

Associations Between Coping Strategies, Perceived Social Support, and Substance Use Among Individuals in Saudi Arabia: A Cross-Sectional Study

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Abstract

Introduction: Substance use is an important public health concern in Saudi Arabia. Coping strategies and perceived social support may be associated with substance-use patterns, but these relationships remain underexplored among individuals who report substance use in the Saudi context. This study aimed to examine substance-use patterns and their associations with coping dimensions, perceived social support, and selected sociodemographic characteristics among individuals in Saudi Arabia. **Methods:** A cross-sectional correlational design was used with 237 individuals who reported current or past substance use. Coping was assessed using the Brief COPE subscales, and perceived social support was measured using the Multidimensional Scale of Perceived Social Support. Data were analyzed using chi-square tests, Mann–Whitney U tests, and Spearman’s correlation coefficients. **Results:** Most participants were male (88.2%), Saudi (85.2%), single (87.3%), and aged 22–26 years (43.5%). The most commonly reported substances were tobacco cigarettes (40.5%), hashish (14.8%), heroin (11.8%), pregabalin/Lyrica (11.4%), methamphetamine (10.5%), and amphetamine (10.5%). The most frequently reported age category for first substance use was 19–23 years (35.4%). Males reported significantly higher perceived social support than females on the MSPSS total score (47.84 ± 18.19 vs. 38.00 ± 14.10 , $p = 0.003$). Tobacco cigarette use was associated with higher problem-focused coping (18.45 ± 5.59 vs. 15.79 ± 5.81 , $p < 0.001$), emotion-focused coping (27.54 ± 8.30 vs. 24.37 ± 8.43 , $p = 0.006$), and avoidant coping (17.76 ± 5.18 vs. 15.21 ± 5.18 , $p < 0.001$). Perceived social support was positively correlated with problem-focused coping ($r = 0.342$, $p < 0.001$), emotion-focused coping ($r = 0.377$, $p < 0.001$), and avoidant coping ($r = 0.260$, $p < 0.001$). **Conclusion:** Perceived social support and coping responses were associated with substance-use patterns in this sample. Culturally responsive and gender-sensitive approaches that consider social support and coping responses may be useful in substance-use prevention and care.

Keywords

coping, perceived social support, Saudi Arabia, substance use, nursing

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Introduction

Substance use disorder (SUD) is a significant and evolving public health challenge in Saudi Arabia, reflecting both global trends and unique local dynamics.¹ While substances such as heroin, khat, and captagon remain reported in Saudi Arabia, recent years have seen increasing concern about methamphetamine, cannabis, and benzodiazepine misuse, particularly among adolescents and young adults.²⁻⁴ Captagon commonly refers to illicit amphetamine-type stimulant tablets and is often discussed in regional substance-use contexts because of its stimulant and euphoric effects. This shift is concerning, as early initiation of substance use is closely linked to increased risks of developing SUDs and associated mental health issues.^{2,3} Studies indicate that substance use often begins in adolescence, driven by factors such as peer pressure, curiosity, and the pursuit of pleasure.^{5,6} Males are generally at higher risk, with sociodemographic variables, including age, gender, and psychiatric history, playing a significant role in substance use vulnerability.⁵ Among university students, academic stress has also been reported alongside substance-use behaviors, although such associations should not be interpreted causally.⁴ Coping strategies are critical in shaping substance use behaviors. Effective coping mechanisms can reduce dependence, but individuals with SUDs often encounter barriers to accessing these resources, especially when co-occurring mental health conditions are present.⁷ Maladaptive coping strategies, such as avoidance or disengagement, may be associated with more severe substance-use-related difficulties.⁸ Interventions that promote emotional regulation and problem-solving are therefore essential for prevention and recovery.

Social support is another key protective factor, with strong family relationships, an important aspect of Saudi culture, linked to lower rates of adolescent substance use.^{1,2} Conversely, a lack of supportive social networks increases susceptibility to risky behaviors. Understanding the interplay between social support, coping mechanisms, and sociodemographic factors is crucial for developing effective, culturally sensitive prevention and intervention strategies.⁵ For example, while women in Saudi Arabia are less likely to initiate substance use due to societal restrictions, those who do are often exposed for longer periods and may face greater challenges in accessing support.⁵ These findings underscore the importance of targeted prevention efforts that consider age, gender, and social context.

Previous studies have examined coping strategies and perceived social support in relation to mental health and substance-use-related outcomes. For example, Yang et al examined perceived social support among patients with DSM-5 substance use disorder and used structural equation modeling to assess its mediating role in relation to resilience, stress, and life satisfaction.⁹ AlHadi et al also examined coping strategies and mental health symptoms in a large Saudi sample during the COVID-19 pandemic using Brief COPE subscale-level analysis.¹⁰ These studies show that coping and perceived social support have been previously examined; however, further context-specific evidence is still needed regarding how these factors are associated with substance-use patterns among individuals in Saudi Arabia. The present study was guided by Lazarus and Folkman's Transactional Model of Stress and Coping, which conceptualizes stress as a dynamic process shaped by individuals' appraisal of stressors and the coping strategies they use to manage perceived demands.¹¹ Within this framework, coping refers to cognitive and behavioral efforts used to manage internal or external demands that are appraised as stressful. Coping responses may include problem-focused strategies, emotion-focused strategies, or avoidant strategies, each of which may be associated differently with substance-use behaviors. Perceived social support can also be understood as an important psychosocial resource that may shape how individuals appraise stress and select coping responses. Therefore, this framework provides a conceptual basis for examining the associations among coping strategies, perceived social support, and substance-use patterns in the present cross-sectional study.

Although coping strategies and perceived social support have been examined in previous international and regional studies, limited evidence has focused specifically on their associations with substance-use patterns among individuals in Saudi Arabia, particularly when considering gender-related differences and sociodemographic characteristics. Therefore, this study aimed to examine substance-use patterns and their associations with coping strategies, perceived social support, and selected sociodemographic characteristics among individuals in Saudi Arabia using a cross-sectional correlational design.

Methods

Research Design

This study employed a descriptive correlational cross-sectional design to examine substance-use patterns and their associations with coping strategies, perceived social support, and selected sociodemographic characteristics in Saudi Arabia. This approach was selected because these variables have not been extensively studied in the Saudi context, making it appropriate for providing updated insights into these relationships. This manuscript was prepared in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guideline for cross-sectional studies.¹²

Study Setting

This research was affiliated with the Faculty of Nursing, King Abdulaziz University, Jeddah, Saudi Arabia. Data collection occurred virtually through an online platform, allowing for broader participant recruitment from the general public.

Sampling and Sample Size

Participants were individuals who reported current or past substance use and were recruited from the public using convenience sampling through social media platforms. Inclusion criteria were: (a) current or past engagement in substance use and (b) ability to read English. Those who had never used substances were excluded. English reading ability was self-reported as part of eligibility and was treated as independent of formal schooling; therefore, “no formal education” reflected self-reported schooling history rather than inability to complete the English-language survey. Because the study aimed to examine associations rather than estimate population prevalence, the sample-size rationale was revised to reflect the correlational design. A sensitivity power analysis indicated that a sample of 237 participants would provide 80% power at a two-tailed α level of 0.05 to detect a small-to-moderate correlation of approximately $r = 0.18$ or larger. Therefore, the achieved sample size was considered adequate for the primary correlational analyses. However, subgroup analyses, particularly gender-based comparisons, were interpreted cautiously because of unequal group sizes.

Instruments

The study utilized a structured questionnaire composed of three main sections. The first section included sociodemographic and substance-use items developed by the research team for descriptive purposes, including participants' age, gender, educational level, economic status, and reported substance-use categories. These descriptive items were not intended to function as a validated diagnostic scale. The second and third sections included two validated instruments: the Multi-dimensional Scale of Perceived Social Support (MSPSS), developed by Zimet et al.,¹³ and the Brief COPE, developed by Carver.¹⁴ The English versions of the MSPSS and Brief COPE were used because English reading ability was an eligibility criterion and the survey was administered online in English. A copy of the study questionnaire is provided as Supplemental File 2.

The MSPSS is a 12-item instrument designed to measure perceived support from three primary sources: family, friends, and significant others. Responses were recorded on a 7-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). Total perceived social support scores were calculated by summing all 12 items, while subscale scores were derived by summing specific items corresponding to each support source. Scores for support from a significant other were calculated using items 1, 2, 5, and 10, family support using items 3, 4, 8, and 11, and friend support using items 6, 7, 9, and 12. Based on total MSPSS scores, participants were categorized as having low (<35), moderate (36–60), or high (61–84) perceived social support. In the present sample, the MSPSS demonstrated high internal consistency for the items, with Cronbach's alpha of 0.920 for the total scale. Subscale reliability coefficients were 0.762 for significant other support, 0.820 for family support, and 0.820 for friend support.

The third section incorporated the Brief COPE scale developed by Carver,¹⁴ a 28-item self-report measure used to assess coping strategies. Participants indicated the extent to which they used each coping strategy on a 4-point Likert scale ranging from “I haven't been doing this at all” to “I've been doing this a lot.” The Brief COPE evaluates three overarching coping styles. Problem-focused coping includes strategies such as active coping, seeking informational support, planning, and positive reframing and was measured using items 2, 7, 10, 12, 14, 17, 23, and 25. Emotion-focused coping encompasses strategies such as venting, emotional support, humor, acceptance, self-blame, and religious coping and was assessed using items 5, 9, 13, 15, 18, 20, 21, 22, 24, 26, 27, and 28. Avoidant coping reflects strategies such as self-distraction, denial, substance use, and behavioral disengagement and was measured using items 1, 3, 4, 6, 8, 11, 16, and 19. Higher scores indicate greater use of the respective coping strategies, with avoidant coping reflecting disengagement from stressors. In the present sample, internal consistency was high for the Brief COPE total scale (Cronbach's $\alpha = 0.940$). Subscale reliability coefficients were 0.839 for problem-focused coping, 0.874 for emotion-focused coping, and 0.791 for avoidant coping.

Ethical Considerations

The research proposal was approved by the affiliated institutional ethics committee before data collection (Approval No.: 1B.92; Approval Date: 28 November 2024). Participants received detailed information about research objectives, procedures, and potential risks through an online information sheet. Consent was implied by participants clicking the “I Agree” button to proceed with the survey. Participants could withdraw at any time without consequences. Data were collected

through a secure platform (Google Forms) to ensure confidentiality and protection from unauthorized access. All information was stored anonymously and encrypted during collection and storage, with access restricted to the research team only.

Data Collection Procedure

Following ethical approval, data were gathered between January 2025 and April 2025 via an electronic link distributed through social media platforms. Participants received study invitations, and electronic informed consent was implied by questionnaire completion. Participation was voluntary and anonymous, with researchers committed to safeguarding data solely for the study's intended purpose.

Data Analysis

Data were analyzed using IBM SPSS Statistics Version 26. Descriptive statistics included frequencies and percentages for categorical variables and means and standard deviations for continuous variables. Chi-square tests were used to examine associations between categorical variables. Mann–Whitney U tests were used to examine differences in perceived social support and coping dimensions across gender and substance-use groups. For Mann–Whitney U tests, standardized z values are reported in the tables. Kruskal–Wallis tests were used when comparing continuous variables across more than two groups. Spearman's rank correlation coefficients were used to examine associations between perceived social support and the Brief COPE coping dimensions. In addition, a sensitivity analysis was conducted for avoidant coping by recalculating the avoidant coping score after removing the two Brief COPE substance-use coping items: item 4, "I've been using alcohol or other drugs to make myself feel better," and item 11, "I've been using alcohol or other drugs to help me get through it." A p-value of <0.05 was considered statistically significant.

Results

Participant demographic and substance-use characteristics are presented in [Table 1](#). Among the 237 participants, 43.5% were aged 22–26 years, 88.2% were male, 85.2% were Saudi, and 87.3% were single. Nearly half had a university-level education (49.4%), 46.8% were employed, and 45.1% reported a middle socioeconomic status. Most participants were living with both parents (70.9%). Regarding age at first substance use, the most frequently reported age category was 19–23 years (35.4%), followed by 13–18 years (23.6%) and younger than or 12 years (19.0%).

[Figure 1](#) shows that the most commonly reported substances were tobacco cigarettes (40.5%), hashish (14.8%), heroin (11.8%), pregabalin/Lyrica (11.4%), methamphetamine (10.5%), and amphetamine (lajjah) (10.5%).

Descriptive scores for perceived social support and coping dimensions are presented in [Supplemental Table S1](#). The mean MSPSS total score was 46.73 ± 18.16 . The mean scores for the Brief COPE dimensions were 16.87 ± 5.86 for problem-focused coping, 25.65 ± 8.50 for emotion-focused coping, and 16.24 ± 5.32 for avoidant coping.

Based on MSPSS total-score classification, 22.8% of participants reported low perceived support, 57.0% reported moderate perceived support, and 20.3% reported high perceived support.

Substance-use patterns differed by gender for selected substances ([Table 2](#)). Male participants reported a higher prevalence of tobacco cigarette use than female participants (43.1% vs. 21.4%, $p = 0.029$). Female participants reported a higher prevalence of hashish use (35.7% vs. 12.0%, $p = 0.001$), heroin use (25.0% vs. 10.0%, $p = 0.021$), ecstasy use (21.4% vs. 7.7%, $p = 0.018$), and qat use (14.3% vs. 4.8%, $p = 0.045$) compared with male participants.

Gender-stratified comparisons of coping dimensions and perceived social support are presented in [Supplemental Table S2](#). Males reported significantly higher MSPSS total scores and higher significant-other, family, and friend support subscale scores than females. No statistically significant gender differences were observed in problem-focused, emotion-focused, or avoidant coping scores.

Associations between perceived social support levels and substance-use categories are shown in [Supplemental Table S3](#). Perceived social support level was significantly associated with tobacco cigarette, hashish, heroin, methamphetamine, amphetamine (lajjah), ecstasy, crack, LSD, and cocaine use. These findings should be interpreted cautiously because some substance categories included small numbers of participants.

Associations between Brief COPE coping dimensions and substance-use categories are presented in [Supplemental Table S4](#). Participants who reported tobacco cigarette use had significantly higher problem-focused coping, emotion-focused coping, and avoidant coping scores compared with those who did not report tobacco cigarette use. No statistically significant differences were observed across most other substance-use categories. In the sensitivity analysis excluding the two Brief COPE substance-use coping items from the avoidant coping score, participants who reported tobacco cigarette use continued

Table 1. Participant Demographic and Substance-Use Characteristics (N = 237)

Variable	No. (%)
Age (years)	
<18	9 (3.8)
18–22	79 (33.3)
22–26	103 (43.5)
26–30	26 (11.0)
31–36	17 (7.2)
37–40	3 (1.3)
Gender	
Female	28 (11.8)
Male	209 (88.2)
Nationality	
Non-Saudi	35 (14.8)
Saudi	202 (85.2)
Marital status	
Married	22 (9.3)
Separated	8 (3.4)
Single	207 (87.3)
Educational level	
No formal education	19 (8.0)
Primary	22 (9.3)
Middle	16 (6.8)
Secondary	22 (9.3)
University	117 (49.4)
Postgraduate	41 (17.3)
Occupational status	
Employed	111 (46.8)
Unemployed	112 (47.3)
Self-employed	14 (5.9)
Socioeconomic class	
Poor	47 (19.8)
Middle	107 (45.1)
High middle	59 (24.9)
Rich	24 (10.1)
Parent status	
Death of parent	20 (8.4)
Divorced	20 (8.4)
Separated	29 (12.2)
Together	168 (70.9)
Age at first substance use	
Younger than or 12 years	45 (19.0)
13–18 years	56 (23.6)
19–23 years	84 (35.4)
24–29 years	33 (13.9)
30–35 years	8 (3.4)
Older than 35 years	11 (4.6)

to have significantly higher reduced avoidant coping scores than those who did not report tobacco cigarette use (13.35 ± 3.96 vs. 11.52 ± 4.22 , $p = 0.001$) ([Supplemental Table S5](#)).

Spearman's correlation analysis showed statistically significant positive associations between perceived social support and all three coping dimensions: problem-focused coping, emotion-focused coping, and avoidant coping ([Table 3](#)). The strongest correlation was observed between MSPSS total score and emotion-focused coping ($r = 0.377$, $p < 0.001$). These correlations indicate that higher perceived social support was associated with greater endorsement of coping responses, but they do not indicate causality or adaptive coping.

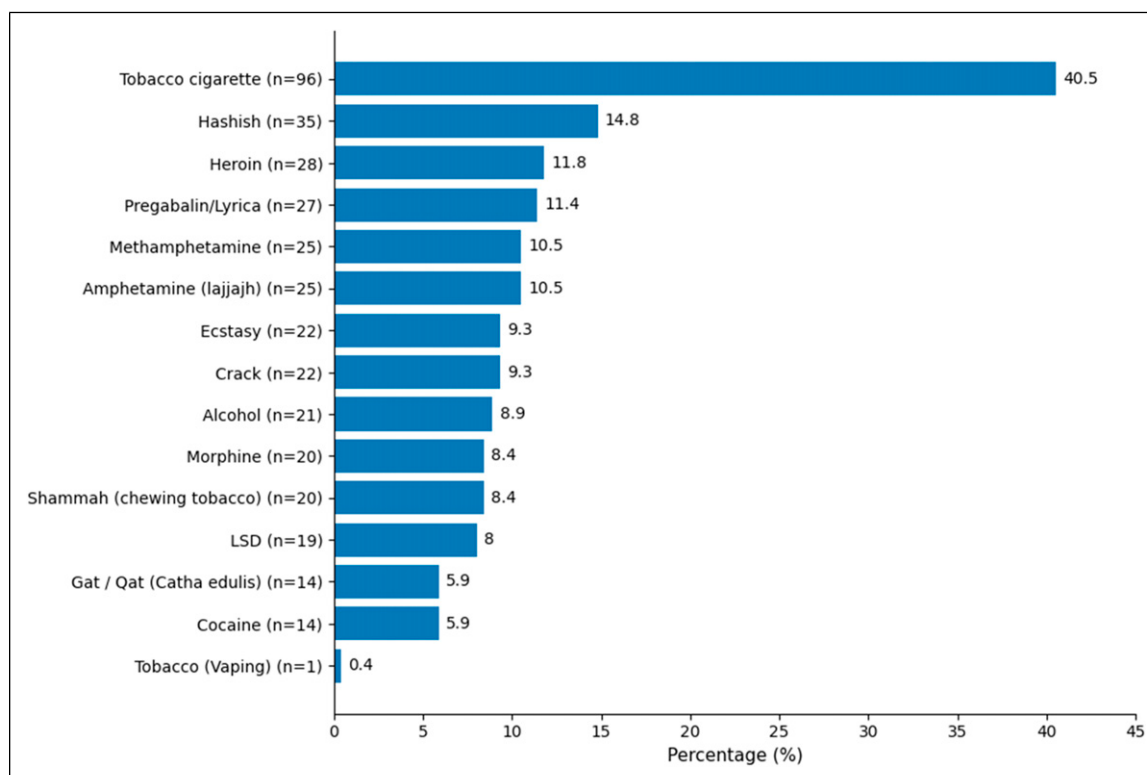


Figure 1. Percentage distribution of reported substance use among participants (N = 237)

Discussion

This study examined substance-use patterns and their associations with coping dimensions, perceived social support, and selected sociodemographic characteristics among individuals in Saudi Arabia. Tobacco cigarette use was the most commonly reported substance, followed by hashish, heroin, pregabalin/Lyrica, methamphetamine, and amphetamine. This pattern is consistent with recent Saudi literature indicating that substance-use patterns are evolving and include both commonly reported substances and increasing concerns related to stimulants, cannabis-related products, and prescription

Table 2. Substance Use by Gender

Variable	Gender		χ^2	p-value
	Female No. (%)	Male No. (%)		
Tobacco (cigarette)	6 (21.4)	90 (43.1)	4.79	0.029
Hashish	10 (35.7)	25 (12)	11.06	0.001
Heroin	7 (25)	21 (10)	5.29	0.021
Lyrica	4 (14.3)	23 (11)	0.26	0.608
Methamphetamine	4 (14.3)	21 (10)	0.47	0.493
Amphetamine (lajjah)	5 (17.9)	20 (9.6)	1.79	0.18
Ecstasy	6 (21.4)	16 (7.7)	5.56	0.018
Crack	5 (17.9)	17 (8.1)	2.77	0.096
Alcohol	5 (17.9)	16 (7.7)	3.18	0.074
Morphine	4 (14.3)	16 (7.7)	1.4	0.236
Shammah (chewing tobacco)	4 (14.3)	16 (7.7)	1.4	0.236
LSD	4 (14.3)	15 (7.2)	1.69	0.193
Gat/Qat (Catha edulis)	4 (14.3)	10 (4.8)	4.01	0.045
Cocaine	3 (10.7)	11 (5.3)	1.32	0.251
Tobacco (Vaping)	0 (0.0)	1 (0.5)	0.13	0.714

Table 3. Spearman's Correlations Between Coping Dimensions and Perceived Social Support

Coping dimension	MSPSS total r	p-value	Significant other r	p-value	Family r	p-value	Friends r	p-value
Problem-focused coping	0.342	<0.001	0.340	<0.001	0.331	<0.001	0.295	<0.001
Emotion-focused coping	0.377	<0.001	0.354	<0.001	0.344	<0.001	0.337	<0.001
Avoidant coping	0.260	<0.001	0.267	<0.001	0.244	<0.001	0.230	<0.001

medications.^{1-5,15} The presence of methamphetamine and pregabalin/Lyrica among the commonly reported substances is clinically relevant because it reflects the importance of monitoring substances that may be linked to changing availability, peer influence, self-medication, or polysubstance-use patterns in younger populations.

Gender-related differences were observed for selected substances. Male participants reported a higher prevalence of tobacco cigarette use, whereas female participants reported higher prevalence of hashish, heroin, ecstasy, and qat use.¹⁶ These findings should not be interpreted as evidence that gender independently determines substance-use patterns, particularly given the small female subgroup. However, they raise important questions about gendered pathways into substance use, disclosure, and help-seeking. Previous Saudi and regional studies have emphasized the importance of gender and sociocultural context in understanding substance-use patterns, access to support, and treatment-seeking behaviors.^{1,5,15,17,18} Therefore, the observed gender differences may reflect not only substance preference or exposure, but also differences in reporting, visibility, social acceptability, and pathways to care.¹⁹

Perceived social support differed by gender, with male participants reporting higher MSPSS total and subscale scores than female participants. This finding is important in the Saudi context, where family and social networks can function as both protective resources and sources of pressure depending on the nature of the relationship and the sensitivity attached to substance use. Recent international evidence also suggests that perceived social support may differ according to addiction type and the number of addictive behaviors, supporting the need to interpret social support as context-specific rather than uniformly protective.²⁰ In the present study, lower perceived support among women may indicate gender-related barriers to disclosure, support-seeking, or perceived emotional safety within available social networks.

Perceived social support level was associated with several substance-use categories. Participants with high perceived support were less represented among those reporting hashish, heroin, methamphetamine, amphetamine, ecstasy, crack, LSD, and cocaine use, whereas tobacco cigarette use was more common among participants with high perceived support. This pattern suggests that the relationship between social support and substance use may differ according to the type of substance and its social meaning. Tobacco cigarette use may be more socially visible or normalized than other substances, while substances that are more legally or socially sensitive may be associated with secrecy, social withdrawal, or reduced perceived support. This distinction suggests that social support should not be treated as a single uniform protective factor across all substance-use categories.

Coping dimensions were also associated with substance-use patterns. Tobacco cigarette use was associated with higher problem-focused, emotion-focused, and avoidant coping scores, whereas most other substance-use categories were not significantly associated with coping dimensions. This finding suggests that participants who reported tobacco cigarette use may endorse a broader range of coping responses. However, this does not mean that their coping is necessarily more effective. The Brief COPE includes qualitatively different coping strategies, including active management, emotional regulation, support-seeking, avoidance, denial, and disengagement.¹⁴ Recent psychometric work in substance-use populations also supports interpreting Brief COPE dimensions separately rather than reducing coping to a single total score.²¹ In this study, the association between tobacco cigarette use and avoidant coping is particularly important because it may reflect stress-related or disengagement-oriented coping rather than adaptive regulation. Because the avoidant coping dimension includes two substance-use coping items, a sensitivity analysis was conducted after removing these items. The association between tobacco cigarette use and avoidant coping remained statistically significant, suggesting that the observed finding was not explained solely by the inclusion of substance-use coping items.

Perceived social support was positively correlated with problem-focused, emotion-focused, and avoidant coping. The strongest association was observed between perceived social support and emotion-focused coping. This may suggest that individuals who perceive greater support are more likely to engage emotional and interpersonal coping responses, such as seeking comfort, expressing distress, or using acceptance and reframing. However, the positive association with avoidant coping complicates a simple protective interpretation. A person may perceive support while also engaging avoidance, self-distraction, or disengagement, particularly when substance use is associated with shame, stress, or fear of disclosure. Recent

qualitative work also shows that stigma can shape how individuals in substance-use treatment cope with disclosure, social judgment, and treatment engagement.²² This supports the need for culturally sensitive interpretation of coping and support rather than assuming that higher coping endorsement always reflects better adjustment. Together, these findings suggest that coping and perceived social support among individuals who use substances may operate in complex and overlapping ways, rather than as purely adaptive or protective factors. This is particularly important in the Saudi context, where social support, disclosure, gender, and stigma may shape how individuals cope with substance-use-related stress.

The findings align with Lazarus and Folkman's Transactional Model of Stress and Coping, which conceptualizes coping as cognitive and behavioral efforts used to manage demands appraised as stressful.¹¹ Within this framework, perceived social support can be understood as a psychosocial resource that may shape stress appraisal and coping responses. The present findings suggest that perceived support and coping dimensions are connected among individuals who report substance use, but the nature of this connection appears complex. Support may facilitate more active or emotion-focused coping, but it may also coexist with avoidance when the individual's social environment is experienced as judgmental, unsafe, or difficult to access.

Overall, this study contributes to the literature by highlighting the relevance of coping dimensions and perceived social support in understanding substance-use patterns among individuals in Saudi Arabia. The findings suggest that psychosocial factors should be considered alongside demographic and substance-related characteristics when designing prevention and support strategies. In particular, interventions may benefit from strengthening accessible support systems, addressing avoidant coping responses, and considering gender-related differences in perceived support and help-seeking needs. Future research should use larger, more gender-balanced samples and longitudinal or multivariable designs to clarify how coping, perceived support, and substance-use patterns develop over time.

This study has several limitations. First, the cross-sectional correlational design does not permit conclusions about causality, directionality, mediation, or prediction. Second, recruitment through social media and the English-language eligibility requirement may have introduced selection bias by favoring participants who were digitally connected, more educated, and able to complete an English-language survey. The use of English-language instruments may also have affected participant comprehension and cultural interpretation of some items and may have limited representativeness by favoring bilingual or more educated participants, even though internal consistency coefficients were acceptable to high in the present sample. Third, substance use was assessed using self-report, which may be affected by recall bias and social desirability bias, particularly in a context where substance use is legally and socially sensitive. Fourth, the sample was imbalanced by gender, with a small female subgroup, limiting confidence in gender-based comparisons. Fifth, the inclusion of both current and past substance use may have introduced heterogeneity because participants may have differed in recency, severity, treatment status, and recovery stage. Sixth, multiple bivariate comparisons were conducted across substance-use categories and psychosocial variables, which may have increased the risk of Type I error. Because the analyses were exploratory, no formal correction for multiple comparisons was applied; therefore, marginally significant findings should be interpreted cautiously. Although the sensitivity analysis excluding the two Brief COPE substance-use coping items produced a similar finding, the avoidant coping dimension should still be interpreted cautiously because these items may overlap conceptually with substance-use behavior in this sample. Finally, the analyses were primarily descriptive, comparative, and correlational; therefore, unmeasured confounders such as psychiatric history, trauma exposure, treatment history, socioeconomic stressors, and polysubstance-use severity may explain some observed associations.

Conclusion

This cross-sectional study found that coping dimensions, perceived social support, and selected substance-use patterns were associated among individuals in Saudi Arabia. Perceived social support differed by gender, whereas coping dimensions did not show significant gender differences. Although some substance-use patterns varied by gender, these findings should be interpreted cautiously because of the small female subgroup and the correlational design. The findings support the need for culturally responsive, gender-sensitive approaches that consider both social support and coping responses in substance-use prevention and care.

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Ethical Considerations

Ethical approval for this study was obtained from the Nursing Research Ethical Committee, Faculty of Nursing, King Abdulaziz University, Jeddah, Saudi Arabia (NREC Serial No.: Ref No. 1B.92; Approval Date: 28 November 2024).

Consent to Participate

Informed consent was obtained electronically from all participants prior to participation in the study.

Author Contributions

Alaa Mahsoon: Conceptualization, methodology, supervision, data curation, formal analysis, writing – original draft, writing – review and editing, and project administration.

Ali Fahad Alzahrani: Data collection, data curation, literature review, and writing – original draft.

Alzubair Alshamkhi: Data collection, literature review, and writing – original draft.

Muteb Abdullah Alzahrani: Data collection, literature review, and writing – original draft.

Omar Durhum AlBaqami: Data collection, literature review, and writing – original draft.

Loujain Sharif: Methodology, supervision, validation, writing – review and editing, and critical revision of the manuscript.

Khalid Sharif: Methodology, validation, writing – review and editing, and critical revision of the manuscript.

All authors reviewed and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

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Declaration of Conflicting Interests

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Data Availability Statement

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

Clinical Trial Registration

Not applicable. This study used a cross-sectional observational design and was not registered as a clinical trial.

Supplemental Material

Supplemental material for this article is available online.

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