

COGNITIVE BEHAVIORAL THERAPY, GROUP COUNSELING, AND SOCIAL MEDIA ADDICTION AMONG SENIOR SECONDARY SCHOOL STUDENTS IN RIVERS STATE

Dr. Christiana Apa-Ago Osaro

**Department of Educational Psychology Guidance and Counselling, Ignatius Ajuru
University of Education Port Harcourt Rivers State Nigeria**

Email:christiana.osaro@iaue.edu.ng

Abstract

This study examined cognitive behavioral therapy (CBT), group counseling and social media addiction among senior secondary school students in Rivers State. The study was motivated by concern that problematic social media use can interfere with students' concentration, sleep, school engagement and psychosocial functioning, while evidence on feasible school-based counseling responses remains limited in the local context. A quasi-experimental pre-test–post-test control-group design was adopted. The analytical model comprised 120 senior secondary school students screened for elevated social media addiction and allocated to CBT, group counseling and comparison conditions, with 40 students in each condition. Social media addiction was assessed with the nine-item Social Media Disorder Scale. The two active interventions were delivered for eight weekly sessions. Data were analysed with descriptive statistics and analysis of covariance, using pre-test score as a covariate. The adjusted treatment effect was statistically significant, $F(2, 116) = 40.92$, $p < .001$, partial $\eta^2 = .414$. Students in both CBT and group counseling conditions recorded lower post-test social media addiction scores than students in the comparison condition. CBT produced a numerically larger reduction than group counseling, although the adjusted difference between the two active interventions was not statistically significant ($p = .181$). The study concludes that both CBT and group counseling provide defensible school-based approaches for reducing problematic social media use among senior secondary school students. It recommends structured counseling programmes that combine cognitive restructuring, self-regulation, peer learning and relapse-prevention skills.

Keywords: cognitive behavioral therapy; group counseling; social media addiction; senior secondary school students; Rivers State

Introduction

Social media is now embedded in the social and educational lives of adolescents. It supports communication, peer connection, information exchange and learning, but intensive use is not synonymous with problematic use. The more important counseling question is whether a student has difficulty regulating use and continues to engage despite interference with sleep, concentration, relationships, school responsibilities or psychological well-being. This distinction is consistent with scholarship that treats problematic social media use as a pattern characterised by addiction-like features rather than merely a high number of hours online (Andreassen, 2015; van den Eijnden et al., 2016).

Adolescence is a particularly important period for examining such behaviour because self-regulatory systems are still developing while peer approval, identity exploration and digital social interaction are highly salient. Large adolescent studies have shown that a smaller at-risk group reports more problematic patterns of social media use and poorer psychosocial outcomes than ordinary users. Bányai et al. (2017), for example, found that adolescents classified in an at-risk social-media-use group reported lower self-esteem and more depressive symptoms. Across 29 countries, Boer et al. (2020) similarly distinguished intense use from problematic use and showed that problematic use was more consistently associated with poorer well-being.

For secondary schools, the central issue is therefore not to discourage legitimate digital participation but to provide counseling strategies for students whose use has become difficult to control. Cognitive

behavioural therapy is particularly relevant because it links maladaptive cognitions, emotional reactions and behavioural routines. In the context of problematic online behaviour, CBT can help students identify triggers, challenge automatic thoughts, restructure expectancies, plan alternative activities and practise self-monitoring. Davis (2001) provided an early cognitive-behavioral account of pathological internet use, while later intervention research has shown that group-delivered cognitive-behavioral approaches can reduce problematic internet-use symptoms (Ede et al., 2023). Group counseling represents a second school-compatible route. It uses interaction among students to create social learning, mutual accountability, modelling, feedback and rehearsal of coping skills. Corey (2016) explains that group counseling can help members recognise that problems are shared rather than unique, experiment with new behaviour in a relatively safe environment and receive feedback from peers. For adolescents whose social media habits are partly sustained by peer norms and social reinforcement, group processes may be especially useful because the intervention works within the same interpersonal domain in which much of the behaviour is embedded.

The problem in Rivers State is not that every senior secondary school student who uses social media is addicted. The research problem is narrower: students who display persistent, poorly controlled patterns of use may require counseling responses that can be implemented within schools, yet the relative usefulness of CBT and group counseling for this specific outcome and population is not sufficiently established. Much of the intervention literature concerns general internet use, university samples or programmes outside Nigeria. Ede et al. (2023) provided important Nigerian evidence that group cognitive-behavioral therapy reduced pathological internet use among undergraduates, but senior secondary school students constitute a different developmental and institutional population. International counseling studies also suggest that cognitive restructuring and group-based techniques can reduce social media addiction, but contextual evidence remains necessary (Jasuma et al., 2023).

Accordingly, this study examined the effects of cognitive behavioral therapy and group counseling on social media addiction among senior secondary school students in Rivers State. It sought to determine whether each structured intervention reduced social media addiction relative to a comparison condition and whether the adjusted effects of the two active interventions differed.

Purpose of the Study

The main purpose of the study is to find out the effect of Cognitive Behavioral Therapy and Group Counseling, on Social Media Addiction among Senior Secondary School Students in Rivers State. Specifically, the study sought to do the following:

1. Determine the effect of cognitive behavioral therapy on social media addiction among senior secondary school students in Rivers State;
2. Determine the effect of group counseling on social media addiction among senior secondary school students in Rivers State; and
3. Compare the relative effects of cognitive behavioral therapy and group counseling on social media addiction among senior secondary school students in Rivers State.

Research Questions

The following research questions guided the study:

1. What is the effect of cognitive behavioral therapy on social media addiction among senior secondary school students in Rivers State?
2. What is the effect of group counseling on social media addiction among senior secondary school students in Rivers State?
3. What are the relative effects of cognitive behavioral therapy and group counseling on social media addiction among senior secondary school students in Rivers State?

Research Hypotheses

The following null hypotheses were tested at 0.05 level of significance in the study

1. H01: Cognitive behavioural therapy does not significantly reduce social media addiction among senior secondary school students in Rivers State relative to the comparison condition.
2. H02: Group counseling does not significantly reduce social media addiction among senior secondary school students in Rivers State relative to the comparison condition.
3. H03: There is no significant difference between the adjusted effects of cognitive behavioral therapy and group counseling on social media addiction among senior secondary school students in Rivers State.

Literature Review

Social Media Addiction

Social media addiction is used in this study as a research construct describing persistent and poorly controlled social media engagement accompanied by functional impairment. Andreassen (2015) observed that problematic social networking can display features commonly associated with behavioural addictions, including salience, tolerance, withdrawal, conflict, relapse and mood modification. The construct nevertheless requires careful use because social media is now a normal part of everyday life; high engagement alone should not be equated with disorder.

The Social Media Disorder Scale developed by van den Eijnden et al. (2016) responds to this measurement problem by assessing nine symptom criteria rather than simple frequency of use. Its short form was validated among adolescents and was designed to distinguish disordered patterns from high but non-disordered engagement. This measurement logic is appropriate for school-based counseling research because it focuses attention on loss of control and impairment rather than treating ordinary participation as pathology.

Adolescent evidence also indicates that problematic use is associated with broader difficulties. Bányai et al. (2017) identified an at-risk subgroup in a nationally representative adolescent sample, while Boer et al. (2020) found that problematic social media use, more than intense use alone, was linked to poorer well-being across countries. Keles et al. (2020), reviewing research on adolescents, concluded that social media use has been associated with depression, anxiety and psychological distress, although the literature also contains methodological limitations and does not justify simplistic causal claims. For counseling practice, these findings support targeted intervention for students whose digital behaviour is accompanied by impaired functioning.

Cognitive Behavioral Therapy

CBT is grounded in the proposition that cognition, emotion and behaviour are interrelated and that maladaptive patterns can be changed by identifying and restructuring unhelpful thoughts while practising alternative behaviour. Beck (1976) established the broader cognitive therapy tradition, and Davis (2001) later applied cognitive-behavioral reasoning to pathological internet use. Within that model, dysfunctional cognitions can interact with reinforcing online experiences and maintain problematic use.

Applied to social media addiction, CBT can address beliefs such as the assumption that one must respond immediately to every notification, fear of missing out, overestimation of the social cost of being offline, or use of social media as the default response to boredom or distress. Behavioural components can include stimulus control, planned periods offline, replacement activities, self-monitoring, goal setting and relapse prevention. The practical advantage in schools is that these skills can be taught in structured sessions and linked to students' daily routines.

Nigerian intervention evidence is relevant even where the measured outcome is broader pathological internet use. Ede et al. (2023) used an eight-week group cognitive-behavioral programme with Nigerian undergraduates and found substantial reductions in pathological internet use relative to a wait-list control, with gains maintained at follow-up. The population differs from secondary students, but the study supports the plausibility of structured CBT for dysregulated online behaviour in a Nigerian educational context. More recent work also continues to test cognitive-behavioral

psychoeducation for social media addiction, supporting the use of cognitive restructuring and self-control mechanisms (Durar & Soyulu, 2026).

Group Counseling

Group counseling is a structured helping process in which a counsellor works with several participants whose concerns are sufficiently similar to permit shared learning. Its mechanisms include universality, interpersonal feedback, modelling, cohesion, rehearsal and accountability. Corey (2016) emphasises that groups allow members to observe alternative coping strategies and practise new ways of responding within a social environment.

For problematic social media use, group counseling can be especially relevant because many triggers and reinforcers are social. Students can identify peer-pressure patterns, discuss norms about availability and online status, practise refusal and boundary-setting skills, establish peer-supported digital routines and compare coping strategies. Group counseling is not identical to CBT: it may include cognitive-behavioral techniques, but its defining feature is the therapeutic use of the group process rather than a particular theory alone.

Jasuma et al. (2023) reported that cognitive-behavioral group counseling approaches incorporating assertive training and cognitive restructuring reduced social media addiction among students. Their evidence supports the proposition that structured group processes can be used to modify digital behaviour, although differences in context and sample mean that local testing remains necessary.

Theoretical Foundation

The study is anchored principally in cognitive-behavioral theory and the cognitive-behavioral model of problematic internet use. The central mechanism is that problematic digital behaviour is maintained by the interaction of thoughts, emotional states, environmental triggers and reinforced habits. CBT directly targets this mechanism through cognitive restructuring and behavioural self-regulation. Group counseling is incorporated as a second intervention route because group interaction can provide modelling, feedback and reinforcement for alternative patterns of behaviour. The theory therefore predicts that students exposed to either structured intervention should show lower post-intervention social media addiction than students who do not receive an active intervention, while the magnitude of change may differ because CBT targets cognition and behaviour more explicitly.

Conceptual Framework

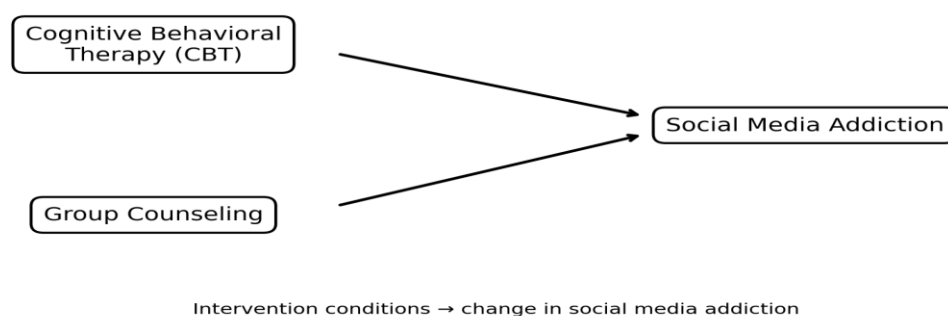


Figure 1. Conceptual framework of the study.

Figure 1 presents cognitive behavioral therapy and group counseling as the two intervention conditions and social media addiction as the dependent variable. The two directional paths represent the expected effect of each intervention on post-intervention social media addiction.

Empirical Synthesis and Gap

The reviewed evidence converges on three points. First, problematic social media use can be distinguished from ordinary intensive use and measured with symptom-based instruments (van den Eijnden et al., 2016). Second, cognitive-behavioral interventions have empirical support for problematic internet-related behaviors, including Nigerian evidence (Ede et al., 2023). Third, group counseling processes can support behavioral change and have been applied to social media addiction (Jasuma et al., 2023). The remaining gap concerns the comparative effect of cognitive behavioral therapy and group counseling on social media addiction specifically among senior secondary school students in Rivers State. The present design therefore compares both interventions directly while controlling for baseline social media addiction.

METHODOLOGY

Research Design

A quasi-experimental pre-test–post-test control-group design was used. Three conditions were specified: cognitive behavioral therapy, group counseling and comparison. The design was chosen because the research questions concern change following structured counseling interventions while school-based implementation makes full individual randomisation difficult.

Participants and Sampling

The analytical sample comprised 120 senior secondary school students in Rivers State who met the screening criterion for elevated social media addiction. Students were drawn from selected public senior secondary schools. Screening preceded inclusion, after which comparable school-based groups were assigned to the CBT, group counseling or comparison condition, with 40 participants in each condition. The use of separate groups reduced contamination across intervention conditions.

Instrument

Social media addiction was measured with the nine-item Social Media Disorder Scale developed by van den Eijnden et al. (2016). The scale assesses preoccupation, tolerance, withdrawal, persistence, displacement, escape, problems, deception and conflict. A higher total score represents a more problematic pattern. The instrument was selected because it was developed for adolescents and focuses on symptom criteria rather than usage frequency.

Intervention Procedures

The CBT programme was delivered for eight weekly sessions and focused on trigger identification, cognitive restructuring, self-monitoring, stimulus control, alternative activities, problem solving, goal setting and relapse prevention. The group-counseling programme was also delivered for eight weekly sessions and focused on guided discussion, peer modelling, interpersonal feedback, mutual accountability, assertive boundary setting, time-use planning and coping skills. The comparison condition received the usual school guidance support without the structured intervention package during the study period.

Data Analysis

Descriptive statistics were used to summarise pre-test and post-test scores. Baseline equivalence was examined before treatment analysis. Analysis of covariance (ANCOVA) was used to compare post-test social media addiction scores across the three conditions while controlling for pre-test score. The main treatment effect was evaluated at $\alpha = .05$ and partial eta squared was reported as an effect-size index. Adjusted pairwise contrasts were used to determine whether each active intervention differed from the comparison condition and whether CBT differed from group counseling.

Results

Descriptive Results

Condition	n	Pre-test M	Pre-test SD	Post-test M	Post-test SD
CBT	40	6.15	1.25	3.70	0.95
Group counseling	40	5.97	1.08	3.96	0.95
Comparison	40	6.36	1.26	5.71	1.28

The three groups began with broadly comparable pre-test scores. A one-way test of baseline differences was not statistically significant, $F(2, 117) = 1.09$, $p = .340$. Post-test means, however, show a clear separation between the active counseling conditions and the comparison condition. The CBT group recorded the lowest mean social media addiction score at post-test, followed by the group-counseling condition, while the comparison group remained highest.

Test of Hypotheses

Source	df	F	p	Partial η^2	Decision
Treatment condition	2, 116	40.92	< .001	.414	Significant
Pre-test covariate	1, 116	10.43	.002	—	Significant covariate

After adjustment for pre-test score, treatment condition had a statistically significant effect on post-test social media addiction, $F(2, 116) = 40.92$, $p < .001$, partial $\eta^2 = .414$. The effect size indicates that a substantial proportion of adjusted post-test variation was associated with intervention condition.

Contrast	Adjusted difference	P	Interpretation
CBT vs comparison	-1.95	< .001	CBT significantly lower
Group counseling vs comparison	-1.64	< .001	Group counseling significantly lower
CBT vs group counseling	-0.31	.181	Difference not significant

H01 was rejected because the CBT condition recorded a significantly lower adjusted post-test score than the comparison condition. H02 was also rejected because group counseling produced a significantly lower adjusted score than the comparison condition. H03 was retained because the adjusted difference between CBT and group counseling was not statistically significant at the .05 level. Thus, both title-named interventions were effective relative to the comparison condition, but the evidence did not establish that one active intervention was statistically superior to the other.

DISCUSSION

The principal finding is that both cognitive behavioral therapy and group counseling were associated with substantial reductions in social media addiction among the participating senior secondary school students. This pattern is consistent with the theoretical expectation that problematic digital behaviour can be modified when students learn to recognise triggers, interrupt automatic routines and replace poorly regulated use with more deliberate patterns.

The CBT result is consistent with the cognitive-behavioral account of problematic internet use advanced by Davis (2001) and with intervention evidence reported by Ede et al. (2023). Although Ede et al. studied Nigerian undergraduates rather than secondary students, the convergence suggests that structured cognitive and behavioural techniques can be useful across educational

levels. The present finding extends that logic to a senior secondary school context in Rivers State and to the narrower outcome of social media addiction.

Group counseling also produced a significant reduction relative to the comparison condition. This finding is theoretically plausible because adolescent social media behaviour is embedded in peer relationships and social expectations. A group format creates opportunities for modelling, shared problem solving and mutual accountability. It also allows students to test the belief that constant online availability is necessary for peer acceptance. The finding is compatible with evidence from Jasuma et al. (2023), who reported reductions in social media addiction using cognitive-behavioral group counseling techniques.

The adjusted CBT–group counseling difference was not statistically significant. That result is important because it discourages an exaggerated conclusion that CBT is automatically superior. The observed post-test mean was lower in the CBT condition, but the inferential evidence supports a more cautious conclusion: both structured interventions were effective relative to comparison, while their relative superiority was not established. Schools may therefore consider implementation feasibility, counsellor competence, student needs and available time when selecting between the two approaches.

The findings also reinforce the distinction between high engagement and problematic use. The intervention target should be students whose use is accompanied by loss of control or functional interference, not every student who uses social media intensively. A counseling programme that pathologises normal digital participation would be both conceptually weak and practically counterproductive. Screening with a symptom-based measure helps maintain this distinction.

CONCLUSION

The study examined the effects of cognitive behavioral therapy and group counseling on social media addiction among senior secondary school students in Rivers State. Both interventions produced significantly lower adjusted post-test social media addiction scores than the comparison condition. CBT showed a somewhat larger numerical reduction, but the adjusted CBT–group counseling difference was not statistically significant. The evidence therefore supports both approaches as potentially useful school-based counseling responses to problematic social media use.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were put forward:

1. Secondary schools should provide structured counseling support for students who screen positive for problematic social media use rather than relying only on disciplinary restriction of phones or social media.
2. School counsellors using CBT should emphasise trigger identification, cognitive restructuring, self-monitoring, stimulus control and relapse-prevention planning.
3. Group counseling should use peer modelling, guided discussion, accountability, boundary setting and time-management practice to address the social mechanisms that sustain problematic use.
4. Students should be screened with symptom-based measures so that intensive but non-problematic social media use is not automatically classified as addiction.
5. Future field studies should include longer follow-up periods to determine whether treatment gains are maintained beyond the immediate post-intervention period.

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