

The Effects of Smoking Factors on Adolescent’s Mental Health

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Abstract

Adolescent mental health has increased over time in the United States making them vulnerable to using tobacco to cope with their symptoms. The purpose of the study is to explore the relationship between adolescents’ engagement of smoking and mental health problems and the association between social media and the engagement in tobacco use. This study was a secondary analysis of data from the Popular Assessment of Tobacco and Health (PATH). The sample was composed of 11,814 adolescents ages 12 to 17 years old. Data collection utilized in-person computer-assisted personal interviewing screener software and the use of audio computer-assisted self-interviewing. Nominal scale questions were used for the demographic variables consisting of gender, age, ethnicity, and race. Questions regarding smoking, social media, and mental health also used a nominal scale to determine if adolescence agreed with the question provided. Results from the data analyses indicated that although adolescents smoke for various reasons, they have become less likely to engage in smoking. It was also found that girls tend to follow or like cigarette brands on social media more than boys. This study further contributed to the existing literature by clarifying the trends and reasons for teen smoking.

Introduction

Significance of Study

- 7.7 million youth aged 6 to 17 years experienced a mental health disorder in the United States (NAMI, 2021).
- The younger the age of initiation into smoking is correlated with a higher chance of nicotine dependency (Bonnie, 2015)
- About 70% of adolescents report having smoked a cigarette at least once (Goriounova & Mansvelder, 2012).

Purpose of the Research

The purpose of this study is to increase the knowledge related to the engagement of smoking and social media usage to mental health problems

Research Questions

- What is the relationship between liking or following a tobacco brand on social media and smoking tobacco products among adolescents?
- What is the relationship between smoking and adolescent’s perception of their mental health?

Hypothesis

The hypothesis for this study is that adolescents who suffer from a mental health illness (depression or anxiety) have a higher chance of smoking tobacco/nicotine.

Literature Review

Contributing Factors to Adolescent Smoking

- Teens who have more conflict with their parents may have more externalizing and internalizing issues (Branje, 2018), including lower levels of self-esteem, well-being, and frequent substance use (Mays, 2014). Mays (2014) also notes that parents of adolescents who are nicotine-dependent smokers are almost twice as likely to be early regular smokers. The number of smoking parents and the number of years exposed to parental smoking also increases the chances of adolescent smoking (Gilman et al., 2009).
- The American Lung Association (2020) reports that 5% of high school-age smokers will remain smoking after graduating.
- About 50% of middle and high school students had received tobacco advertisements or promotions on their social media pages (Dunlop et al, 2016).

Smoking and the Impacts on Mental Health

- Adolescents are dealing with their mental health, social and emotional well-being in combination with issues around them like substance use. In children, about 50% of mental health issues begin at the age of 14 (Aguirre, 2020).
- About 95% of youth between 12 and 17 years of age have access to the internet, which keeps them connected to their peers (Huang et al., 2014). Adolescents are exposed to content posted and shared by their peers, such as tobacco advertisements, which leads to various consequences like depression, anxiety, and loneliness, leading to substance abuse and self-destructive behaviors.

Smoking Cessation

- About 25% of United States adolescents smoke cigarettes occasionally by the end of high school (Helping teens stop smoking, 2007). Products are made appealing by adding flavorings or colors to these items.
- As of 2019 (NRT) has not been approved by the US Food and Drug Administration (FDA) (American Academy of Pediatrics, 2019). NRT is sometimes used in teens as it has proven to be safe and provides promising results in heavy users. The most common use of NRT is nicotine gum, transdermal patches, nasal sprays, and medication.
- Wyszynski et al. (2011) reported that parents who quit smoking reduce the risk of their children smoking by 30%. A way parents can influence adolescents is by modeling non-smoking behavior. This behavior decreases the likeliness of teens being daily smothers by the twelfth grade (Wyszynski et al., 2011).

Research Gaps

- There is not enough evidence that suggests an increase in smoking initiation among those who suffer from depression or anxiety. There is a lack of research that demonstrates whether mental illnesses affect smoking or smoking affects mental illnesses. It is not sufficient up-to-date research that helps understand how mental illnesses correlate to smoking in adolescences.

Methods

Research Design

- The current study is a secondary analysis of the Popular Assessment of Tobacco and Health (PATH) Study Series data.
- PATH provides an empirical evidence base for developing, implementing, and evaluating tobacco products regulations.
- A four-stage stratified area probability sample design was used in Wave 1- 4 (Wave 3 was utilized for the current study) to choose adults and youth ages 12 to 17 years old from the U.S. civilian, non-institutionalized population (CNP).
- The sample was recruited by mailing a total of 174,273 addressed from the U.S. civilian non-institutionalized population.
- In-person computer-assisted personal interviewing (CAPI) screener software was used for household screeners in Wave 1 and Wave 4.
- Audio computer-assisted self-interviewing (ACASI) was used for in-person youth interviews.

Sample

- A total of 174,273 mailing addresses were selected to recruit adults and youth ages 12 to 17 from (CNP).
- Information on PATH study sponsor, the nature and use of the data collected, legally authorized, the voluntary nature of participation and the protection of information were provided by mail.
- CAPI screening instrument randomly selected up to two adults and two youths per eligible household.
- From Wave 1 to Wave 4, 4,293 youth participated stayed for the entire study.

Results

Smoking Tobacco & Social Media

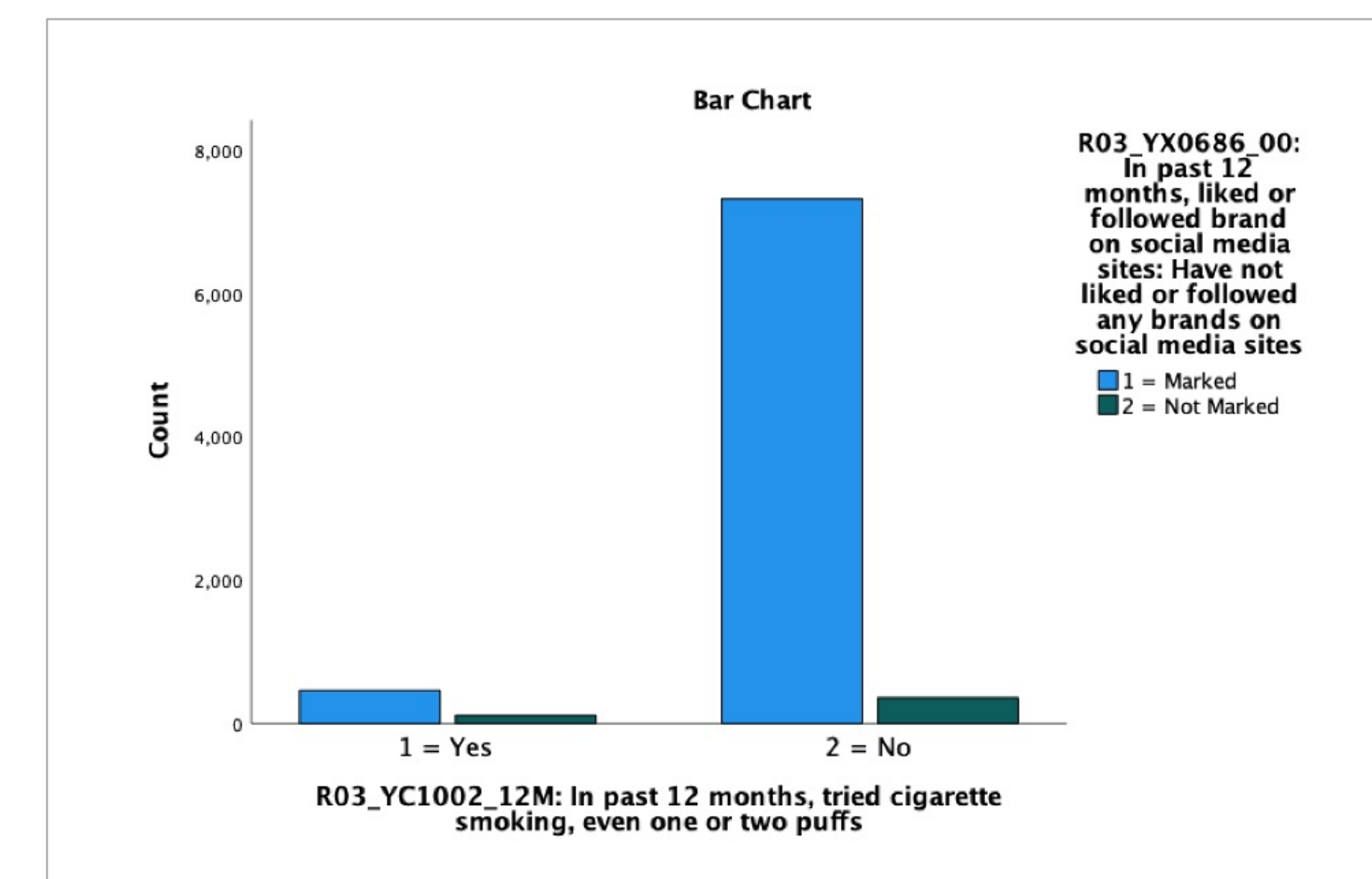
- A series of chi-square tests were calculated to examine whether frequencies of mental health increased the chances of adolescents smoking.
- The results indicated a statistically significant relationship, ($\chi^2(1) = 207.863$, $p < 0.01$), while a Cramer’s V statistics suggested a strong relationship (0.159).

Chi-Square Test Results

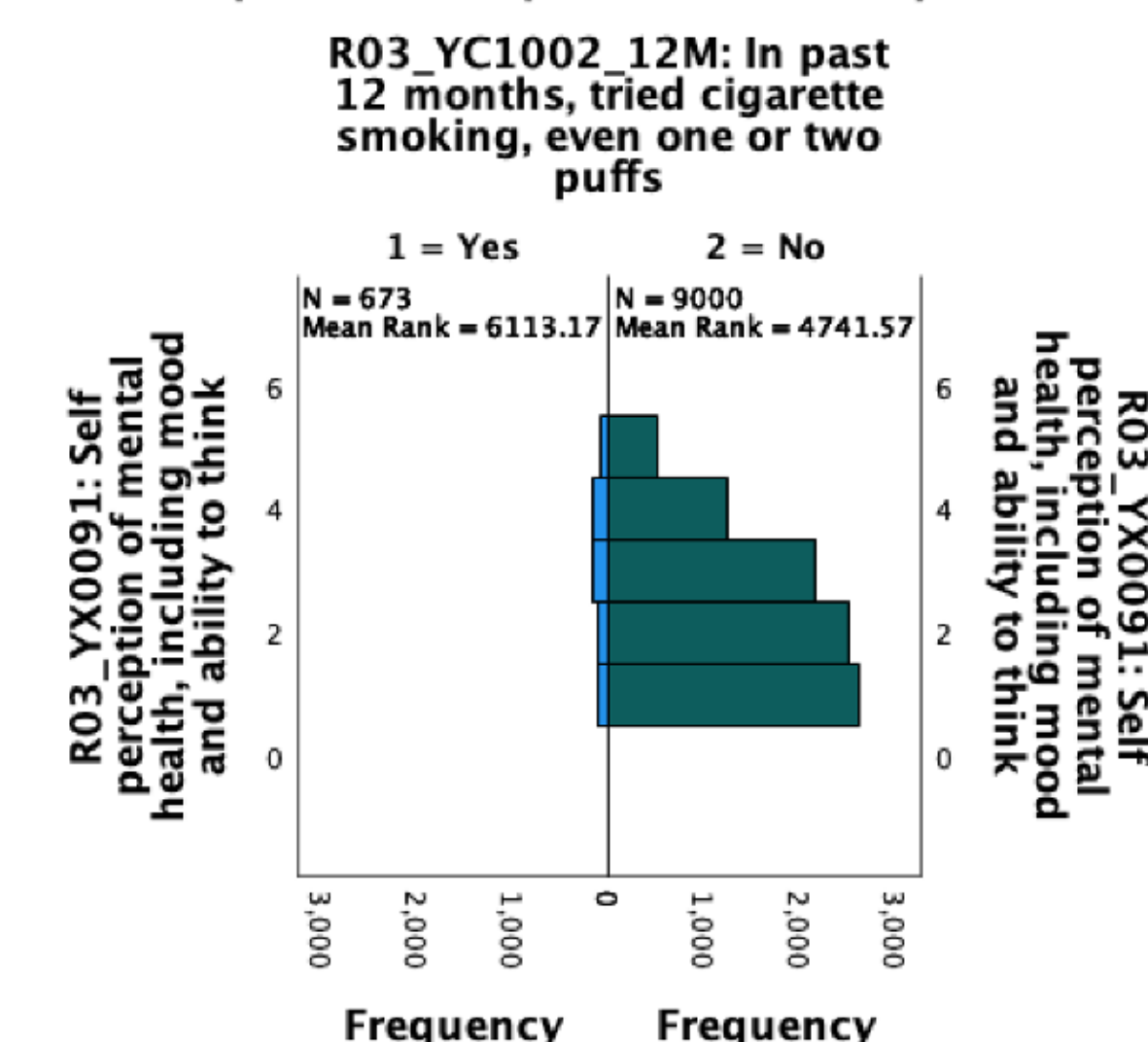
	Cigarette Smoking within the past 12 months				Total
	n	%	n	%	
Yes	463	80.9%	109	19.1%	571
No	7320	95.3%	357	4.7%	7677

Smoking Tobacco & Mental Health

- A Mann-Whitney U test was used to examine the difference in adolescents’ self-perception of mental health and having tried cigarettes within the previous 12 months. T
- he results indicated the self-perception of mental health (*Mean rank = 4741.57*) and smoked cigarettes within the last 12 months (*Mean rank = 6113.17*; $U = 2169639$, $p = .000$) did not correlated.



Independent-Samples Mann-Whitney U Test



Conclusion

Strength & Limitations

- The current study’s limitations include: The use of both parents and teens being together at the time of the interview could have impacted the research by some individuals not providing the whole truth to the answer.
- The current study strengths include: The study included a large size of participants. Furthermore, the current study provided the views of two age groups of teenagers (12 to 14 years old and 15 to 17 years old). The two adolescent groups allowed researchers to take into consideration teens’ maturity level and brain development.

Implications & Future Research

- Services implemented to address and assess smoking habits at an early age to lower the chances of addiction and mental health symptoms.
- Additional research on the association between parental smoking and child smoking could be beneficial for future studies which would provide a perspective on the reason adolescents begin smoking.
- The results indicated a decreased interest in smoking among adolescents.
- Understanding the impact of smoking tobacco on teenagers can guide social workers in providing appropriate referrals to agencies and supportive programs.
- The knowledge of this study can assist in creating specific training, support groups, and therapy specialized to help does with tobacco additions.
- Addressing this issue can begin in schools or primary care doctors who can use their time to screen for smoking.

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