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Drug Addiction among Youth in Bangladesh: Causes, Consequences and Prevention Strategies

Ahmed Sabbir Sazzad^{1*}

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ABSTRACT

An understanding of problem substance use in young adults will involve a combination of social, emotional, material, and access-to-support factors. In the present study, such relationships were explored among 300 participants aged 18-29 years old, who lived in urban areas of Dhaka Division, Bangladesh. Peer influence, dysfunctional family environment, psychological distress, socioeconomic strain, prevention and support, problematic substance use, and adverse consequences were included in a cross-sectional survey model. Seven hypotheses were tested, including a moderating effect of support access, by using partial least squares structural equation modelling. There was an association between problematic substance use and peer influence, family dysfunction, psychological distress, and socioeconomic strain. Prevention and support access were negatively associated with problematic use and also reduced the positive association between prevention and peer influence. There was a strong link between problematic substance use and consequences. The model accounted for 51.5% of the variance in problematic use and 45.8% of the variance in adverse consequences. The reliability and convergent validity also proved satisfactory with all heterotrait-monotrait ratios less than 0.85. These results point to: Coordinated prevention strategies that include peer environments, family relations, emotional distress, and available support. The findings are restricted to associations among participants in an urban sample of survey respondents who recently used non-medical substances. The measures do not make clinical diagnoses of addiction or substance use disorder but highlight difficulties and consequences.

INTRODUCTION

Youth substance use at problematic levels can lead to disruptions in the transition to education, employment and independent social functioning. Its impacts are not just how much it is used. When an individual has trouble controlling their use; when they feel a strong need to use; when they continue using even when it continues to cause problems; and when it interferes with responsibilities, it could be a pattern that is worth examining. These experiences can happen alongside emotional suffering, family turmoil, and financial strain. It is important therefore to understand their relationships to inform the design of locally appropriate and prevention-focused interventions (Islam, 2025).

It is a matter that needs special conceptual attention in Bangladesh. The word addiction is widely used to refer to a variety of behaviours involving substance use, misuse and abuse in public discourse. Occasional non-medical use, frequent use, problematic use and a clinically diagnosed disorder are not the same thing, however. Mixing them may cloud the distinctions in severity and deter disclosures. It is therefore important that a survey about reported experiences should differentiate between behaviours and diagnosis (Sarker, 2023). This separation also helps to avoid the possibility of making the leap to viewing all respondents as falling into one clinical category.

Young adulthood is a propitious age to explore these relationships. Although within the age band 18-29, residents might be transitioning between school, jobs, and household status change. Peer acceptance can be a force at these transitions. Meanwhile, the lack of opportunities in the future can cause emotional and material stress.

While family relationships can offer reassurance, family conflict or emotional support can be limiting and lessen the protection. Substance use is thus a phenomenon which must be understood not just as part of individual behaviour, but as part of a social whole (Owolabi & Rabiat, 2024).

Within an urban environment, other issues of exposure and help arise. Young-adult residents of the same division can vary in terms of their education, their employment status, the resources in their home, and their networks. Services alone do not equate to perceived access. Whether a help seems accessible might be determined by awareness, confidentiality, affordability, and confidence in talking with a professional. Prevention and support access should, therefore, be taken into consideration along with social and psychological factors. It may be a factor on its own, or it could act as a buffering factor against peer influence (Karnani, 2023).

Because explanations often come isolated, an integrated model is necessary to yield a comprehensive list of priorities for intervention. Tackling only peer pressure can disregard distress that led up to or happened along with substance use. Focusing only on family relations can overlook limitations stemming from financial insecurity. Similarly, if the negative consequences are identified, but support access is not explored, then this provides limited information about prevention (Chaimaa *et al.*, 2024). Several domains can be included in a model that looks at the independent associations between the domains without losing the separation between risk-like situations and reported behavioral responses.

¹ Senior Assistant Secretary, National Defence College, Bangladesh

* Corresponding author's e-mail: sabbir25685@gmail.com

The present study aims at fulfilling this need by setting the following three objectives: The first is to explore the associations between peer influence, the family environment, psychological distress, and socioeconomic strain and problematic substance use. The second is to evaluate the relationship between problematic substance use and negative outcomes. The third is to examine if there is a negative association between prevention and support access with problematic use and if prevention and support access is a moderator for the relationship between peer influence and problematic use. The objectives are studied on 300 young adults living in the Urban areas of Dhaka Division.

The study provides a model that can help understand how prevention access can be viewed as a possible protective correlate in addition to being an administrative feature. It also distinguishes problematic use from its broader implications, affording the possibility of assessing their empirical relationship (Haque *et al.*, 2022). This separation is helpful since consumption problems and consequences do not have to be at the same level. Some respondents may experience issues with control before there is definite disruption. Others may be having a lot of disruption on a fairly narrow range of use.

The analysis is limited by the design and the type of participants. The respondents indicated that they had used a non-medical psychoactive substance in the last year. The study thus has a variationist approach instead of a user-non-user approach. Cross-sectional relationships cannot identify if distress occurs before or perhaps as a result of substance use. Thus, the results provide information for context sensitive priorities for prevention without making a statement regarding national prevalence, clinical diagnosis or demonstrate effectiveness of interventions. The analysis separates out structural relationships from descriptive consumption. This allows us to discuss the need for prevention without turning the frequency categories into diagnostic labels and without making the same vulnerabilities an assumption.

LITERATURE REVIEW

Social exposure and family relationships

Peer influence is a likely explanation for the differences in problematic substance use. Friends have an influence on perceptions of acceptable behaviour through encouragement, shared activities and normalisation of consumption. Pressure doesn't always mean harassment (Islam, 2025). A young adult can expect to be rejected socially or feel that they have to take part to fit in. Hence, peer use, encouragement, perceived pressure and the social acceptability of consumption is embedded in the construct. It is possible that the association with problematic use is a combination of interpersonal exposure and the meanings ascribed to group membership (Haque *et al.*, 2022).

Peer networks could also be chosen and not just imposed. People who already consume drugs can develop more intimate connections with other drug users. This makes

causal interpretation more complicated but it in no way diminishes the importance of the association (Mohiuddin, 2019). A positive relationship would suggest problematic use and a substance supportive peer environment would co-occur in the study population. It is important that factors related to social relationships and possibilities for other kinds of participation are, therefore, taken into account in prevention. According to H1, peer influence is expected to have a positive correlation with problematic substance use (Mohamad Kamal *et al.*, 2024).

The family environment is a second interpersonal sphere. Ongoing household strife, lack of emotional support, and an inability to talk about personal worries can lessen constructive coping resources. Other stresses that young adults may experience can also increase because of family-related stress (Nawaz & Akhter, 2024). The present construct is focused on dysfunction; scores higher on the present subscale correlate with greater conflict and poorer communication and perceived support. This orientation is needed because it is not a relationship with family involvement per se, but with adverse family circumstances (Chowdhury & Barua, 2024).

Even if young adults spend considerable time outside of the home, family relationships may be influential. Individual experiences can relate to family dynamics through educational decisions, financial assistance and employment expectations (Dondeti, 2024). There may also be a reciprocal relationship with substance-related problems being the cause of conflict. The model also explores the relationship between a dysfunctional family environment and problematic use after controlling for all of the other variables listed above. H2's theory suggests that there is a positive correlation between a dysfunctional family environment and problematic substance use (Al-Mamun *et al.*, 2024).

Psychological distress and socioeconomic strain

Psychological distress refers to stress, trouble controlling negative feelings, persistent worry and discouragement. Such experiences can increase the appeal of immediate relief and make other ways of coping seem less appealing. Drug and alcohol use that is not in the service of medical treatment might be seen as a short-term coping mechanism for emotional distress however, ongoing drug and alcohol use can bring new challenges (Purnamasari *et al.*, 2024). The conceptual relationship is therefore not related to a diagnosis of a mental health disorder but to the concept of vulnerability and coping. It is hypothesized that problematic substance related experiences will increase as distress increases (Rahman, 2019).

Adverse consequences are not necessarily distress. Psychological distress is related to the general emotional state of the respondent. Adverse consequences relate to problems reported as being problems directly related to drug use. This split enables emotional vulnerability and sensation of substance-related harm to take different places in the model (Rahul Vasant Narwade, 2025). It also needs to be carefully measured as there may be

some shared wording or interpretation that may result in overlap. H3: Positive relationship between psychological distress and problematic substance use in the eligible young adults (Hasan, 2025).

Socioeconomic strain refers to the perceived pressure due to financial trouble, lack of opportunities and challenging living conditions. It is not exclusively dependent on household income. People who have the same amount of resources could feel insecure to varying extents due to a job history of short duration, the need for further education or family responsibilities (Mahmud, 2024). Strain may lead to a sense of a lack of control and restrict coping options. It can also make seeking help more difficult, and helping could involve spending money, travelling, or taking time off work. Thus, the construct is not only one of socioeconomic position, but one of the experienced pressures (Faruq Ahammed & Shakil Ahmed, 2019).

Material strain can exist independently of distress or in addition to distress. Financial uncertainty is a situation and distress is a response to several situations. Both can be included to allow an evaluation of their separate links with problematic use (Anieto, 2025). This takes a different approach to not assuming economic disadvantage to equal substance-related issues. It rather looks at if perceived strain adds to the model over and above the other factors mentioned. According to H4, the greater the socioeconomic stress, the more likely a person is to engage in problematic substance use (Al Imran *et al.*, 2021).

Problematic use and adverse consequences

Substance use problems are characterized by problems maintaining control, quantity of intended use, interference in functioning, craving and persistence despite harmful consequences to self others. Adverse consequences include physical discomfort, emotional and mental struggles, interpersonal conflicts, missed duties, and financial issues as a result of consuming. Constructs are conceptually distinguishable, but related (Somia Shabbir *et al.*, 2025). Consequences may include behavioural difficulties which do not offer a clinical diagnosis. Their separation also enables the model to address the question

whether problematic use is related to greater disruption across everyday life domains (Rashid, 2025).

The relationship is predicted to be positive due to repeated exposure to harm-related circumstances as a result of difficulty with consumption. Consequences though can differ depending on the substance, resources and social context. H5 posits that substance use will be positively related to negative outcomes (Husain, 2024).

Prevention access

Prevention and support access involves self-efficacy in accessing counselling or health services, location awareness of local services, trusted professional approach and knowledge of confidential support. These are not measures of actual service use, but rather perceptions of access. Support can provide alternative ways to cope with the distress, speak about concerns and identify problematic patterns (Chaimaa *et al.*, 2024). H6: Prevention and access to support is negatively related to problem substance use. This association is explored in conjunction with the four risk factors constructs and not independently.

Access may also help to minimize susceptibility to peer influence. When an adolescent or young adult thinks he or she has someone who can support him or her, he or she may be able to talk about pressure and look for other options. H7 suggests that prevention and support lessens the positive relationship between peer influence and problematic substance use (Nawaz & Akhter, 2024). The conceptual framework thus indicates that four positive predictor variables, one negative one, and an interaction term between the peer influence and support access variables will predict problematic use, while a positive path between problematic use and adverse consequences exists (Haque *et al.*, 2022).

Conceptual framework

Support access is viewed as a distinct entity from the framework as it can result in favourable resources and significant risk exposure. It does not presume that support turns around all the risk pathway. Assessment is done for each relationship separately and the word interaction refers specifically to the variation in the peer influence relationship (Al-Mamun *et al.*, 2024).

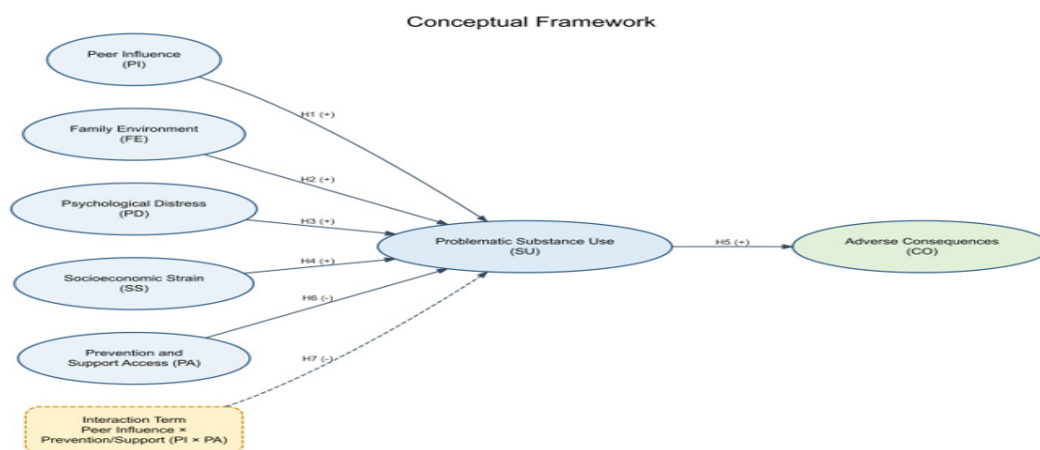


Figure 1: Conceptual framework for problematic substance use and adverse consequences

MATERIALS AND METHODS

Study design and analytical population

A quantitative cross-sectional survey design was employed to explore possible associations between social factors, drug and alcohol use problems, perceived support and negative outcomes. The analytical sample comprised 300 young adults aged 18–29. 100% of the respondents lived in urban areas of Dhaka Division, Bangladesh. The geographical interpretation is thus restricted to this population. Living in the same division does not necessarily mean people live in the same neighbourhood, have access to the same types of services, or have similar socio-economic situations. Not assumed to be nationally representative (Chen, 2023).

The inclusion criteria for respondents were: age 18-29, residing in Bangladesh and having used a psychoactive substance for non-medical reasons in the last 12 months. Non-medical use means use without a prescription, use not as prescribed, or use for a non-medical purpose. Medicines that were taken as described were not included in the definition of screening. The instrument had an instruction for the respondent to stop and not complete the instrument if they did not meet all the eligibility criteria. The analysis thus targets current users instead of youth in general (Earley, 2023).

Instrument and measurement

The questionnaire included participant information, consent, eligibility screening, background characteristics and seven measurement domains. Background variables included age group, gender, main activity, residence type, division, education and frequency of substance use. Gender disclosure was voluntary and the option to not provide was given. The response to frequency of non-medical use was descriptive. Not viewed as a diagnostic classification or used in place of a multidimensional problematic-use construct. This differentiation maintained the difference between the frequency of consumption and challenge in managing consumption.

A total of 29 indicators were included in the measurement instrument. Peer influence, family environment, psychological distress and access to prevention and support each consisted of four items. Contained three socioeconomic strains. There were five items within each of the two categories: problematic substance use and adverse consequences. The first five constructs were based on a five point agreement scale (strongly disagree-strongly agree). Responses from the latter two were on a five-point scale from never to very often. Responses were based upon situations or experiences in the one-year period prior to the survey (N. SHREEJAA *et al.*, 2025).

The higher scores on the peer influence scale indicated more exposure, encouragement, pressure or normalisation from key social groups. Family Environment scores were interpreted as being more dysfunctional when the scores were higher. Distress and strain scores were higher for more challenging emotional and material circumstances. A higher score on the support access indicated a higher

perception of the availability and approachability of support. Problematic use and consequence scores reflected more frequent difficulties, with higher scores representing higher problematic use and consequences scores. Constructs were interpreted within their respective response anchors. Means and frequencies were therefore not considered to be substantively interchangeable measures of severity, and agreement means were used to measure the severity.

Descriptive statistics included frequencies and percentages of characteristics and mean and standard deviations of measurement domains. The number of samples was consistent throughout the assessments. All of the 29 indicators were reflected in the measurement outcomes. Interval estimates were used in conjunction with hypothesis decisions, but when no statistics were available, they were not estimated but, rather, left unknown.

Measurement and structural assessment

The 7 hypotheses have been tested by using partial least squares structural equation modelling. For the initial assessment, the constructs were in a reflective manner, as per the proposed instrument. Measurements were evaluated in terms of indicator loadings, cronbach's alpha, rhoA, composite reliability and average variance extracted. The criteria for assessment were loadings of more than 0.70, reliability higher than 0.70, and an average variance extracted of at least 0.50. The indicators were taken into account with respect to construct coverage and statistical performance. A marginal loading was not deemed to be sufficient grounds for automatic deletion (Moura & Neves, 2025).

The heterotrait-monotrait ratio was used to compute discriminant validity. Values < 0.85 were used to provide a conservative metric of distinction between constructs. Inner-model variance inflation factors (VIFs) tested for collinearity among problematic substance use' predictors. Standardised coefficients, bootstrap standard errors, reported significance levels and 95% confidence intervals were used to evaluate the structural relationships. Statistical support had to be consistent with the direction proposed and not include the interval zero. Probabilities that were reported to be zero were actually seen as $p < 0.001$.

The moderation hypothesis was tested via the peer influence by prevention access interaction predicting substance problem use. A negative coefficient signified a decrease in the positive peer relationship as the amount of access to support increased. Explained variance is a summary of explanatory performance as adjusted explained variance. The individual contributions were displayed by f-squared statistics when available. All the assessments relate to the fitted sample. They did not demonstrate out-of-sample predictive performance, a causal intervention effect, or indirect relationship via problematic use. Further designs or analyses are needed to draw such conclusions.

Participant protection and interpretation

This instrument involved optional consent, permission to not answer questions, and optional no-fault drop-out. Did not ask for names, phone numbers or other direct identifiers. Information about participants differentiated research evaluation from medical diagnosis. These provisions come into play when it comes to interpreting sensitive disclosures and the achievement of non-identification of respondents. The measures used were

‘self-made’ by the researcher and not validated as diagnostic tools. Results were communicated in terms of samples’ characteristics and associations, avoiding interpretation in terms of clinical classification, prevalence in the country, and causal inference.

RESULTS AND DISCUSSION

Respondent characteristics

The number of respondents was 300, representing all

Table 1: Demographic characteristics of respondents

Characteristic	Category	n	%
Age group	18–20	68	22.67
	21–23	81	27.00
	24–26	82	27.33
	27–29	69	23.00
Gender	Another identity	4	1.33
	Man	165	55.00
	Prefer not to answer	7	2.33
	Woman	124	41.33
Main activity	Employed	97	32.33
	Not currently working or studying	20	6.67
	Other	13	4.33
	Self-employed	25	8.33
	Student	107	35.67
	Unemployed and seeking work	38	12.67
Residence	Urban	300	100.00
Division	Dhaka	300	100.00
Education	Bachelor’s degree	110	36.67
	Higher secondary	87	29.00
	Other	14	4.67
	Postgraduate degree	36	12.00
	Primary or below	14	4.67
	Secondary	39	13.00

four eligible age categories. The largest age group was 24–26 with a close second of 21–23. Men represented 55.00% and women 41.33%. Seven respondents opted not to identify as either male or female. The highest percentage of subjects was students and employed subjects followed. There was variation in education attained with the largest proportion being both bachelor’s and higher secondary.

All respondents reported that they live in Dhaka division which is an urban area. This demographic spread, in turn, is reflective of a geographically focussed sample, with a diverse range of educational and occupational experiences.

There was a considerable range in the frequency of consumption reported. The highest category was weekly,

Table 2: Non medical substance use during the previous twelve months

Frequency category	n	%
Once	27	9.00
A few times	56	18.67
About once a month	53	17.67
About once a week	67	22.33
Several times a week	61	20.33
Daily or almost daily	36	12.00

22.33% of respondents use this. The use every day or almost every day was 12.00%, and the use once or more times per week was 20.33%. All of these categories combined were represented by 164 respondents, that is, 54.67% of the sample. The remaining respondents reported monthly use, a few occasions, or a single occasion. This distribution suggests that there are some variations in the frequency of consumption among

eligible respondents. It does not report the ratio with a substance use disorder or the percentage of consumption among all youths.

Construct distributions and measurement quality

Construct means were close to the numerical midpoint. Prevention and support access had the highest mean, adverse consequences and socioeconomic strain

Table 3: Descriptive statistics for the study constructs

Construct	Mean	SD
Peer influence	2.965	1.202
Dysfunctional family environment	2.904	1.244
Psychological distress	2.912	1.150
Socioeconomic strain	3.027	1.222
Prevention and support access	3.067	1.170
Problematic substance use	2.999	1.135
Adverse consequences	3.029	1.144

followed. The lowest mean was for family dysfunction. The standard deviations ranged from 1.135 to 1.244, with differences between each of the constructs. Means near three corresponded about the sometimes anchor at the aggregate level for problematic use and consequences. The other constructs did not have a midpoint between the agree and disagree responses. These differences

prevent using the same number of means as an argument for the same experience in the substantives.

The range of indicator loadings was .680 – .963. Twenty-nine indicators were identified of which 28 were above 0.70. The loading for Uncertainty about work, education or future opportunities (SS2) was the lowest at 0.680. The retention of its key elements maintained an important

Table 4: Indicator loadings

Construct	Indicator	Loading
PI	PI1	0.731
	PI2	0.963
	PI3	0.851
	PI4	0.827
FE	FE1	0.840
	FE2	0.893
	FE3	0.819
	FE4	0.840
PD	PD1	0.869
	PD2	0.818
	PD3	0.846
	PD4	0.762
SS	SS1	0.941
	SS2	0.680
	SS3	0.908
PA	PA1	0.819
	PA2	0.747
	PA3	0.849
	PA4	0.889
SU	SU1	0.780
	SU2	0.814
	SU3	0.840
	SU4	0.816
	SU5	0.839
CO	CO1	0.873
	CO2	0.830
	CO3	0.776
	CO4	0.855
	CO5	0.842

PI = peer influence; FE = dysfunctional family environment; PD = psychological distress; SS = socioeconomic strain; PA = prevention and support access; SU = problematic substance use; CO = adverse consequences.

element of socioeconomic strain, and the construct's reliability and convergent validity remained satisfactory. The highest loading was for PI2, which validated highly the linkage between peer encouragement and peer influence. The loadings validate the proposed measurement structure, but the performance of individual items does

not guarantee that the instruments are independently diagnostic and have no need for further development. Cronbach's alpha ranged from 0.884 to 0.921. RhoA and composite reliability ranged from 0.897 to 0.921, respectively. All constructs received a reliability score above the benchmark. The AVEs for all the factors varied

Table 5: Reliability and convergent validity

Construct	Alpha	rhoA	rhoC	AVE
PI	0.910	0.918	0.910	0.717
FE	0.912	0.912	0.911	0.720
PD	0.895	0.897	0.895	0.680
SS	0.884	0.905	0.885	0.724
PA	0.897	0.900	0.896	0.685
SU	0.910	0.910	0.910	0.669
CO	0.921	0.921	0.920	0.698

Alpha = Cronbach's alpha; rhoA and rhoC = reported construct reliability measures; AVE = average variance extracted. PI = peer influence; FE = dysfunctional family environment; PD = psychological distress; SS = socioeconomic strain; PA = prevention and support access; SU = problematic substance use; CO = adverse consequences.

between 0.669 for problematic substance use and 0.724 for socioeconomic strain. For each of these constructs more than half the variance of indicators was thus explained by the construct in the reported assessment. A convergence of the evidence results in internal

consistency and convergent validity. Reliability, however, relates to consistency in these data, but not to clinical accuracy.

All the heterotrait-monotrait ratios were less than 0.85. Problematic substance use had the highest correlation

Table 6: Discriminant validity assessed using HTMT

Construct	PI	FE	PD	SS	PA	SU	CO
PI	—	0.236	0.061	0.051	0.153	0.415	0.239
FE	0.236	—	0.186	0.123	0.098	0.444	0.258
PD	0.061	0.186	—	0.167	0.062	0.392	0.410
SS	0.051	0.123	0.167	—	0.086	0.193	0.105
PA	0.153	0.098	0.062	0.086	—	0.369	0.275
SU	0.415	0.444	0.392	0.193	0.369	—	0.676
CO	0.239	0.258	0.410	0.105	0.275	0.676	—

HTMT = heterotrait-monotrait ratio. Diagonal values are not applicable. PI = peer influence; FE = dysfunctional family environment; PD = psychological distress; SS = socioeconomic strain; PA = prevention and support access; SU = problematic substance use; CO = adverse consequences.

at 0.676 with adverse consequences. This was in line with their conceptual association without crossing the conservative threshold. The ratio between family dysfunction and problematic use was 0.444 and the ratio between peer influence and the problematic use was 0.415. Analysis of the results indicates that the seven constructs were empirically differentiated. Empty threshold violation does not indicate that there was no content overlap, as there was some overlap in many items that assessed responsibility and problematic-use and those assessing consequences, and therefore should be addressed in future measurements (Sarker, 2023).

Structural relationships and moderation

VIF values of the substance use problem predictors were in the range of 1.009 to 1.097. These values suggest that

there is low correlation in the set of predictors. Family dysfunction was the highest and the interaction term the lowest. Thus, collinearity did not seem to preclude the estimation of the reported relationships. There was only one specified predictor of adverse consequences. It did not report its variance inflation factor, nor was the missing entry considered an estimated statistic. Omitted variables/confounders and a shared response effect are not considered in predictor collinearity assessment.

Each of the seven hypotheses was supported by statistics in the proposed direction. The coefficient for the peer influence was 0.301 (95% confidence interval: 0.195-0.403) and was positively associated with problematic substance use. Since the results of the variables were regressed against the problem behavior, the regression value of psychological distress was 0.290, and that of

Table 7: Collinearity in the structural model

Outcome	Predictor	VIF
SU	PI	1.071
SU	FE	1.097
SU	PD	1.051
SU	SS	1.050
SU	PA	1.031
SU	PI × PA	1.009
CO	SU	NR

VIF = variance inflation factor; NR = not reported. CO has one specified predictor. PI = peer influence; FE = dysfunctional family environment; PD = psychological distress; SS = socioeconomic strain; PA = prevention and support access; SU = problematic substance use; CO = adverse consequences.

family dysfunction was 0.264. The smaller positive coefficient was for socioeconomic strain (0.142). The coefficient of prevention and support access was -0.293 and with the problematic use was negative. Its confidence interval was completely below zero, confirming the

suggested protective association.

There was a strong correlation between problematic substance use and adverse consequences. This coefficient was 0.677, with the 95% confidence interval 0.606 to 0.740. The peer influence by prevention access

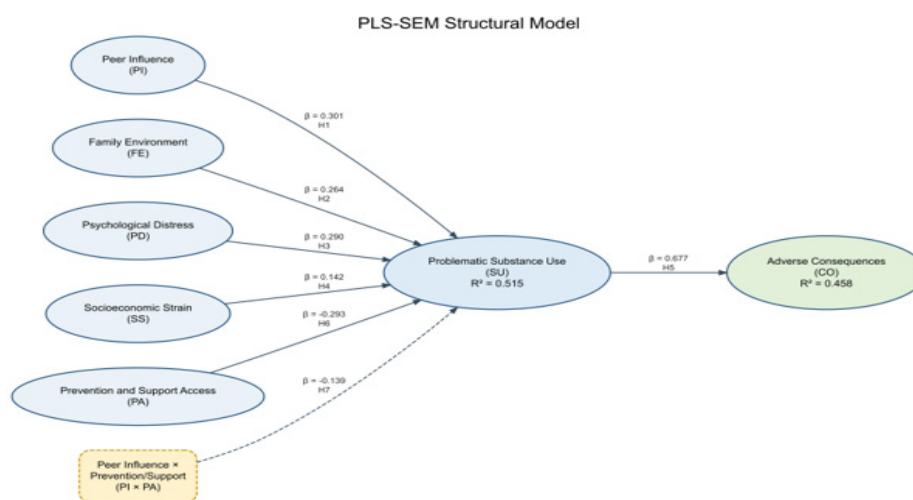
Table 8: Structural relationships and hypothesis tests

H	Path	β	SE	t	95% CI	p	Decision
H1	PI $\rightarrow$ SU	0.301	0.053	5.666	[0.195, 0.403]	<0.001	Supported
H2	FE $\rightarrow$ SU	0.264	0.054	4.891	[0.161, 0.368]	<0.001	Supported
H3	PD $\rightarrow$ SU	0.290	0.054	5.390	[0.187, 0.393]	<0.001	Supported
H4	SS $\rightarrow$ SU	0.142	0.063	2.269	[0.042, 0.251]	0.008	Supported
H5	SU $\rightarrow$ CO	0.677	0.034	19.709	[0.606, 0.740]	<0.001	Supported
H6	PA $\rightarrow$ SU	-0.293	0.056	-5.212	[-0.390, -0.195]	<0.001	Supported
H7	PI $\times$ PA $\rightarrow$ SU	-0.139	0.048	-2.910	[-0.224, -0.048]	0.002	Supported

interaction was negative (-0.139 , -0.224 , -0.048). This finding confirmed H7 and (Chaimaa *et al.*, 2024) showed a decrease in positive peer relationship at higher access to support. The coefficient represents moderation for the given model. It is not providing estimates of simple slopes nor determining where peer influence stops being associated with problematic use.

The absolute values of the coefficients of these variables

were nearly the same, with the signs differing for support access and peer influence. A formal comparison for equality was not made for these estimates. The interaction was deemed outside of the direct support relationship. The pattern of associations revealed by the statistical support throughout the model is not indicative of equivalency for each of the predictors.

**Figure 2:** PLS-SEM structural model

Explanatory performance

This model accounted for 51.5% of the variance of problematic substance use and 45.8% in adverse consequences. These values related to adjusted were 50.6%

and 45.7%, respectively. Small adjustment differences indicate small reduction, considering model complexity. The problematic-use relationship with consequences had the highest effect size (0.846) among the effects available.

Table 9: Panel a. R-squared and Adjusted R-squared

Endogenous Construct	R ²	Adjusted R ²
SU	0.515	0.506
CO	0.458	0.457

Table 9: Panel b. Effect Sizes for Hypothesised Structural Paths

Hypothesis	Structural Path	f ²
H1	PI → SU	—
H2	FE → SU	0.128
H3	PD → SU	0.164
H4	SS → SU	0.039
H5	SU → CO	0.846
H6	PA → SU	—
H7	PI × PA → SU	0.039

The effect size for psychological distress was 0.164, then family dysfunction 0.128. Values of socioeconomic strain and interaction were 0.039, respectively. Unfortunately there was no data on effect sizes for peer influence and access to supports, so no full comparison of the incremental contributions can be made (Chowdhury & Barua, 2024).

Discussion

Integrated interpretation of risk relationships

The results point to an integrated picture of substance use problems among recent substance users in urban Dhaka Division. All the variables included in the current model were able to maintain their positive association. This trend indicates that problematic usage is too complex to be represented by a single domain. Simultaneously the estimates should not be interpreted to mean that all the respondents face the same mix of pressures. The model does not model individual trajectories, but rather associations across the sample.

Among the direct predictors of problematic use, the highest positive coefficient was that of peer influence. When looking at consumption difficulties it may be relevant to consider encouragement, pressure and normalisation that may occur within social groups. However, there was some overlap in the confidence intervals for peer influence, distress and family dysfunction. There are no statistically significant differences between the coefficients in the numerical ordering. Furthermore, an inclusion within drug networks could play a role in relationships. These possibilities should be taken into consideration in prevention priorities and not being singly blamed on pressure from peers (Owolabi & Rabiati, 2024).

The family environment relationship suggests that household environment conditions continue to influence during the young adult years. Conflict and less emotional support can happen together with greater

lack of opportunities to talk about personal concerns. Once the individual is the only target, this intervention may fail to address this context (Chowdhury & Barua, 2024). However, struggles with substance abuse can also contribute to increasing tensions within the family. This association hence supports attention to communication and supportive relationships, without being able to specify the direction of influence. Involvement should also be based on participant preference and appropriateness of the family environment (Safayet Hossen *et al.*, 2024).

Peer influence had a similar positive association with psychological distress. This discovery is in line with the significance emotional situations have in problematic consumption. It does not imply that substance use is always coping-motivated, since substance use was not actually measured as a function of motives. Distress can occur prior to use, during use, or in part as a result of use (Nawaz & Akhter, 2024). The practical consequence is thus to evaluate how emotional needs need to be taken into account in relation to substance issues. Assistance should help respondents describe their situation without presuming a psychiatric diagnosis based on the scores of certain surveys.

The coefficient of socioeconomic strain was smaller in size than that of socioeconomic status and the reported effect size was small. This finding indicates a relationship which is greater than the other domains included; this should not be interpreted as a statement that poverty inevitably causes substance use. The construct addressed is the perception of pressure in terms of finance and opportunity. It additionally encompasses situations that can vary by pupil, working respondent and seeker. Therefore, it would be beneficial in support planning to understand the specific material difficulty faced as opposed to seeing economic strain as a single state (Al Imran *et al.*, 2021).

Prevention access as a protective correlate

There was a direct relationship with problematic use and prevention and support access. This association puts perceived assistance in a substantive place in the model. Familiarity with options for confidential support and feeling comfortable in talking to a trusted professional can come with reduced struggles with consumption. But service quality, affordability, utilisation and completion of treatment were not verified for the construct (Hasan, 2025). Hence, the outcome is a person's perceived access. It should inform the analysis of making support accessible, not be used to argue that services are already available that make for an effective intervention.

This interpretation is complemented by the negative interaction. Support access was positively correlated, and the positive link between peer influence and problematic use was attenuated at higher levels of support access. This is consistent with a buffering model in which assistance is a source of guidance or support alternative to the one provided by the teacher. It also implies that access might have different implications in different social contexts. Although the coefficient was statistically supported, its low effect size suggests that it has a small incremental contribution. This practical significance should therefore not be ignored, as well as service quality and feasibility (Haque *et al.*, 2022).

The moderation result does not imply that peer influence is absent when access to support is high. A clearly documented interaction specification, conditional estimates and confidence intervals for simple slopes are required to draw this conclusion. Nor does it show that a greater number of users would lead to less use by any specific population (Al-Mamun *et al.*, 2024). To test out that proposition, a longitudinal measure or an evaluated increase in the extent of services would be required. Based on the current bodies of evidence, it is reasonable to consider access as one of the factors with respect to peer exposure, and that policy recommendations need to be proportionate to the design and analyses available.

Consequences and prevention priorities

There is a strong link between engaging in problematic substance use and undesirable outcomes that links behavioural difficulties to general disruption. The broad consequence domain consists of physical concerns, emotional problems, problems with conflict and responsibility and avoidable spending. The coefficient and effect size indicate problematic use is very relevant to its variation in the context of the specified model (Momen *et al.*, 2026). But there is some conceptual overlap between both domains in that responsibilities are interfered with. Further studies should consider how the relationship holds up when shared items are changed or consequences are judgements from alternative indicators.

An integrated prevention response is settled from the pattern of associations. Peer based activity might provide opportunities for the discussion of social pressure and supporting participation away from substance normalising

settings. Support for families may be able to help with communication if this needs to happen and is wanted. Emotional support may offer an opportunity to talk about distress, as well as issues with consumption. The model makes suggestions for priorities, not interventions that have been tested in this study. Their efficacy should be assessed in terms of changes in access, participation and resulting outcomes that can be measured (Faruq Ahammed & Shakil Ahmed, 2019).

Access needs to focus on the respondent's capacity to utilise support services rather than simply knowing about them. Information on confidentiality, support and contact procedures could be clearer and make the person more approachable. The difference between students, workers and respondents looking for work should be taken into consideration when designing services (Mahmud, 2024). The transport costs, consultation and inflexible timetable could also be relevant barriers due to material strain. The following barriers have not been measured independently and thus need to be assessed locally. Implementation should start with identifying what practical constraints impact the intended service population (Husain, 2024).

Limitations and future research

There were several limitations to the conclusions. This study adopts a cross sectional design which does not allow any inference as to the temporal sequence and the causal direction. Limits to recent non-medical users means that it is not possible to estimate initiation risk among non-users. The respondents were all in the urban Dhaka Division and transfer to the rural areas or other divisions was limited. Recall, concerns about disclosure and common response processes may affect self-reported experiences. When descriptive means are compared, care must be taken with the use of different response anchors. Even with reliability and low levels of predictor collinearity, these drawbacks remain.

The instrument developed by the researcher needs to be further validated beyond the current sample. Reflective specification might be more complicated in domains that involve a mixture of service components or disparate consequences. Therefore, alternative measurement specifications should be considered with respect to substantive definitions. Future studies should consider avoiding the lumping of substance types, ascertain trends over time and explore conditional peer relations at different levels of support. Independent outcome measures and out of sample prediction would enhance assessment. Future research could also focus on the relationship between increased accessibility to help and decreased problematic use and negative outcomes.

There is also a need to differentiate between fitted relationship and prediction in the explanatory results. Explained variance describes the extent to which the relationships explain the variability in this sample. It does not indicate the accuracy of the model prediction of new respondents. Likewise, statistical findings for all the hypotheses do not provide completeness of the

conceptual framework. Some relationships may appear to change and some of the difference may be due to unmeasured characteristics. The next step in evaluating this instrument is to compare different models and test them on different data samples before recommending the instrument as a useful tool in individual risk assessment or allocation of services.

CONCLUSION

This study was done with 300 young adults who reported using problematic substances in the recent past in urban Dhaka Division, Bangladesh. Peer influence, dysfunctional family environment, psychological distress, and socioeconomic strain was positively associated with problematic use. There was a negative relationship between prevention and support access, which decreased the positive peer relationship. There was a strong association between the extent of problem substance use and adverse consequences. The model jointly accounted for about half the variance of problematic use and a large amount of variance of consequences.

The results contribute to the prevention planning by considering the social relationships, emotional conditions, material pressures, but also by providing easy accessible help in a coordinated way. Access in particular needs to be highlighted as its significance was not only related to its linkage to moderation of peer influence. But availability perception must be differentiated from the actual service utilisation and its effectiveness. The findings highlight what needs to be assessed in more detail and what needs to be developed for prevention, not the impact of a complete prevention programme.

The study's contribution is still restricted to the population of the study and the method in which the measurement is taken. These scores should not be used to consider respondents clinically addicted. The results also cannot provide an estimate of national prevalence or determine causality between the variables proposed to be causes of problematic use. Future studies are needed to validate the instrument, provide records of patterns for each of the substances and to analyse change over time. Improvements in confidential and accessible support could then be evaluated to see if the protective relationships identified here result in noticeable decreases in consumption difficulties and effects.

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