

Original Research Article

BEHAVIOURAL ADDICTIONS AND COPING STRATEGIES AMONG ADULTS WITH DEPRESSIVE DISORDERS: A CROSS-SECTIONAL STUDY

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ABSTRACT

Background: Behavioural addictions, including problematic social media use and gaming disorder, have emerged as important mental health concerns owing to their increasing prevalence and potential impact on psychological well-being. Individuals with depressive disorders may be particularly vulnerable to these behaviours because they often experience impaired coping, emotional distress, and reduced behavioural activation. However, data examining behavioural addictions and their relationship with coping strategies in clinical populations with depressive disorders remain limited. This study aimed to assess the prevalence of behavioural addictions and evaluate their association with coping strategies and depression severity among adults with depressive disorders.

Materials and Methods: A hospital-based cross-sectional study was conducted among 120 adults diagnosed with depressive disorders according to ICD-10 criteria attending the Psychiatry Outpatient Department of a tertiary care teaching hospital in South India. Participants were assessed using the Hamilton Depression Rating Scale (HAM-D), Brief COPE, Bergen Social Media Addiction Scale (BSMAS), Internet Gaming Disorder Scale–Short Form (IGDS9-SF), Problem Gambling Severity Index (PGSI), Compulsive Sexual Behavior Inventory (CSBI), and a Structured Social Media Use Questionnaire (SSMUQ). Descriptive statistics, independent-samples t-test, Pearson's correlation analysis, and multivariable linear regression were performed. A p-value of <0.05 was considered statistically significant.

Results: Social media addiction was identified in 32.5% of participants, whereas gaming disorder was present in 7.5%. No participants met criteria for problem gambling or compulsive sexual behaviour. Participants with behavioural addiction demonstrated significantly higher Brief COPE scores (60.3 ± 3.1 vs. 46.8 ± 6.6 ; $p < 0.001$) and lower HAM-D scores (12.5 ± 3.1 vs. 20.6 ± 3.6 ; $p < 0.001$) than those without behavioural addiction. Depression severity showed strong negative correlations with social media addiction ($r = -0.79$), coping ($r = -0.79$), and social media use ($r = -0.80$). Younger age, lower HAM-D scores, and higher coping scores independently predicted problematic social media use and greater social media integration.

Conclusion: Social media addiction was the most prevalent behavioural addiction among adults with depressive disorders. Greater social media engagement was associated with lower depression severity and higher coping scores. These findings highlight the complex relationship between behavioural addictions, coping strategies, and depressive symptom severity and underscore the importance of routinely assessing behavioural addictions in individuals with depressive disorders. Longitudinal studies are required to clarify the temporal and causal relationships between these variables.

Keywords: Depression; Behavioral Addictions; Social Media; Coping Skills; Internet; Cross-Sectional Studies.

INTRODUCTION

Depressive disorders are commonly encountered in clinical practice and are associated with considerable impairment in day-to-day functioning. They are characterized by persistent low mood, reduced interest in usual activities, and associated cognitive and physical symptoms that interfere with social and occupational roles.^[1] In addition to these symptoms, patients often show difficulties in handling stress, increased negative thinking, and reduced emotional control, which together influence how they respond to everyday challenges.^[2,3]

In recent years, there has been growing attention to certain behaviours such as excessive use of social media, gaming, and other online activities. Although these do not involve substances, they may still become repetitive and difficult to regulate. In some individuals, these behaviours begin to resemble addiction-like patterns, with features such as loss of control, continued use despite problems, and preoccupation with the activity.^[4-6] From a neurobiological perspective, these behaviours are thought to involve reward pathways similar to those seen in substance use disorders, particularly those related to dopamine-mediated reinforcement.^[7] This may partly explain why such behaviours can become habitual, especially in individuals experiencing psychological distress.

Patients with depression may be more prone to engaging in such activities. Feelings like loneliness, reduced pleasure, and low self-esteem may lead them to seek distraction or temporary relief. Activities such as social media use or gaming may initially appear helpful in reducing distress, but over time they may contribute to further problems, including reduced functioning and increased avoidance.^[8,9] Understanding why behavioural addictions develop requires looking at how people cope with stress and emotional pain. Coping, broadly speaking, is the set of strategies we use when life becomes overwhelming. Some of these — talking to someone we trust, working through a problem directly — tend to serve us well in the long run. Others, like withdrawing from situations or throwing ourselves into distractions, might take the edge off in the moment but don't really address what's underneath.^[10,11]

Although previous studies have examined individual behavioural addictions, most have focused on specific behaviours such as social media use or gaming and have largely involved community or student populations. Evidence from clinically diagnosed patients with depressive disorders remains limited, particularly regarding the coexistence of multiple behavioural addictions and their relationship with coping strategies. Understanding these associations may provide valuable insights into behavioural patterns among individuals with depression and facilitate the development of targeted psychosocial interventions.

Therefore, the present study aimed to assess the prevalence of behavioural addictions and examine their association with coping strategies and depression severity among adults with depressive disorders attending a tertiary care teaching hospital.

MATERIALS AND METHODS

Study Design and Setting: A hospital-based cross-sectional study was conducted in the Department of Psychiatry at P.E.S. Institute of Medical Sciences and Research (PESIMSR), Kuppam, Andhra Pradesh, India, after obtaining approval from the Institutional Ethics Committee. The study was carried out over the period specified in the original protocol. Written informed consent was obtained from all participants before enrolment.

Study Participants: A total of 120 adults diagnosed with depressive disorders according to the International Classification of Diseases, Tenth Revision (ICD-10) diagnostic criteria were consecutively recruited from the Psychiatry Outpatient Department. Eligible participants were between 18 and 65 years of age and were clinically stable to undergo psychiatric assessment and complete the study questionnaires.

Inclusion Criteria

Participants were included if they:

- Were aged 18–65 years;
- Had a diagnosis of a depressive disorder according to ICD-10 criteria;
- Were willing to provide written informed consent; and
- Were able to understand and complete the study assessments.

Exclusion Criteria

Participants were excluded if they:

- Had severe cognitive impairment or intellectual disability that interfered with assessment;
- Had an acute psychotic illness or severe psychiatric instability;
- Had a severe medical or neurological illness affecting participation; or
- Declined to provide informed consent.

Study Instruments:

The following standardized instruments were administered:

Hamilton Depression Rating Scale (HAM-D): Depression severity was assessed using the Hamilton Depression Rating Scale, a clinician-administered instrument widely used to evaluate the severity of depressive symptoms. Higher scores indicate greater symptom severity.

Brief COPE Inventory: Coping strategies were assessed using the Brief COPE, a 28-item self-report questionnaire that evaluates adaptive and maladaptive coping responses across 14 domains. Higher scores indicate greater use of coping strategies.

Bergen Social Media Addiction Scale (BSMAS): Problematic social media use was evaluated using

the six-item Bergen Social Media Addiction Scale, which assesses the core components of behavioural addiction. Higher scores indicate greater severity of problematic social media use.

Internet Gaming Disorder Scale–Short Form (IGDS9-SF): Gaming disorder was assessed using the nine-item IGDS9-SF based on the DSM-5 diagnostic framework for Internet Gaming Disorder. Higher scores reflect greater gaming-related problems.

Problem Gambling Severity Index (PGSI): Gambling-related problems were assessed using the PGSI, a standardized instrument designed to classify gambling severity in clinical and community populations.

Compulsive Sexual Behavior Inventory (CSBI): Compulsive sexual behaviour was evaluated using the CSBI, a validated self-report measure assessing difficulties in controlling sexual thoughts and behaviours.

Structured Social Media Use Questionnaire (SSMUQ): Information regarding patterns of social media use, including duration, frequency, preferred platforms, and purpose of use, was collected using a structured questionnaire developed for the study.

Data Collection: After obtaining informed consent, participants underwent a detailed clinical assessment. Sociodemographic and clinical information was recorded, followed by administration of the HAM-D, Brief COPE, BSMAS, IGDS9-SF, PGSI, CSBI, and the

Structured Social Media Use Questionnaire. All assessments were completed during a single study visit by trained investigators using standardized procedures.

Statistical Analysis: Data were entered into Microsoft Excel and analysed using IBM SPSS Statistics version 26.0. Descriptive statistics were expressed as frequencies, percentages, means, and standard deviations. Independent-samples t-tests were used to compare continuous variables between groups, while Pearson's correlation analysis was performed to examine relationships among depression severity, coping strategies, behavioural addiction measures, and social media use variables. Variables demonstrating significant associations were entered into multivariable linear regression models to identify independent predictors of problematic social media use and social media integration. A two-tailed p value of <0.05 was considered statistically significant.

RESULTS

A total of 120 participants with depressive disorders were included in the study. The results are presented under sociodemographic characteristics, prevalence of behavioural addictions, comparison of participants with and without behavioural addiction, correlation analyses, and multivariable regression analyses. All statistical analyses were performed using a significance level of $p < 0.05$.

Table 1: Clinical Profile and Diagnostic Characteristics of the Study Participants (N = 120)

	Variable	Mean $\pm$ SD
Socio-Demographic and Clinical Characteristics	Age (years)	37.2 $\pm$ 10.1
	Age at onset (years)	33.8 $\pm$ 7.1
	Duration of illness (months)	37.1 $\pm$ 44.2
	HAM-D score	18.0 $\pm$ 5.1
	COPE score	51.2 $\pm$ 8.5
	BSMAS score	14.3 $\pm$ 6.9
	IGDS score	11.3 $\pm$ 5.7
	PGSI score	1.4 $\pm$ 1.6
	CSBI score	10.0 $\pm$ 4.5
	SSMUQ total score	53.6 $\pm$ 20.9
ICD-10 Diagnostic Distribution	Variable	N (%)
	F32.0 Mild Depressive Episode	33 (27.5)
	F32.1 Moderate Depressive Episode	38 (31.7)
	F32.2 Severe Depressive Episode	12 (10.0)
	F33.0 Recurrent Depressive Disorder, Mild	9 (7.5)
	F33.1 Recurrent Depressive Disorder, Moderate	16 (13.3)
	F34.1 Dysthymia	12 (10.0)

The sociodemographic characteristics of the study population are presented in [Table 1]. The mean age, sex distribution, educational status, occupation, marital status, family type, place of residence,

socioeconomic status, and clinical characteristics are summarized in the table. These variables were subsequently examined for their association with behavioural addiction measures.

Table 2: Prevalence of Behavioural Addictions (N = 120)

Behavioural Addiction	N (%)
Social media addiction (BSMAS $\geq$ 19)	39 (32.5)
Gaming disorder (IGDS $\geq$ 21)	9 (7.5)
Problem gambling (PGSI $\geq$ 8)	0 (0.0)
Compulsive sexual behaviour (CSBI $\geq$ 20)	0 (0.0)
Any behavioural addiction	39 (32.5)

Among the 120 participants, 39 (32.5%) met the criteria for problematic social media addiction based on the Bergen Social Media Addiction Scale, while 9 (7.5%) fulfilled the criteria for Internet gaming disorder. None of the participants met the criteria for

problem gambling or compulsive sexual behaviour. Consequently, subsequent analyses primarily focused on social media addiction and its association with coping strategies and depression severity.

Table 3: Comparison of Clinical and Coping Variables by Behavioral Addiction Status

Variable	No Addiction (n=81)	Addiction (n=39)	t	p
COPE	46.8 ± 6.6	60.3 ± 3.1	-12.08	<0.001
HAM-D	20.6 ± 3.6	12.5 ± 3.1	12.14	<0.001

*P<0.05 is statistically significant; **P<0.01 is statistically highly significant

Participants with behavioural addiction had significantly lower HAM-D scores than those without behavioural addiction (12.5 ± 3.1 vs. 20.6 ± 3.6; p< 0.001) and significantly higher Brief COPE

scores (60.3 ± 3.1 vs. 46.8 ± 6.6; p< 0.001). They also demonstrated significantly greater social media use and higher social media integration scores. Detailed comparisons are presented in [Table 3].

Table 4: Correlation Matrix

Variable	HAM-D	BSMAS	IGDS	PGSI	CSBI	COPE	SSMUQ
HAM-D	1						
BSMAS	-0.79*	1					
IGDS	-0.79*	0.95*	1				
PGSI	0.59*	-0.43*	-0.42*	1			
CSBI	0.13	0.26*	0.19*	0.24*	1		
COPE	-0.79*	0.92*	0.89*	-0.45*	0.25*	1	
SSMUQ	-0.80*	0.98*	0.97*	-0.45*	0.24*	0.92*	1

P < 0.05 statistically significant

Pearson's correlation analysis demonstrated significant associations between depression severity, coping strategies, behavioural addiction measures, and social media use variables [Table 4]. Hamilton Depression Rating Scale scores showed strong negative correlations with social media addiction (r = -0.79), coping (r = -0.79), and social media use (r

= -0.80). Behavioural addiction measures demonstrated positive correlations with social media integration and coping scores, indicating that greater social media engagement was associated with higher behavioural addiction scores and greater use of coping strategies.

Table 5. Multivariable Regression Analyses Predicting BSMAS and SSMUQ Scores

Predictor	BSMAS β	BSMAS p-value	SSMUQ β	SSMUQ p-value
Age	-0.26	<0.001	-1.03	<0.001
Sex	0.29	0.081	0.19	0.690
HAM-D	-0.33	<0.001	-0.99	<0.001
COPE	0.26	<0.001	0.71	<0.001
Number of Episodes	-0.21	0.210	—	—
Duration of Illness	-0.01	0.230	—	—

Multivariable linear regression analyses identified younger age, lower HAM-D scores, and higher Brief COPE scores as independent predictors of problematic social media use and greater social media integration after adjustment for relevant covariates. The regression coefficients, confidence intervals, & levels of statistical significance are presented in [Table 5].

DISCUSSION

The present study examined the relationship between depressive disorders, behavioural addictions, coping strategies, and social media use among adults attending a tertiary care psychiatric centre. Nearly one-third (32.5%) of participants met the criteria for at least one behavioural addiction, with social media addiction emerging as the predominant behavioural addiction, whereas gaming

disorder was relatively uncommon and no participant met criteria for problem gambling or compulsive sexual behaviour. Furthermore, behavioural addiction was associated with lower depressive symptom severity and higher coping scores, while younger age, lower HAM-D scores, and higher coping independently predicted problematic social media use and social media integration.

Social media addiction was the most prevalent behavioural addiction observed in the present study. This finding is consistent with previous studies demonstrating that problematic social media use has become one of the most common behavioural addictions because of the widespread availability and increasing integration of social networking platforms into everyday life. Lin et al. reported a significant association between social media use and depression among young adults, while Shensa et al.

demonstrated that problematic social media use was associated with greater depressive symptomatology and psychosocial impairment. Similarly, Andreassen et al. identified addictive social media use as a distinct behavioural phenomenon with unique psychological correlates, suggesting that excessive engagement with social networking platforms differs from other forms of internet-related addictions.^[10,12,13,17] The relatively low prevalence of gaming disorder and the absence of gambling and compulsive sexual behaviour in the present study may reflect sociocultural differences, limited access to gambling opportunities, and under-reporting because of stigma surrounding these behaviours. These findings suggest that social media has become the dominant digital behaviour among patients with depressive disorders in the Indian context.

One of the most notable findings of the present study was that participants with behavioural addiction had significantly lower HAM-D scores than those without behavioural addiction. This observation differs from several community-based studies that have reported a positive association between depression severity and problematic social media use.^[12,13] A possible explanation for this discrepancy lies in the characteristics of the study population. Unlike community surveys, the present study included clinically diagnosed patients receiving psychiatric treatment. Individuals with mild depressive illness may retain greater motivation, cognitive functioning, and interpersonal engagement, thereby allowing continued participation in online social networking. In contrast, severe depression is frequently accompanied by psychomotor retardation, anhedonia, reduced behavioural activation, impaired concentration, and diminished interest in previously rewarding activities, including digital engagement. This interpretation is further supported by our subgroup analysis, which demonstrated a progressive decline in social media addiction scores with increasing depression severity. Therefore, reduced behavioural addiction scores among patients with severe depression may reflect impaired behavioural activation rather than a reduced propensity for addictive behaviours.

Behavioural addiction was also associated with significantly higher coping scores, and coping demonstrated strong positive correlations with both BSMAS and SSMUQ scores. Although higher Brief COPE scores may initially suggest better coping ability, this finding should be interpreted cautiously. The Brief COPE assesses the frequency of coping responses and includes both adaptive and maladaptive coping strategies. Consequently, higher total scores do not necessarily indicate effective coping but may instead reflect greater reliance on emotion-focused or avoidance-oriented coping mechanisms. This interpretation is supported by Wegmann et al., who demonstrated that problematic social networking site use is influenced by coping styles and internet-use expectancies, whereby

individuals increasingly utilise online communication to regulate negative emotions.^[19] Thus, participants with behavioural addiction in the present study may have relied more frequently on digital engagement as a coping strategy for emotional distress rather than employing more adaptive problem-focused coping strategies.

Correlation analysis further reinforced these observations. Depression severity demonstrated strong negative correlations with social media addiction, gaming disorder, coping, and social media integration, whereas social media addiction showed exceptionally strong positive correlations with gaming disorder and SSMUQ scores. These findings indicate that problematic social media use occurs within a broader pattern of digital engagement rather than as an isolated behavioural phenomenon. Similar relationships between excessive social media use, emotional distress, and psychosocial functioning have been reported by Lin et al. and Primack et al., who observed that increasing social media engagement was associated with altered psychological well-being and interpersonal functioning.^[12,14] The very strong correlation between BSMAS and SSMUQ in the present study also supports the concurrent validity of these instruments, as both measure complementary aspects of problematic social media behaviour.

Multivariable regression analysis demonstrated that younger age, lower HAM-D scores, and higher coping scores independently predicted both social media addiction and social media integration. These findings suggest that behavioural addictions are influenced more by current psychological functioning and age-related digital behaviour than by illness chronicity. Younger individuals have consistently been shown to demonstrate greater engagement with social networking platforms because of increased digital literacy, greater dependence on online communication, and more frequent internet access.^[17,18] Interestingly, illness duration and number of depressive episodes were not independently associated with behavioural addiction, indicating that problematic social media use may be more closely related to present symptom severity than to the longitudinal course of depressive illness.

From a clinical perspective, these findings emphasise the importance of assessing behavioural addictions, particularly problematic social media use, during routine psychiatric evaluation of patients with depressive disorders. Early identification of maladaptive digital behaviours may facilitate timely psychoeducation and targeted psychological interventions. Assessment of coping styles may also help clinicians distinguish adaptive coping from excessive reliance on digital platforms for emotional regulation. Incorporating cognitive behavioural strategies, behavioural activation, and digital hygiene interventions into routine management may

improve emotional regulation while reducing dependence on maladaptive online behaviours.^[19,20]

Limitations:

The present study has several limitations. The cross-sectional design precludes conclusions regarding causality between depression severity and behavioural addictions. Behavioural addictions were assessed using self-report instruments, making reporting bias possible. Recruitment from a single tertiary care centre may limit the generalisability of the findings, and the absence of participants with problem gambling or compulsive sexual behaviour prevented subgroup analyses of these behavioural addictions. Despite these limitations, the study provides important evidence regarding the relationship between depressive disorders, coping strategies, and behavioural addictions in a clinical Indian population.

CONCLUSION

Social media addiction was the predominant behavioural addiction among adults with depressive disorders and was associated with lower depressive symptom severity, higher coping scores, and greater social media integration. Younger age, lower depression severity, and higher coping independently predicted problematic social media use. These findings suggest that behavioural addictions in depressive disorders may reflect complex interactions between symptom severity, behavioural activation, and coping processes rather than simply representing markers of greater psychopathology. Prospective longitudinal studies are required to clarify the temporal relationship between depression, coping strategies, and behavioural addictions and to determine whether interventions targeting maladaptive digital engagement improve long-term clinical outcomes.

Recommendations:

Based on the findings of the present study, the following recommendations are proposed:

1. Routine screening for behavioural addictions should be incorporated into the clinical assessment of individuals with depressive disorders, particularly for problematic social media use, as it was the most prevalent behavioural addiction identified in this study.
2. Assessment of coping strategies should form an integral part of psychiatric evaluation, as coping patterns were significantly associated with behavioural addiction measures and depression severity.
3. Psychoeducational interventions should promote healthy and balanced use of digital media while encouraging adaptive coping strategies to improve overall psychological well-being.
4. Longitudinal studies are warranted to clarify the temporal and causal relationships between

behavioural addictions, coping strategies, and depressive symptom severity.

5. Multicentre studies with larger and more diverse samples are recommended to improve the generalizability of findings and examine behavioural addictions across different clinical settings and cultural contexts.
6. Future research should include objective measures of digital behaviour, such as smartphone usage logs or application-based monitoring, to complement self-reported measures and reduce reporting bias.

Ethics Statement: The study was conducted in accordance with the ethical principles of the Declaration of Helsinki. Ethical approval was obtained from the Institutional Ethics Committee of P.E.S. Institute of Medical Sciences and Research (PESIMSR), Kuppam, Andhra Pradesh, India, before commencement of the study. Written informed consent was obtained from all participants prior to enrolment. Participant confidentiality and anonymity were maintained throughout the study.

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