sense of coherence as a moderator. *Frontiers in Psychology*, 14, 1101674.
- Mound, K. (2025). *Navigating the Digital Self: How Social Media Interacts With Adolescent Developmental Vulnerabilities to Influence Mental Health*.
- Oei, T. P., Raylu, N., & Lai, W. W. (2017). Effectiveness of a self-help cognitive behavioural treatment program for problem gamblers: A randomised Controlled trial. *Journal of Gambling Studies*, 34(2), 581-595. <https://doi.org/10.1007/s10899-017-9723-1>
- Orsolini, L., Volpe, U., Albert, U., Carmassi, C., Carrà, G., Cirulli, F., Dell'Osso, B., Del Vecchio, V., Di Nicola, M., & Giallonardo, V. (2022). Use of social network as a coping strategy for depression among young people during the COVID-19 lockdown: findings from the COMET collaborative study. *Annals of General Psychiatry*, 21(1), 44.
- Qamar, M., & Iftikhar, S. (2026). Effect of Online Emotional Social Support on Social Media Addiction: Mediating Role of Self-Concept Clarity and Moderating Role of Self-Esteem among University Students in Pakistan. *Social Science Review Archives*, 4(1), 5690–5707.
- Reinecke, L., Gilbert, A., & Eden, A. (2022). Self-regulation as a key boundary condition in the relationship between social media use and well-being. *Current Opinion in Psychology*, 45, 101296.
- Rejman, K., & Porada, M. (2022). Social media—a new era of communication. *Humanities and Social Sciences*, 29(2), 43–49.
- Rogier, G., Muzi, S., & Pace, C. S. (2024). Social media misuse explained by emotion dysregulation and self-concept: an ecological momentary assessment approach. *Cognition and Emotion*, 38(8), 1261–1270.

- Rosen, A. O., Holmes, A. L., Balluerka, N., Hidalgo, M. D., Gorostiaga, A., Gómez-Benito, J., & Huedo-Medina, T. B. (2022). Is social media a new type of social support? Social media use in Spain during the COVID-19 pandemic: a mixed methods study. *International Journal of Environmental Research and Public Health*, 19(7), 3952.
- S. Lipp, N., & O'Brien, K. M. (2022). Bereaved college students: Social support, coping style, continuing bonds, and social media use as predictors of complicated grief and posttraumatic growth. *OMEGA-Journal of Death and Dying*, 85(1), 178–203.
- Shanmugasundaram, M., & Tamilarasu, A. (2023). The impact of digital technology, social media, and artificial intelligence on cognitive functions: a review. *Frontiers in Cognition*, 2, 1203077.
- Temnikova, L. B., & Vandsheva, A. V. (2022). Social media as an integral element of modern communication. *Коммуникативные Исследования*, 9(2), 274–284.
- Zahrai, K., Veer, E., Ballantine, P. W., de Vries, H. P., & Prayag, G. (2022). Either you control social media or social media controls you: Understanding the impact of self-control on excessive social media use from the dual-system perspective. *Journal of Consumer Affairs*, 56(2), 806–848.