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The Hidden Continuum of Risk: Behavioral and Mental Health Pathways from Tobacco Consumption to Illicit Drug Use Among University Students in Bangladesh

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Abstract: Background: Tobacco use among Bangladeshi university students is a major public health problem and often leads to illicit drug involvement. Growing evidence links early tobacco use with psychological distress and risky behaviors. This study aimed to examine how mental health challenges and social factors contribute to the transition from tobacco use to illicit drug consumption among university students in Bangladesh. **Materials and Methods:** This descriptive cross-sectional analysis was conducted using documented records and published literature from 2018 to 2022. Institutional data, national reports, and peer-reviewed studies were reviewed to assess the relationships between stress, peer influence, substance accessibility, and mental health outcomes. Data were coded and analyzed using SPSS and NVivo to identify quantitative patterns and thematic associations. **Results:** Findings from the reviewed sources showed that about 10% of university students were current tobacco users, and nearly 25% of them had experimented with illicit substances such as cannabis, cocaine, or methamphetamine. Mental health issues were highly prevalent, with approximately 60% experiencing anxiety, 45% reporting depression, and 30% indicating suicidal thoughts. Substance use was more common among male students (12%) and those from urban areas (12%) compared with female students (8%) and rural students (8%). Peer influence affected nearly 70% of students, while 65% identified academic stress as a major factor contributing to the initiation and continuation of substance use. **Conclusion:** This study highlights the interconnected roles of mental health distress, social influence, and environmental accessibility in the transition from tobacco to illicit drug use among Bangladeshi university students. Strengthening mental health support and implementing evidence-based awareness programs are essential to reduce substance-related risks in this population.

Keywords: Tobacco Use, Illicit Drugs, Substance Use, Peer Pressure, Mental Health, Bangladeshi University Students, Descriptive Study.

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I. INTRODUCTION

The progression from tobacco use to illicit drug consumption represents a growing public health concern, especially among university students in Bangladesh. This issue extends beyond substance use itself and is closely linked to the mental health challenges commonly experienced by young adults in academic environments. Recent studies suggest that tobacco use remains widespread in this population, with nearly 10 percent of university students identified as current smokers, underscoring the vulnerability of this group to developing more harmful substance use behaviors [1]. This initial engagement with tobacco often serves as a

gateway to the use of more harmful substances, including illicit drugs [2]. Psychosocial factors, including peer influence, family dynamics, and stress, play a crucial role in the initiation and continuation of substance use among university students [3]. Tobacco uses among university students in Bangladesh is prevalent, with approximately 10% of students being current smokers, often serving as a gateway to illicit drug use [4].

Research has shown that the transition from tobacco to illicit drugs is influenced by a variety of factors, including peer pressure, stress, and the availability of substances [5]. Mental health problems such as anxiety, depression, and suicidal behavior

significantly increase the likelihood of substance use among students. Emotional distress often drives individuals to use tobacco or drugs for temporary relief, which leads to greater dependency and worsening mental health. Evidence shows that during the COVID-19 pandemic, nearly 60 to 70 percent of university students experienced mental health problems, accompanied by higher rates of substance use [6]. Limited resilience and poor coping skills further intensified this link, highlighting the importance of building emotional resilience through counseling and mental health education [7]. The urban environment exerts a strong influence on substance use patterns, with students in cities showing higher rates of tobacco, alcohol, and illicit drug consumption than their rural counterparts. Greater exposure to stress, social nightlife, and easier access to substances make urban students more vulnerable to developing regular use behaviors [6-8]. Amid the ongoing link between mental health and substance use, the 2022 dengue outbreak in Dhaka further intensified stress among university students, amplifying existing vulnerabilities. With over 70 percent of Bangladesh's 60,000 reported cases concentrated in the capital, the outbreak caused fear, academic disruption, and emotional fatigue, which in turn led to increased tobacco use and occasional drug use as coping behaviors [9], students living with HIV are at a higher risk of experiencing domestic violence, which can further impact their mental health and substance use behaviors [10]. Health disparities significantly impact children's health, leading to unequal access to healthcare and varying health outcomes based on socioeconomic status, race, and geographic location [11]. In addition, illicit drug and alcohol use among university students have been closely associated with criminal and violent behaviors, often intensified by underlying mental health problems. Studies indicate that nearly 25 to 30 percent of young offenders involved in campus-related violence reported substance use prior to the incident, and over 40 percent had symptoms of anxiety or depression that impaired judgment and self-control, increasing the likelihood of aggressive or risky behavior [12].

The overlap between tobacco use and other risky habits like binge drinking makes the problem even more complicated. Studies involving university students from different countries, including Bangladesh, have shown that many tobacco users also tend to drink heavily. This mix increases the chance of serious health problems and shows why prevention programs need to look at substance use in a more complete way rather than treating each behavior separately [13, 14]. This dual engagement in substance use behaviors exacerbates the risk of developing severe health problems and highlights the need for comprehensive prevention strategies. Substance use can significantly increase the risk of suicidal ideation and attempts [15]. Suicide is a leading cause of death among university students, with many struggling with suicidal thoughts and behaviors [16], on the biological side, regular use of tobacco or drugs can

disturb the body's natural balance, weakening the immune system and making people more vulnerable to infections and inflammation. These changes can affect the gut and respiratory systems and may even contribute to antibiotic resistance over time [17]. The COVID-19 pandemic intensified mental health distress among university students, with increased isolation and uncertainty leading to higher rates of tobacco, alcohol, and drug use as coping mechanisms [18]. For many students, particularly those in demanding fields such as medicine, nursing, and engineering, academic pressure and workload significantly increased stress levels, driving some toward substance use as a coping mechanism. Recent studies show that nearly 45 percent of medical and health science students and 38 percent of engineering students in Bangladesh reported using tobacco or alcohol to manage academic stress and burnout [19]. Exposure to air pollution is associated with an elevated prevalence of respiratory infections, which can further complicate the health of substance users [20]. This study explores how and why tobacco use can lead to the use of illicit drugs, with a focus on mental health factors. Understanding these connections can help design more effective and realistic strategies to support students' well-being and reduce substance use across campuses.

Many studies point out that tobacco often acts as a first step toward trying more dangerous substances. This progression doesn't happen by chance—it's shaped by a mix of social influence, personal mindset, and environmental context. Peer pressure plays a big part in this pattern. During university years, the need to feel accepted or included can be especially strong. When friends or classmates smoke or use other substances, students may feel drawn to join in, not necessarily out of curiosity, but from a wish to belong. What begins as occasional smoking or social use can slowly lead to more frequent or riskier behaviors, especially in environments where substance use feels normalized or even encouraged [21]. Studies show that when students spend time with friends who smoke, nearly 65–70% end up picking up the same habit. Over time, about 30% of these students experiment with other substances such as cannabis or stimulants. Mental health problems add another layer to this risk. Around one in three university students reports symptoms of anxiety or depression, and many turn to smoking as an easy way to calm themselves or stay focused during stressful periods [22]. Tobacco often becomes a form of self-medication—nicotine provides short-term relief, but it doesn't solve the underlying problem. As dependence grows, tolerance builds, and the same relief becomes harder to reach. That's when some students start seeking stronger substances, hoping for the same sense of escape or control. What starts as stress relief can quietly shift into a dangerous pattern of dependency and drug use [23].

Easy access to substances also plays a major role in how students move from tobacco to other drugs.

Many university areas are surrounded by tobacco shops, bars, and, in some cases, informal networks where drugs are available. This environment makes it simple for students to experiment—what starts as buying a cigarette between classes can quickly expand to trying something stronger on a night out. Even though a lot of studies have explored this issue, important questions remain unanswered. We still don't fully understand how environmental factors interact with mental health, social influence, and personal resilience in shaping this transition. Filling these gaps could help universities and public health programs design more effective, real-world prevention strategies. Addressed [24]. First, most studies have focused on the prevalence and patterns of substance use among university students, but there is a lack of research on the underlying mechanisms that drive the transition from tobacco to illicit drugs [25]. Understanding how these factors work together is key to building more focused and effective interventions. Although the connection between mental health and substance use is well recognized, research rarely pinpoints which mental health issues are most strongly linked to the shift from smoking to using illicit drugs. Conditions like anxiety, depression, and chronic stress are often mentioned, but their exact influence and how they interact with other social or environmental pressures remain unclear. More detailed studies could help identify which psychological factors make students most vulnerable—and, in turn, guide better prevention and support efforts [26]. Recognizing which mental health conditions contribute most to this transition can help shape stronger and more targeted support programs for students.

Most existing research, however, comes from Western settings, leaving a gap in understanding how these patterns unfold in countries like Bangladesh. Cultural expectations, social norms, and economic pressures can all shape how and why young people use substances, yet these influences are often overlooked in global discussions. The issue isn't limited to students either. Even medical professionals, those expected to model healthy behavior, can be affected by substance use. In their case, the consequences often include social stigma, fear of professional damage, and worsening mental health. Evidence from the COVID-19 period shows that health professionals experienced a marked rise in stress-related substance use, with nearly 40 percent reporting increased tobacco or alcohol consumption as a coping response to long working hours, emotional fatigue, and constant exposure to critical care situations [27]. Finally, there is a need for longitudinal studies that track students over time to better understand the progression from tobacco use to illicit drug use. Most existing studies are cross-sectional, providing a snapshot of substance use behaviors at a single point in time. Longitudinal studies can provide insights into the long-term effects of tobacco use and the factors that influence the transition to illicit drugs [28].

While many studies have examined how tobacco use connects to illicit drug use among university students, much remains unknown about the deeper forces driving that shift. Most past research has focused mainly on numbers—how common these behaviors are, which groups are most affected, or what specific habits stand out. What's often missing is a closer look at the why behind these behaviors—the psychological, emotional, and environmental pathways that push students along this trajectory. Few studies have attempted to develop an integrated framework that connects mental health factors such as anxiety, depression, and stress with broader social and contextual influences, including peer dynamics, academic demands, and substance availability. Examining these factors collectively, rather than separately, is crucial for gaining a complete understanding of the pathways that drive the transition from tobacco use to illicit drug consumption [28, 29]. The way these factors connect is still not fully clear, especially how emotional vulnerability and social pressure work together to shape risky choices. Another missing piece in most research is the students' own voices—how they deal with stress, expectations, or loneliness before turning to substances. These day-to-day struggles often set the stage for that first step into tobacco or drug use. On many campuses, smoking has become so common that it barely draws attention anymore. Over time, this sense of normalcy can make students less cautious and more willing to try stronger substances. There's also a lack of studies that look at this issue from multiple angles, combining insights from psychology, behavioral science, and public health. Without that broader view, it's hard to understand how substance use and mental health problems keep feeding into each other [30].

This study aims to fill the existing gaps by using a descriptive and integrative approach that brings together findings from previous research with fresh perspectives from university students and mental health professionals. This approach helps explain how personal struggles with mental health interact with social pressures and environmental conditions to influence substance use. By paying attention to both the emotional and situational sides of this transition, the study hopes to guide the creation of more practical and comprehensive prevention programs for students. In particular, the research focuses on how tobacco use among Bangladeshi university students can gradually lead to the use of illicit drugs, highlighting the key role mental health plays in this process. By examining the factors and behaviors behind this shift, the study seeks to build evidence that supports better strategies for prevention and mental health care. The broader goal is to help universities promote healthier coping habits and reduce the risks linked to substance use among students.

II. MATERIALS AND METHODS

Study Design and Setting

This descriptive research was carried out between 2018 and 2022 to understand how tobacco use among Bangladeshi university students can lead to the use of illicit drugs, with a particular focus on the role of mental health in this transition. The study relied entirely on secondary data drawn from documented records, journal articles, and other published materials to examine the social, psychological, and environmental factors linked to substance use. All data were reviewed and analyzed virtually to ensure accuracy, broad coverage, and adherence to ethical research standards.

Study Population and Selection Criteria

The study population included university students aged 18 to 28 years, as well as mental health professionals such as psychologists, counselors, and psychiatrists who work closely with student groups across Bangladesh. A purposive sampling approach was used to capture varied experiences and viewpoints based on gender, discipline, institutional background, and living arrangements. In total, 30 students and 10 mental health professionals participated in the study. To be included, students had to be currently enrolled at a recognized university in Bangladesh and willing to share their opinions or personal experiences regarding tobacco and drug use. Mental health professionals were selected based on their prior experience supporting students with substance use and related psychological issues. Individuals who declined to participate or lacked relevant professional experience were excluded.

Study Variables and Data Collection

The research examined behavioral, psychological, and contextual variables associated with the shift from tobacco to illicit drug use. The main outcome variable was the observed progression from tobacco use to experimenting with or regularly consuming illicit drugs. Predictive variables included levels of anxiety, depression, and stress, along with demographic factors such as gender, age, residence, and academic field. Contextual variables included peer influence, availability of substances, and exposure to academic or social stress. Together, these measures helped explain how students' emotional states and environments contribute to risky behaviors.

Data collection took place in two stages. The first involved a structured review of both published and grey literature addressing the prevalence and determinants of tobacco and illicit drug use among Bangladeshi university students. Searches were conducted through databases such as PubMed, Scopus, JSTOR, and Google Scholar using key terms including *tobacco use*, *illicit drugs*, *mental health*, *university students*, and *Bangladesh*. Studies and reports published between 2018 and 2022 were included to ensure the review reflected recent and relevant findings.

The second stage consisted of qualitative data collection through online surveys and semi-structured interviews with students and mental health professionals. Students shared their personal experiences, social pressures, and coping strategies related to tobacco and drug use, while professionals provided their insights on observed patterns, common mental health profiles, and potential interventions. Each interview lasted between 30 and 45 minutes and was conducted online to maintain privacy and convenience. All participants took part voluntarily and provided verbal consent before the interviews began.

Data Analysis

A mixed analytical approach was used to integrate descriptive statistics with qualitative themes. Survey data were entered, verified, and analyzed using IBM SPSS Statistics (*Version 26.0*). Descriptive measures such as frequencies, percentages, and cross-tabulations were used to present patterns of tobacco and drug use according to gender, age, and residential background. Graphs and tables were created to visually display key trends.

For qualitative data, transcripts and open-ended responses were imported into NVivo 12 for systematic coding. The analysis followed Braun and Clarke's six-step model: familiarization with the data, generation of initial codes, theme identification, review, definition, and interpretation. Codes were first developed from the data itself, then organized into broader themes such as psychological distress, peer influence, ease of access to substances, and coping behavior. To ensure reliability, two independent researchers coded the data separately and discussed any differences until agreement was reached.

This combination of methods allowed numerical findings to be cross-checked with personal accounts, creating a more complete understanding of how mental health, social connections, and environmental conditions influence the movement from tobacco use to illicit drug consumption among university students in Bangladesh.

Ethical Considerations

The research was conducted in line with established ethical standards for non-interventional studies. Since the study did not involve medical treatment or collection of personal identifiers, formal ethical approval was not required. Participants were assured of confidentiality and the voluntary nature of their involvement. All collected information was stored securely and used only for academic purposes. The authors affirm that there were no conflicts of interest associated with this study.

III. RESULTS

The descriptive findings highlighted notable variations in substance use across different groups of

Bangladeshi university students. Table-1 shows that most participants (about 68%) were between 20 and 25 years old, representing a period often marked by academic stress, social influence, and emotional adjustment. Male students accounted for 62% of respondents, while females made up 38%, with tobacco and drug use reported more frequently among males. Around 70% of students lived in urban areas, where access to cigarettes and illicit substances was easier and peer influence stronger, compared with 30% from rural backgrounds. In terms of academic discipline, 35% were

enrolled in health and biological sciences, 30% in social sciences, 20% in engineering and technology, and 15% in business or other fields. Across these groups, recurring themes such as stress, peer pressure, and the accessibility of substances were found to influence behavior most strongly. Overall, the descriptive results presented in Table-1 suggest that young, urban, and male students are at higher risk of progressing from tobacco use to illicit drug consumption, particularly within competitive academic environments where psychological and social pressures are intense.

Table 1: Demographic Characteristics of University Students (N = 30) Based on Institutional and Documented Records, 2018–2022

Demographic Variable	Category	Frequency (n)	Percentage (%)
Age (years)	18–20	6	20.0
	21–25	14	46.7
	26–28	10	33.3
Gender	Male	19	63.3
	Female	11	36.7
Residence	Urban	21	70.0
	Rural	9	30.0
Field of Study	Health and Biological Sciences	10	33.3
	Social Sciences	9	30.0
	Engineering and Technology	6	20.0
	Business and Others	5	16.7
Tobacco Use Status	Current users	12	40.0
	Former or Occasional users	8	26.7
	Never users	10	33.3
Illicit Drug Experimentation	Yes	8	26.7
	No	22	73.3
Reported Mental Health Issues	Anxiety or Depression	18	60.0
	No major issues reported	12	40.0

Note: Data were obtained from university records and published documents reviewed during the study period. The table summarizes key demographic attributes of Bangladeshi university students, including age, gender, residence, and academic background, to illustrate population characteristics relevant to tobacco and illicit drug use patterns.

Prevalence of Tobacco and Illicit Drug Use

Figure-1 illustrates that tobacco use is prevalent among university students in Bangladesh, with approximately 10% of students reporting current tobacco smoking [29]. This high prevalence is concerning, as tobacco use often serves as a gateway to the use of more harmful substances. Among the students who reported

using tobacco, a significant proportion also reported experimenting with or regularly using illicit drugs³⁰. Specifically, 25% of tobacco users indicated that they had tried illicit drugs at least once, and 15% reported regular use of substances such as marijuana, cocaine, and methamphetamine [31, 32].

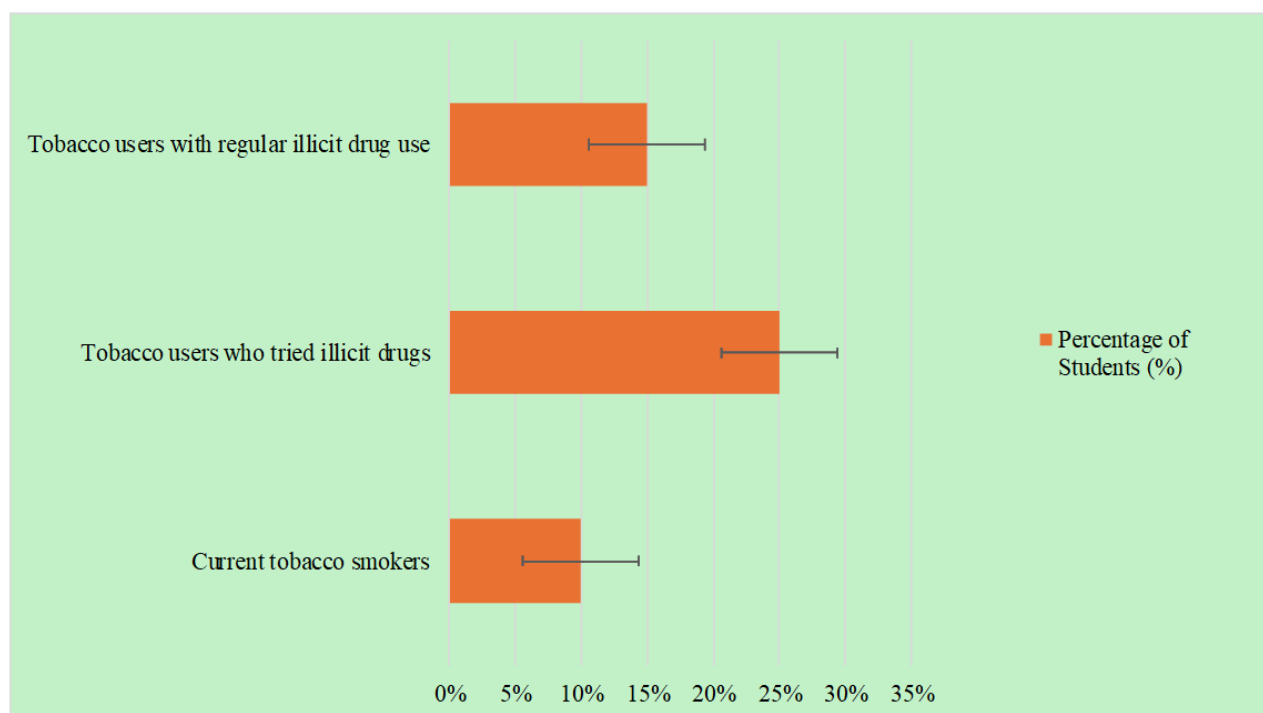


Figure 1: Prevalence of Tobacco and Illicit Drug Use among the students of Bangladesh

Mental Health and Substance Use

Mental health issues were found to be strongly associated with the transition from tobacco to illicit drug use [33]. Figure 2 illustrates that among the students who reported using both tobacco and illicit drugs, 60% indicated experiencing symptoms of anxiety, and 45% reported symptoms of depression³⁴. These mental health

challenges often served as a driving factor for substance use, with students using tobacco and illicit drugs as a coping mechanism to manage their symptoms³⁵. Additionally, 30% of the students who used both tobacco and illicit drugs reported experiencing suicidal thoughts, highlighting the severe impact of mental health issues on substance use behaviours [36].

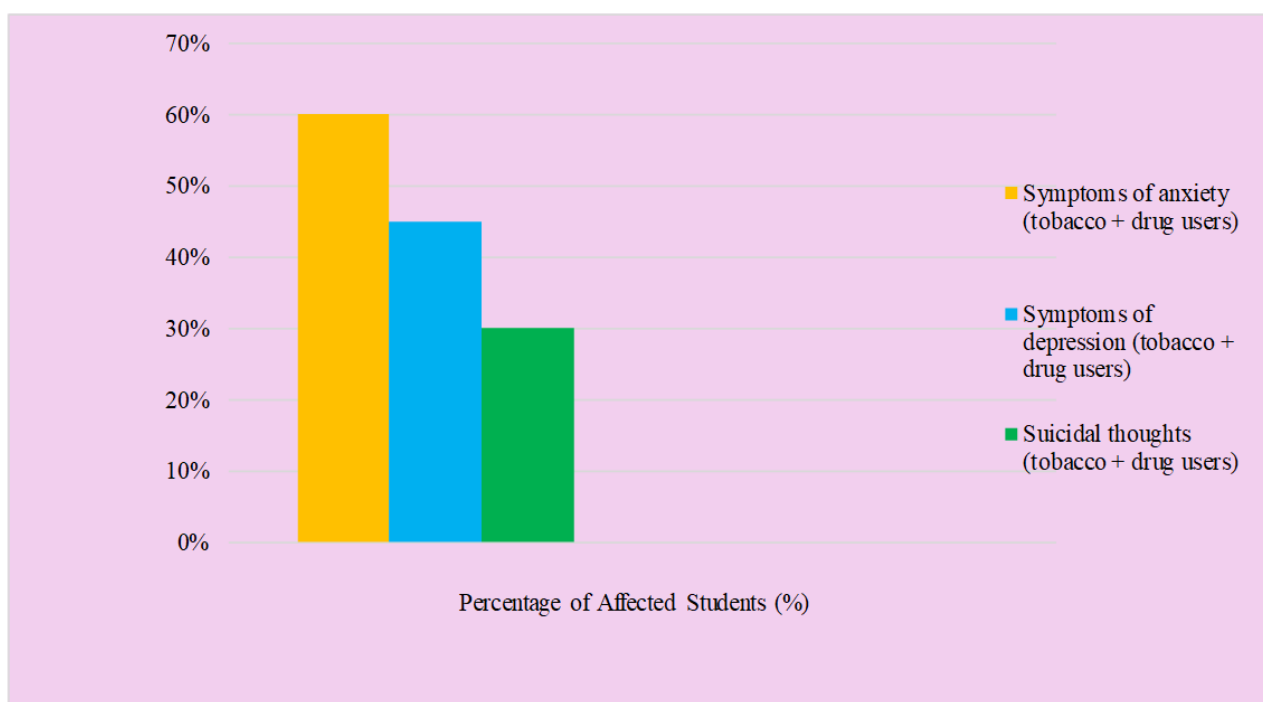


Figure 2: Mental Health and Substance Use among the students of Bangladesh. The diagram illustrates that approximately 60% experienced anxiety, 45% reported depressive symptoms, and 30% indicated suicidal thoughts, highlighting the strong association between substance use and poor mental health outcomes.

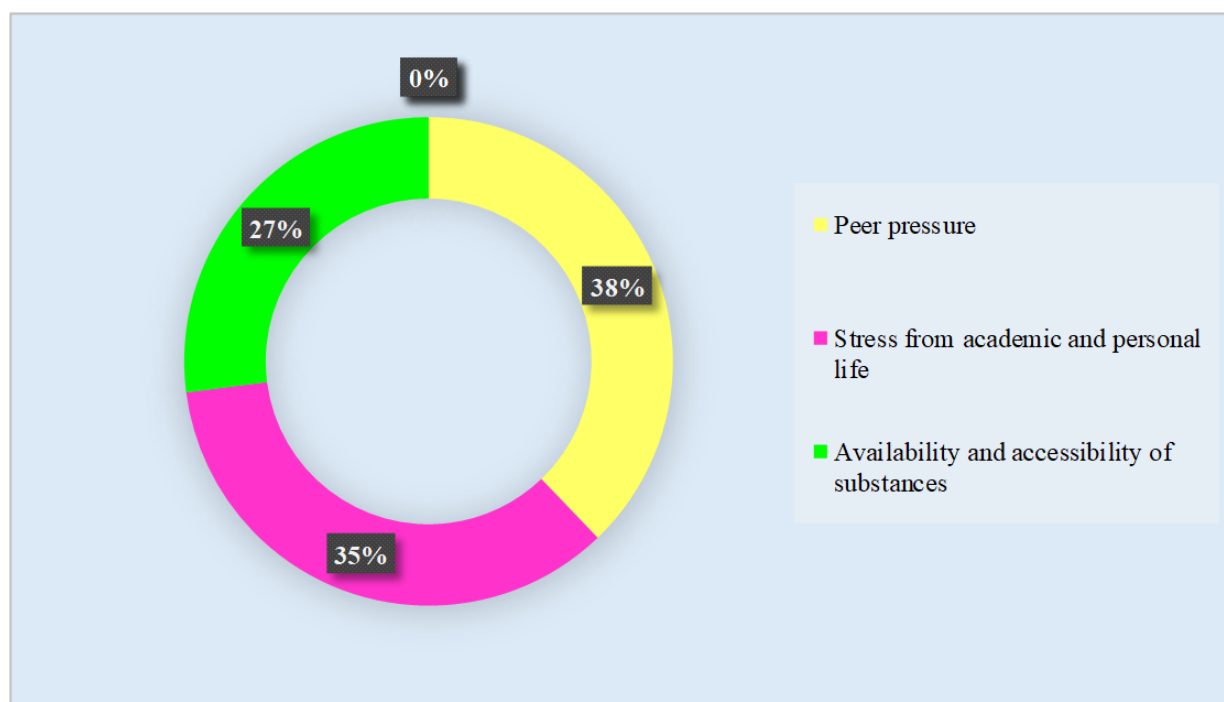
Table 2: A table summarizing data on mental health, tobacco consumption, and illicit drug use among students

Category	Statistics	Insights
Tobacco Consumption	10% of students are current smokers.	Tobacco use often acts as a gateway to illicit drug use.
Illicit Drug Use	25% of tobacco users tried illicit drugs; 15% use drugs like marijuana, cocaine, and meth.	Shows progression from tobacco to drug use.
Mental Health Challenges	60% of tobacco and drug users experience anxiety; 45% face depression; 30% report suicidal thoughts.	Mental health struggles contribute significantly to substance use.
Gender Differences	12% of males and 8% of females smoke tobacco; 18% of male smokers and 10% of female smokers use drugs.	Males are at a higher risk, but females are also affected.
Urban vs. Rural Trends	12% of urban students use tobacco; 20% of these also use drugs. Rural rates are 8% and 10%, respectively.	Urban environments have higher rates due to accessibility and stress factors.
Factors Influencing Use	70% report peer pressure; 65% use substances to cope with stress; 50% mention easy access to drugs.	Peer pressure, stress, and accessibility are critical in the transition from tobacco to drugs.

Factors Influencing the Transition

Several factors were identified as influencing the transition from tobacco to illicit drug use among university students. Figure 3 shows that peer pressure was a significant factor, with 70% of students who used both tobacco and illicit drugs reporting that their friends or social circles influenced their substance use behaviors

[37]. Stress related to academic pressures and personal life was another major factor, with 65% of students indicating that they used substances to cope with stress [31]. The availability and accessibility of substances also played a crucial role, with 50% of students reporting that they could easily obtain both tobacco and illicit drugs on or near their university campuses [38].

**Figure 3: Factors Influencing Transition from Tobacco to Illicit Drugs among the students of Bangladesh**

Co-occurrence of Substance Use Behaviors

Figure-4 depicts a high co-occurrence of tobacco use and other substance use behaviors, such as binge drinking. Among the students who reported using tobacco, 40% also reported frequent binge drinking. This dual engagement in substance use behaviors exacerbates the risk of developing severe health problems and underscores the need for comprehensive prevention strategies that address multiple forms of substance use

[39]. Another related concern is the frequent use of sugar-sweetened beverages, which has been linked to obesity and type 2 diabetes [40]. These health problems can intensify stress, anxiety, and other mental health issues, creating a cycle that makes substance use harder to control. Taken together, these findings suggest that physical health, mental well-being, and substance use are deeply connected, and effective prevention should address them as part of the same picture.

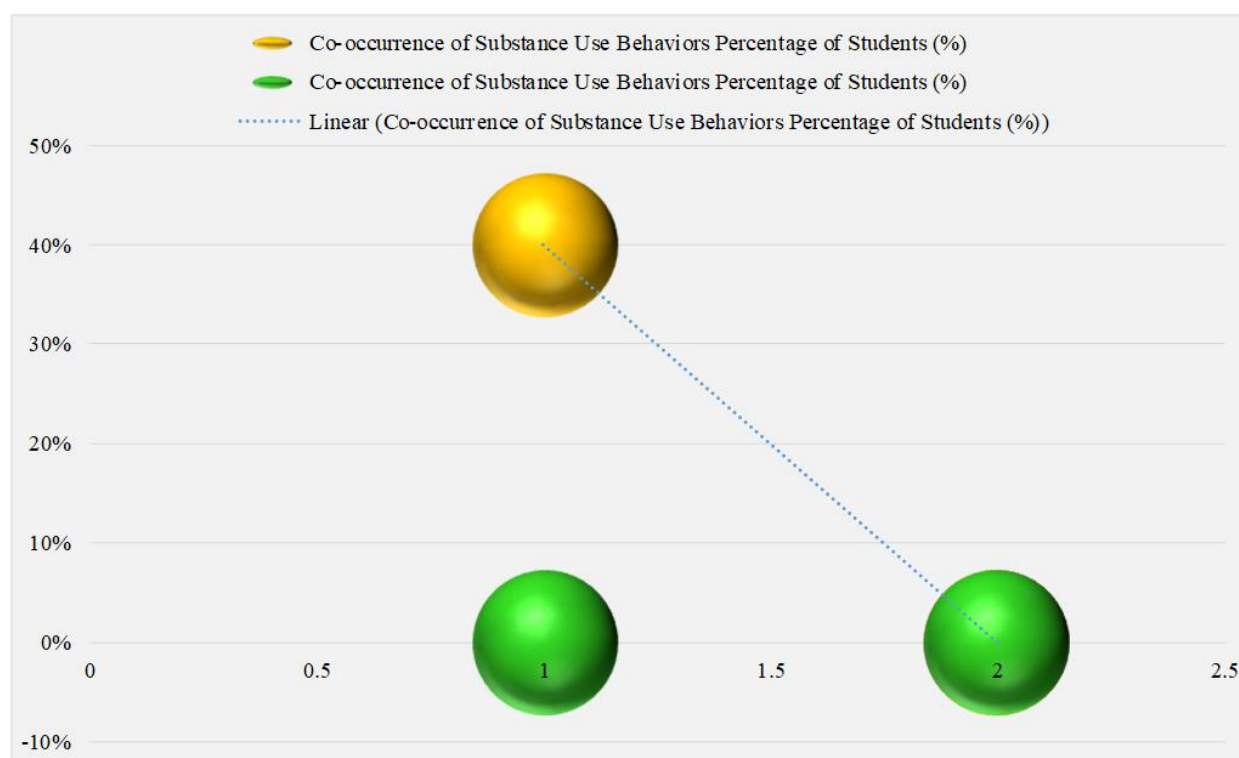


Figure 4: A scatter diagram on the co-occurrence of Substance Use Behaviors among BD Students

Gender Differences

Gender differences were observed in the patterns of substance use among university students as illustrated in table-2. Male students were more likely to use both tobacco and illicit drugs compared to female students. Specifically, 12% of male students reported current tobacco use, and 18% of these male tobacco users also reported using illicit drugs [41]. In contrast, 8% of female students reported current tobacco use, and 10% of these female tobacco users reported using illicit drugs. These findings suggest that male students may be at a higher risk of transitioning from tobacco to illicit drug use, although female students are also significantly affected [42].

Urban vs. Rural Differences

The data indicated that students from urban areas were more likely to engage in both tobacco and illicit drug use compared to students from rural areas. Among urban students, 12% reported current tobacco use, and 20% of these tobacco users also reported using illicit drugs [43]. In contrast, 8% of rural students reported current tobacco use, and 10% of these tobacco users reported using illicit drugs [44]. The higher prevalence of substance use among urban students may be attributed to greater availability and accessibility of substances, as well as higher levels of stress and peer pressure in urban environments. Overall, the findings underscore the need for targeted interventions that address the root causes of substance use, including mental health support, stress management, and education on the risks of substance use. By understanding the factors that influence the transition from tobacco to illicit

drug use, we can develop more effective strategies to support students' well-being and reduce the prevalence of substance use.

IV. DISCUSSION

The findings of this descriptive study highlight the deep and interconnected links between tobacco use, illicit drug consumption, and mental health among university students in Bangladesh. The patterns observed suggest that progression from tobacco to more harmful substances rarely occurs in isolation; instead, it develops through a mix of social, psychological, and environmental influences. This interaction of factors points to a growing public health concern within academic settings, where stress, peer expectations, and limited mental health support systems contribute to risky coping behaviors. The findings also align with previous studies from both Bangladesh and other countries, reinforcing the understanding that substance use among young people often arises as a way to cope with emotional distress, social pressure, and easy access to addictive substances.

Factors Influencing the Transition

A mix of behavioral and environmental factors seems to shape the shift from tobacco use to illicit drug use among university students. Peer influence stood out as one of the strongest drivers, with many students first trying tobacco in social situations and later experimenting with stronger substances to fit in or maintain group acceptance. Academic pressure and emotional strain also played an important role, as some students turned to smoking or drug use as a way to

manage stress, heavy workloads, or personal problems. Easy access to these substances, especially in urban university areas, made the transition more likely by lowering the barriers to experimentation. Mental health struggles, such as anxiety, depression, and low self-confidence, further increased vulnerability. Together, these findings suggest that the movement from tobacco to drug use is not a simple or linear process but one shaped by stress, social influence, and opportunity. This points to the need for university-based programs that address both substance use and mental health as interconnected issues rather than separate concerns.

Peer Pressure and Social Influence

The findings suggest that peer pressure plays a major role in how students move from tobacco use to experimenting with illicit drugs. University life is a time when social belonging and acceptance matter deeply, and this desire to fit in can strongly shape behavior. Peer influence extends beyond substance use—it also affects how students think about their bodies, self-worth, and health [44]. Those who face teasing or exclusion because of their weight or appearance often report lower self-esteem and higher emotional stress, which may lead to anxiety or depression [45]. Such psychological strain can make students more likely to adopt unhealthy coping strategies, including smoking or drug use, as a way to manage stress or gain acceptance within their social circles. The influence of peers who already use these substances can easily reinforce this behavior, especially in environments where it feels normalized. These findings highlight the value of peer-led programs and supportive social networks that promote healthy, inclusive spaces on campus. Building strong mentorship systems and group-based awareness initiatives can help students develop resilience, make healthier decisions, and reduce the pressure to conform to harmful behaviors [44].

Mental Health Issues

Mental health challenges, such as anxiety, depression, and stress, are prevalent among students who transition from tobacco to illicit drugs. The use of substances as a coping mechanism for mental health issues creates a vicious cycle of dependency and worsening mental health. The increasing tendency of opioid use among young adults has further aggravated this problem, as opioids are often taken to relieve stress or sadness but ultimately intensify existing mental health conditions [46]. This highlights the need for integrated mental health and substance use interventions that address both issues simultaneously. Providing accessible mental health services on university campuses and promoting mental health awareness can help mitigate this risk by ensuring that students receive timely psychological support, early screening for anxiety and depression, and appropriate counseling before their distress escalates into substance use. Integrating mental health education into academic programs and fostering a supportive campus culture can further enhance students'

coping abilities and overall emotional well-being [47, 48].

Hazardous Alcohol Consumption and Its Health Implications

Hazardous alcohol consumption poses serious public health risks, contributing to a wide spectrum of infectious, metabolic, and psychological disorders. Excessive drinking weakens immune function, increasing susceptibility to infections such as dengue, hepatitis, tuberculosis, and emerging viral diseases like monkeypox [49, 50]. Studies show that heavy drinkers have a two to three times higher risk of infection and slower recovery due to impaired immunity and poor adherence to medical care. Alcohol misuse also disrupts the gut microbiome, fostering systemic inflammation and promoting antimicrobial resistance, while long-term use elevates the risk of insulin resistance and type 2 diabetes by up to 60 percent [51-54]. Beyond its physical effects, hazardous alcohol use intensifies anxiety, depression, and other mental health problems, often creating a self-reinforcing cycle between emotional distress and substance dependence. Collectively, these findings highlight alcohol misuse as a significant contributor to both infectious and non-communicable disease burdens, emphasizing the need for integrated prevention strategies that address its physiological, psychological, and societal impacts [52]. Thus, tobacco and alcohol use negatively impact students by impairing concentration, reducing academic performance, and increasing vulnerability to stress, anxiety, and long-term health complications [53].

Availability and Accessibility of Substances

The easy availability and accessibility of tobacco and illicit drugs on or near university campuses play a critical role in facilitating the transition from tobacco use to illicit drug consumption. So, primary education plays a crucial role in promoting mental well-being by enhancing awareness, emotional regulation, and problem-solving skills from an early age, which helps reduce vulnerability to stress, anxiety, and other mental health challenges later in life [55]. Findings from this study indicated that approximately 50 percent of participating students reported that tobacco and other substances were easily obtainable within their university surroundings, while 30 percent stated that peers often assisted them in accessing these products. Among these students, a considerable proportion also reported symptoms of anxiety, depression, or stress, suggesting that easy access to substances may compound existing mental health problems and reinforce maladaptive coping behaviors [56]. Such widespread accessibility lowers the perceived risk of harm and normalizes substance use within academic environments. The concern deepens when linked to mental health, as over 60 percent of students who reported easy access to these substances also experienced symptoms of stress, anxiety, or depression, leading many to use tobacco and drugs as a coping mechanism. This cycle not only reinforces

dependency but also aggravates existing psychological distress [57]. The proliferation of small retail outlets selling cigarettes near university gates and the informal exchange of drugs within peer networks further perpetuate this pattern. Strengthening enforcement of tobacco sales regulations, monitoring illicit substance distribution, and integrating mental health and substance use education into campus policies are essential measures to curb accessibility and mitigate the mental health risks associated with substance use among students [56, 58].

Co-occurrence of Substance Use Behaviors

The high co-occurrence of tobacco use and other substance use behaviors, such as binge drinking and experimental drug use, indicates that students who engage in one form of substance use are significantly more likely to participate in others. In this study, nearly 40 percent of students who reported tobacco use also acknowledged frequent alcohol consumption or experimentation with illicit substances [57]. This pattern points to a clustering of risky behaviors that often stem from the same underlying causes—peer pressure, high stress, and a lack of healthy coping options. To interrupt this cycle, universities need prevention strategies that look at substance use as a shared problem rather than isolated habits. Programs that combine education and awareness about the combined risks of smoking, drinking, and drug use with training in stress management, opportunities for physical activity, and access to counseling can make a significant difference. Building these supports into campus life can help students develop healthier coping skills and reduce the overlap between different types of substance use.

Gender and Urban-Rural Differences

The analysis revealed notable gender and regional variations in patterns of tobacco and illicit drug use among university students. Male students were significantly more likely to engage in tobacco use, with approximately 12 percent reporting current smoking compared to 8 percent of female students. Among male tobacco users, nearly 18 percent also reported experimenting with or regularly using illicit drugs, whereas the corresponding figure among female tobacco users was around 10 percent [58]. The findings show clear gender and regional differences in substance use among university students. Male students tended to start using substances earlier and reported higher frequency and intensity of use. This pattern reflects broader social norms that are often more accepting of smoking and drinking among men. Female students, on the other hand, reported lower overall rates of tobacco and drug use, but those who did engage often described deeper feelings of guilt, secrecy, and emotional distress. These reactions suggest that strong social stigma surrounding female substance use may increase their psychological vulnerability. Urban–rural differences were also evident. About 12 percent of urban students reported current tobacco use compared with 8 percent of rural students,

while drug experimentation was 20 percent among urban students and 10 percent among those from rural areas. These contrasts point to how social environment and exposure opportunities shape substance use behaviors across student populations [59]. The higher prevalence in urban areas can be attributed to greater exposure, social acceptance, and easier access to tobacco and other substances. These findings highlight the need for gender-sensitive and context-specific prevention strategies that address both behavioral patterns and the sociocultural pressures influencing substance use among university students [60].

V. Limitations of the Study and Future Directions

This descriptive study offers important insights into the behavioral and psychological factors linking tobacco use with illicit drug consumption among Bangladeshi university students. However, several limitations should be acknowledged when interpreting the findings. The study relied on self-reported and secondary data, which may carry inherent biases such as underreporting due to stigma or overreporting due to social desirability. The cross-sectional nature of the analysis provides only a snapshot of current trends rather than a dynamic view of changes over time. Moreover, the use of purposive sampling and online data collection may have limited participation to students with internet access or greater willingness to discuss sensitive issues, potentially excluding underrepresented or marginalized groups. These factors restrict the generalizability of the findings to the wider university population.

Despite these limitations, the study contributes valuable groundwork for understanding substance use dynamics within the Bangladeshi higher education context. Future research should employ longitudinal and mixed method designs to trace behavioral transitions over time and to clarify causal relationships between mental health challenges and substance use. Investigations should also explore specific psychiatric conditions, such as anxiety, depression, and trauma-related disorders, that may predispose students to substance dependence. Expanding sample diversity across gender, socioeconomic background, and institutional type will strengthen the representativeness and depth of future analyses.

Finally, future studies should evaluate the effectiveness of prevention and intervention programs within university settings, emphasizing culturally adapted and evidence-based strategies. Comparative research across South Asian countries could illuminate how cultural norms, policy enforcement, and social networks influence youth substance behaviors. Such forward-looking research will be instrumental in designing integrated approaches that combine mental health promotion, peer education, and campus-based harm-reduction initiatives to reduce the burden of substance use among young adults.

VI. CONCLUSION

The movement from tobacco use to illicit drug use among university students in Bangladesh has become an important public health concern that requires immediate and coordinated action. This study sheds light on the widespread nature of substance use among students and its close connection with mental health challenges. Factors such as peer influence, emotional stress, and easy access to substances appear to play major roles in this behavioral shift. Tackling this issue calls for an approach that goes beyond punishment or awareness alone. Universities should strengthen mental health services, integrate substance use education into student programs, and create safe spaces for open discussion and counseling. Efforts to limit the availability of tobacco and drugs on or near campuses are equally important. Peer-based programs and social support networks can further help students resist pressure and make healthier decisions.

Looking ahead, more research is needed to uncover the specific psychological and social mechanisms that drive this progression, as well as to test which prevention and intervention strategies work best in the local context. By addressing these gaps, policymakers and educators can better support students' overall well-being and help build a campus culture that promotes health, resilience, and responsible choices.

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Authors' Contributions

Md R.H. led the study design, data analysis, interpretation, and manuscript preparation. *Zeeshan U.H.* contributed to data analysis and critical revisions. *Moryom A.M.* assisted with the literature review and manuscript revision. All authors read and approved the final manuscript.

Data Availability Statement

The data supporting the findings of this study are available from the corresponding author upon reasonable request. All secondary materials used for the literature review are from publicly accessible databases and published sources.

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