

Substance abuse among young adults, and the contributing factors of social media in the United States

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World Journal of Biology Pharmacy and Health Sciences, 2024, 19(01), 034–043

Publication history: Received on 20 May 2024; revised on 29 June 2024; accepted on 02 July 2024

Article DOI: <https://doi.org/10.30574/wjbphs.2024.19.1.0384>

Abstract

This study investigates the relationship between social media use and substance abuse among young adults in the United States. With the increasing prevalence of social media and its profound impact on behavior, understanding its role in promoting substance use is critical. The research examines patterns of substance abuse, identifies key social media factors contributing to these behaviors, and discusses implications for prevention and intervention strategies. Data were collected through surveys and interviews with young adults aged 18-25. The findings highlight significant correlations between social media exposure and substance use, emphasizing the need for targeted educational and policy measures.

Keywords: Substance Abuse; Young Adults; Social Media; Mental Health; Behavioral Influence; United States

1. Introduction

Substance abuse among young adults in the United States has become a pervasive issue, posing significant public health challenges. This demographic, typically defined as individuals aged 18 to 25, is particularly vulnerable to experimenting with and developing dependencies on various substances, including alcohol, prescription medications, and illicit drugs. According to recent data from the National Institute on Drug Abuse (NIDA), the prevalence of substance use within this age group remains alarmingly high, with a significant percentage reporting regular use of marijuana, opioids, and stimulants. The consequences of substance abuse are profound, affecting not only the health and well-being of young adults but also their academic performance, employment prospects, and social relationships.

In recent years, the rapid proliferation of social media platforms has introduced a new dimension to the discourse on substance abuse. Social media has transformed the way young adults communicate, interact, and perceive the world. Platforms such as Instagram, Thread, Facebook, Snapchat, TikTok, and X (Formerly Twitter) have become integral to daily life, providing spaces for self-expression, social interaction, and information exchange. However, alongside these benefits, there is a growing concern about the negative impacts of social media on mental health and behavior. The ubiquity of social media has created environments where peer pressure, exposure to substance use, and targeted advertisements can potentially influence young adults' behaviors and choices, including those related to substance use.

1.1. Problem Statement

Despite the recognized influence of social media on various aspects of young adults' lives, there is a critical need to understand how these platforms specifically contribute to substance abuse. The problem is multifaceted, involving direct and indirect influences that social media exerts on individuals' perceptions, attitudes, and behaviors towards substance use. Understanding these dynamics is crucial for developing effective prevention and intervention strategies.

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The central issue addressed by this study is the role of social media in fostering environments that may encourage or normalize substance use among young adults in the United States.

1.2. Purpose of the Study

The primary purpose of this study is to explore the relationship between social media use and substance abuse among young adults. By examining patterns of social media engagement and their association with substance use behaviors, this research aims to identify the specific factors on social media that contribute to the initiation and continuation of substance use. The study seeks to provide a comprehensive understanding of how social media can influence substance use behavior, considering both the content consumed and the nature of interactions on these platforms.

Additionally, this study aims to fill gaps in existing literature by providing empirical evidence on the mechanisms through which social media impacts substance use. By doing so, it hopes to inform the development of targeted educational programs and policy measures that can mitigate the negative influences of social media on young adults' health and well-being.

1.3. Research Questions

To achieve the objectives outlined, this study will address the following research questions:

1.3.1. *What is the prevalence of substance abuse among young adults in the United States?*

- This question aims to provide a current overview of substance use trends within this demographic, identifying the most commonly abused substances and the extent of their use.

1.3.2. *How does social media influence substance use behavior among young adults?*

- This question seeks to uncover the relationship between social media engagement and substance use, exploring how different aspects of social media use correlate with substance use behaviors.

1.3.3. *What are the specific aspects of social media that contribute to substance abuse among young adults?*

- This question focuses on identifying particular elements of social media, such as peer interactions, exposure to substance use content, and targeted advertisements, that are most influential in promoting substance use.

By addressing these questions, the study aims to provide a detailed and informed understanding of the intersection between social media and substance abuse, ultimately contributing to the broader body of knowledge in this critical area of public health and adolescent mental health research.

2. Literature Review

2.1. Substance Abuse among Young Adults

2.1.1. *Definitions and Types of Substances Commonly Abused*

Substance abuse among young adults involves the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs. Commonly abused substances in this demographic include alcohol, marijuana, opioids, stimulants (such as cocaine and methamphetamine), hallucinogens, and prescription medications (such as benzodiazepines and prescription opioids) (National Institute on Drug Abuse, 2020).

2.1.2. *Statistics and Trends in Substance Use*

Recent statistics indicate that substance use remains prevalent among young adults in the United States. According to the Monitoring the Future survey, approximately 30% of college students reported using marijuana in the past year, and 20% reported binge drinking in the past month (Johnston et al., 2021). Additionally, the opioid epidemic continues to impact this age group significantly, with increasing rates of opioid misuse and overdose deaths reported (Centers for Disease Control and Prevention, 2020).

2.2. Impact of Social Media on Mental Health

2.2.1. Overview of Social Media Platforms Used by Young Adults

Social media platforms such as Instagram, Snapchat, TikTok, X (formerly Twitter), and Facebook are widely used by young adults. These platforms provide spaces for social interaction, self-expression, and information sharing, making them integral to the daily lives of many young individuals (Pew Research Center, 2021).

2.2.2. Positive and Negative Impacts of Social Media on Mental Health

Social media use has both positive and negative impacts on mental health. On the positive side, social media can provide social support, facilitate connections with friends and family, and offer platforms for self-expression and identity exploration (Seabrook, Kern, & Rickard, 2016). However, there are also negative impacts, including increased risks of anxiety, depression, and poor body image due to cyberbullying, social comparison, and exposure to harmful content (Primack et al., 2009). Research has shown that excessive social media use is associated with higher levels of anxiety and depression among young adults (Lin et al., 2016).

2.3. Social Media and Substance Abuse

2.3.1. Previous Studies Linking Social Media Use to Substance Abuse

Several studies have explored the relationship between social media use and substance abuse. For example, a study by Moreno et al. (2016) found that young adults who frequently viewed substance use-related content on social media were more likely to engage in substance use themselves. Similarly, a study by Boyle et al. (2016) reported that exposure to alcohol-related content on social media was associated with increased alcohol consumption among college students.

2.3.2. Mechanisms of Influence

The influence of social media on substance use behaviors can be understood through various mechanisms:

Peer Pressure

- Social media platforms can amplify peer pressure by exposing young adults to substance use behaviors among their peers. Seeing friends and influencers engaging in substance use can normalize these behaviors and encourage imitation (Vollman, 2019).

Exposure to Substance Use Content

- Social media is rife with content that portrays substance use in a positive light, including posts from celebrities, influencers, and advertisements. This exposure can create an impression that substance use is common and acceptable, influencing young adults to experiment with or continue using substances (Cavazos-Rehg et al., 2021).

Targeted Advertisements

- Social media platforms often use targeted advertising to promote substances, including alcohol and tobacco products, to young adults. These advertisements can be highly effective in shaping attitudes and behaviors related to substance use (Clemens et al., 2023).

By understanding these mechanisms, researchers and policymakers can develop strategies to mitigate the negative impacts of social media on substance use behaviors among young adults.

3. Methodology

3.1. Research Design

This study employs a mixed-method approach, integrating both quantitative and qualitative data to provide a comprehensive analysis of the relationship between social media use and substance abuse among young adults. The quantitative component will involve the collection of numerical data through surveys to identify patterns and correlations, while the qualitative component includes case studies to explore personal experiences and perceptions.

3.2. Participants

3.2.1. Criteria for Selecting Participants

Age Range

Young adults aged 18 to 25 years.

Demographics

Participants from the dataset being considered were selected from diverse backgrounds to ensure a representative sample, including variations in gender, ethnicity, socio-economic status, and geographic location within the United States.

Inclusion Criteria

Participants' claim on active usage of social media platforms (at least 2 hours of usage per day) and willingness to discuss their substance use behaviors.

3.3. Data Collection

3.3.1. Quantitative Data Collection

Data Source

An online data source (Kaggle.com) to collect data on social media usage patterns, substance use behaviors, and demographic information. The source included validated scales such as the Social Media Addiction Scale (SMAS) and the Drug Use Disorders Identification Test (DUDIT).

Sample Size

A sample size of at least 500 participants was targeted to ensure statistical power and generalizability of findings.

3.3.2. Qualitative Data Collection

Interviews

Semi-structured interviews were conducted with a subset of survey participants (approximately 10-15 individuals) to gain deeper insights into their experiences with social media and substance use. Interviews explored themes such as peer pressure, exposure to substance use content, and perceived impacts of social media on behavior.

Recruitment

Participants for interviews were screened based on their readiness to provide responses. We also ensured a relatively mix of high and low social media users as well as varying levels of substance use.

3.4. Data Collection and Analysis

Summarily, data were analyzed descriptive statistics such as frequencies and percentages were used to summarize the demographic data and the responses to the knowledge and perception questions. Inferential statistics, specifically correlation test, were employed to test the hypotheses at a 0.05 level of significance.

3.4.1. Quantitative Data Analysis

Descriptive Statistics

Initial analysis included descriptive statistics to summarize the demographic characteristics of the sample, social media usage patterns, and substance use behaviors.

Inferential Statistics

Correlation and regression analyses were conducted to examine the relationships between social media usage and substance use.

Software

Statistical analysis was used to perform using software such as python

3.4.2. Qualitative Data Analysis

Thematic Analysis

Interview transcripts were analyzed using thematic analysis to identify recurring themes and patterns related to social media influence on substance use. This process involved coding the data, identifying key themes, and interpreting the findings.

Software

Our qualitative data analysis was facilitated by Atlas.ti., a qualitative software

4. Findings

4.1. Demographic Information

The study sample comprised 500 young adults aged 18 to 25 years, representing diverse backgrounds to ensure a representative sample. The demographic characteristics are summarized in Table 1.

Table 1 Descriptive Statistics of Sample Characteristics

Variable	Mean (SD)	Median (IQR)	Frequency (%)
Age	21.4	21 (19-23)	-
Gender	-	-	Male: 48%, Female: 52%
Ethnicity	-	-	White: 45%, Black: 30%, Hispanic: 15%, Others: 10%
Social Media Usage	3.5 hrs.	3 hrs.	-
Substance Use	-	-	Alcohol: 65%, Marijuana: 40%, Prescription Medications: 25%, Others: 15%

4.2. Substance Use Patterns

The data indicated that substance use is prevalent among the young adults in the sample. The most commonly used substances were alcohol (65%), followed by marijuana (40%), prescription medications (25%), and other substances (15%). These findings align with national trends reported by the National Institute on Drug Abuse (NIDA, 2020).

Table 2 Prevalence of Substance Use

Substance	Frequency (%)
Alcohol	65%
Marijuana	40%
Prescription Medications	25%
Other Substances	15%

4.3. Influence of Social Media

4.3.1. Correlation between Social Media Usage and Substance Abuse

The study found significant correlations between social media usage and substance abuse. Increased hours spent on social media were associated with higher likelihoods of substance use. This correlation is illustrated in Table 3.

Table 3 Correlation Matrix of Key Variables

Variables	Social Media Usage	Substance Use	Age	Gender	Ethnicity
Social Media Usage	1.00	0.52*	0.15	-0.05	0.03
Substance Use	0.52*	1.00	0.10	-0.03	0.02
Age	0.15	0.10	1.00	0.02	0.01
Gender	-0.05	-0.03	0.02	1.00	0.01
Ethnicity	0.03	0.02	0.01	0.01	1.00
*Note: *p < 0.05					

4.3.2. Specific Social Media Factors Contributing to Substance Use

Through thematic analysis of interview data, several key social media factors contributing to substance use were identified. These factors include peer pressure, exposure to substance use content, and targeted advertisements.

Table 4 Thematic Analysis of Interview Data

Theme	Example Quotes	Frequency
Peer Pressure	"I felt like I had to try it because all my friends were."	12
Exposure to Substance Use	"I see posts about drinking every weekend."	15
Targeted Advertisements	"Ads for alcohol keep popping up on my feed."	8

Peer Pressure

Interview participants reported feeling pressured to use substances when they saw their peers doing so on social media. This phenomenon, driven by the need for social acceptance and fear of missing out (FOMO), was frequently mentioned.

4.3.3. Exposure to Substance Use Content

Participants frequently encountered posts and stories depicting substance use, which normalized these behaviors and influenced their own actions. The prevalence of such content underscores the powerful role of social media in shaping perceptions and behaviors.

4.3.4. Targeted Advertisements

Many participants highlighted the impact of targeted advertisements promoting alcohol and other substances. These ads often appeared seamlessly in their feeds, making substance use seem attractive and widespread.

4.4. Real-Time Data Integration

Real-time social media monitoring revealed trends consistent with the statistical and interview findings. Hootsuite Social Media Analytics tool was used to track keywords and hashtags related to substance use, confirming the high visibility and normalization of such behaviors on social media platforms.

By combining quantitative data from Kaggle and qualitative insights from interviews, the findings provide a robust understanding of how social media influences substance abuse among young adults. This comprehensive approach ensures the credibility and relevance of the study, offering valuable insights for interventions and policy development.

5. Discussion

5.1. Interpretation of Findings

5.1.1. Comparison with Existing Literature

The findings of this study are consistent with existing literature on the influence of social media on substance use among young adults. Previous research has established a significant correlation between social media exposure and substance use behaviors (Boyle et al., 2016; Moreno et al., 2012). Our study further confirms these associations, demonstrating that increased social media usage correlates with higher rates of substance use among young adults. This alignment with past research underscores the robustness of our findings and highlights the pervasive impact of social media on substance-related behaviors.

5.1.2. Insights into How Social Media Influences Substance Use Behaviors

The study provides several key insights into the mechanisms through which social media influences substance use behaviors:

Peer Pressure

As identified in both the quantitative and interview data, peer pressure plays a crucial role in substance use initiation and continuation. The constant exposure to peers engaging in substance use on social media platforms normalizes these behaviors and creates a perceived social norm (Evans et al., 2017). This finding aligns with the concept of social learning theory, which suggests that individuals learn behaviors by observing others, especially those within their social networks.

Exposure to Substance Use Content

The high frequency of substance-related content on social media platforms contributes to the normalization and glamorization of substance use. This exposure can significantly impact young adults' perceptions, making substance use appear more socially acceptable and less risky (Cavazos-Rehg et al., 2021). Our study's qualitative data support this, with participants frequently mentioning the influence of such content on their behavior.

Targeted Advertisements

The role of targeted advertisements in promoting substance use was prominently highlighted by participants. Social media platforms utilize sophisticated algorithms to deliver ads for alcohol and other substances directly to users, reinforcing substance use behaviors and potentially leading to increased consumption (Clemens et al., 2021).

5.2. Implications

5.2.1. For Parents, Educators, and Policymakers

The findings of this study have significant implications for parents, educators, and policymakers:

Parents

Awareness campaigns should be designed to educate parents about the potential risks associated with social media use and substance exposure. Parents should be encouraged to monitor their children's social media activities and engage in open conversations about the content they encounter online.

Educators

Schools and universities should incorporate digital literacy and substance abuse prevention programs into their curricula. These programs should address the impact of social media on substance use and equip students with the skills to critically evaluate online content and resist peer pressure.

Policymakers

Regulatory measures should be considered to limit the exposure of young adults to substance-related content and advertisements on social media. Policies could include restrictions on targeted advertising for substances and the promotion of content moderation practices to reduce the visibility of substance use.

5.2.2. Recommendations for Mitigating Negative Influences of Social Media

To mitigate the negative influences of social media on substance use, several strategies can be implemented:

Digital Literacy Education

Promote digital literacy education to help young adults critically assess the content they encounter on social media and understand the potential risks associated with substance use.

Parental Controls and Monitoring

Encourage the use of parental controls and monitoring tools that can help parents supervise their children's social media use and limit exposure to harmful content.

Public Health Campaigns

Launch public health campaigns that raise awareness about the risks of substance use and the role of social media in promoting these behaviors. These campaigns should utilize social media platforms to reach a broad audience.

Platform Accountability

Advocate for greater accountability from social media platforms in regulating substance-related content. Platforms should implement stricter content moderation policies and provide users with tools to report inappropriate content.

Limitations

While this study provides valuable insights, it is important to acknowledge its limitations:

- **Sample Size and Generalizability:** The study's sample size, while adequate, may not fully represent the diversity of the young adult population in the United States. Future research should aim to include a larger and more diverse sample to enhance generalizability.
- **Reported Data Weakness:** The reliance on secondary data for quantitative measures, and low interviews participants may introduce bias, as participants might underreport or overreport their social media usage and substance use behaviors. Future studies could incorporate wider objective measures of social media activity and substance use.
- **Cross-Sectional Design:** The cross-sectional design of the study limits the ability to draw causal inferences. Longitudinal studies are needed to better understand the causal relationships between social media use and substance abuse.

Suggestions for Future Research

Future research should address these limitations and explore additional areas:

- **Longitudinal Studies:** Conduct longitudinal studies to examine the long-term effects of social media use on substance use behaviors and identify causal relationships.
- **Intervention Studies:** Develop and evaluate interventions aimed at reducing the negative impact of social media on substance use. These could include digital literacy programs, public health campaigns, and policy initiatives.
- **Diverse Populations:** Expand research to include diverse populations, including different and widely dispersed age groups, geographic regions, and socio-economic backgrounds, to understand how these factors influence the relationship between social media use and substance abuse.

Keynote

By addressing these limitations and pursuing further research, we can continue to build a comprehensive understanding of the complex interactions between social media and substance use among young adults, ultimately contributing to more effective prevention and intervention strategies

6. Conclusion

6.1. Summary of Key Findings

This study investigated the relationship between social media use and substance abuse among young adults in the United States. The key findings from our research can be summarized as follows:

6.1.1. Prevalence of Substance Use

The study found that substance use is prevalent among young adults, with significant proportions reporting the use of alcohol (65%), marijuana (40%), and prescription medications (25%).

6.1.2. Correlation between Social Media Usage and Substance Abuse

Increased hours spent on social media were significantly correlated with higher rates of substance use. Specifically, social media usage was found to influence substance use behaviors through mechanisms such as peer pressure, exposure to substance use content, and targeted advertisements.

6.1.3. Influence of Social Media Factors

Key social media factors contributing to substance use included peer pressure, where individuals felt compelled to engage in substance use to fit in with their social circles, exposure to substance use content, which normalized and glamorized substance use, and targeted advertisements that promoted substances directly to young adults.

6.1.4. Qualitative Insights

In-depth interviews provided additional insights, revealing that young adults frequently encountered substance-related content on social media, which influenced their perceptions and behaviors. Many participants also highlighted the impact of targeted advertisements and peer influences as significant factors in their substance use.

6.2. Final Thoughts

6.2.1. The Importance of Addressing Substance Abuse Among Young Adults

Substance abuse among young adults remains a critical public health issue with far-reaching consequences. The findings of this study underscore the urgent need for targeted interventions to address this problem. Young adults are particularly vulnerable to the influences of social media, which can significantly shape their behaviors and attitudes toward substance use. Addressing substance abuse in this demographic is essential to safeguard their health, academic performance, and overall well-being.

6.2.2. The Need for Responsible Social Media Use and Awareness

The study also highlights the importance of promoting responsible social media use and increasing awareness of its potential negative impacts. Social media platforms have become integral to the lives of young adults, and their influence cannot be underestimated. Therefore, it is crucial to educate young adults about the risks associated with excessive social media use and exposure to substance-related content.

Recommendations for Action

- **Educational Programs:** Implement digital literacy and substance abuse prevention programs in schools and universities. These programs should educate young adults about the potential risks of social media and provide strategies to critically assess online content.
- **Parental Involvement:** Encourage parents to engage with their children about their social media use and discuss the potential risks associated with substance use. Parental monitoring and open communication can help mitigate negative influences.
- **Policy Measures:** Advocate for policies that limit the exposure of young adults to substance-related content on social media. This includes stricter regulations on targeted advertisements and enhanced content moderation practices by social media platforms.
- **Public Health Campaigns:** Launch public health campaigns that leverage social media to spread awareness about the dangers of substance use and promote healthy behaviors. These campaigns can reach a broad audience and effectively counteract the glamorization of substance use.

In summary, By addressing these areas, we can work towards reducing substance abuse among young adults and fostering a safer, healthier online environment. The findings of this study provide a foundation for future research and interventions aimed at mitigating the negative impacts of social media on substance use behaviors. Continued efforts in this direction will contribute significantly to the well-being of young adults and the broader society.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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