Factors Related to Consumption Behaviors of Containing-cannabis Foods and Beverages Among High School Students in Ban Bueng District, Chonburi Province

Thidarat Inthapanya[1], Nisakorn Krungkraipetch[2], Pornnapa Homsin[2]
[1]Students of Master of Nursing Science Program in Community Nurse Practitioner, Faculty of Nursing, Burapha University, Thailand
[2]Faculty of Nursing, Burapha University, Thailand
Correspondence author: Nisakorn Krungkraipetch; Email: nisakorn@buu.ac.th
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Abstract

The growing trend of cannabis legalization has sparked curiosity among adolescents to taste cannabis-infused foods and beverages. This correlational research aimed to investigate factors associated with the consumption of cannabis-infused foods and beverages. The sample consisted of 293 high school students in grades 10 to 12 during the 2023 academic year from Ban Bueng District, Chonburi Province, Thailand, selected through cluster sampling. The research instrument was an online questionnaire covering eight sections: personal information, attitudes toward cannabis-infused foods and beverages consumption, perceived risk of overdose from consuming such products, accessibility of cannabis-infused foods and beverages, parental acceptance, peer influence, media influence, and consumption behavior. All questionnaire sections demonstrated high internal consistency with Cronbach's alpha coefficients ranging from .82 to .98. Data were analyzed using point-biserial and Pearson correlation coefficients. The results indicated that the sample demonstrated a low level of consumption behavior for cannabis-infused foods and beverages (mean=19.03, SD=7.92). Statistically significant factors associated with consumption behavior included parental acceptance ($r=.66$, $p<.001$), attitude ($r=.63$, $p<.001$), academic performance ($r=-.58$, $p<.001$), perceived risk of overdose ($r=.45$, $p<.001$), peer influence ($r=.43$, $p<.001$), media influence ($r=.30$, $p<.001$), and accessibility ($r=.13$, $p<.05$). These findings can inform the development of prevention strategies and monitoring programs aimed at reducing cannabis-infused foods and beverages consumption among adolescents. Key interventions may include shaping adolescents' and families' attitudes towards recognizing the risks and consequences, as well as teaching refusal skills to resist peer pressure.

Keywords: adolescent behavior; cannabis consumption; PRECEDE-PROCEED model; risk behavior

INTRODUCTION

Following Thailand's cannabis policy change in 2022, there has been an increase in cannabis-infused food and beverage products in the local market, raising concerns about accessibility to young consumers. For adolescents, this represents an enticing new trend, driven by ease of consumption, visual appeal, and societal popularity. According to a 2022 survey on cannabis-infused food and beverage consumption conducted by Thai YouGov Omnibus, 47% of consumers were aged 13-25 years (Generation Z), with similar consumption rates among males (54%) and females (44%).[1] Additionally, 16% of high school students reported consuming such products almost daily, particularly in urban areas with easy access to a variety of cannabis-infused products.[2] Ban Bueng District, Chonburi Province, has seen a rapid expansion in the availability of cannabis-infused foods and beverages, paralleling broader social trends. This area, undergoing industrial and economic development, as well as tourism growth, has witnessed increasing cannabis and substance use among youth. In 2021, Ban Bueng ranked seventh for cannabis and substance use among youth in Chonburi Province, with a prevalence rate of 45.36%, and rose to fourth place in 2022, with a rate of 58.49%, out of 11 districts.[3] Adolescents often begin experimenting with cannabis by consuming cannabis-infused foods and beverages[4], which are considered a gateway to the use of other addictive substances, including alcohol and heroin.[5]

Adolescents are increasingly at risk of consuming large quantities of cannabis-infused foods and beverages, often exceeding the .2% threshold of tetrahydrocannabinol (THC) due to a lack of awareness regarding the amount of cannabis present in these products. Many cannabis-infused items do not clearly label their THC content, and the use of fresh leaves, flowers, or other parts of the cannabis plant in cooking can lead to varying levels of THC in different foods. Moreover, the method of preparation significantly affects the THC concentration. Since the effects of consuming cannabis-infused products typically take 30 minutes to 2 hours to manifest, adolescents may unknowingly consume excessive amounts, leading to unintentional overdose. THC can remain in the body for approximately 8 to 12 hours[6], raising serious concerns. Within just one week of the cannabis legalization policy being implemented, 14 cases of pediatric and adolescent patients experiencing adverse effects from THC—after consuming cakes, brownies, cookies, jellies, homemade foods, and beverages—were reported.[7] The immediate impacts of THC consumption can impair consciousness, particularly when operating vehicles, increasing the risk of accidents by over 4 times.[8] Long-term effects on the adolescent brain and behavior include abnormal behavior such as aggression, paranoia, and violence, as well as deteriorating family relationships. Furthermore, adolescents are 2.9 times more likely to develop schizophrenia following heavy cannabis use.[9] The burden on the healthcare system has also grown, with over 300 million Baht in expenses dedicated to treating psychiatric patients affected by cannabis. This situation not only strains public health resources but also leads to the loss of valuable human capital, as the country risks losing a generation of high-quality adolescents who are essential to its future development.

A review of the literature reveals that both individual and environmental factors are associated with adolescents' consumption of cannabis-infused foods and beverages. Therefore, it is crucial to analyze the key

factors influencing such behaviors and utilize the findings to develop appropriate behavioral intervention plans. This aligns with the PRECEDE-PROCEED model by Green and Kreuter[10], which posits that multiple factors contribute to individual behaviors. These include predisposing factors such as gender-female adolescents are reported to have a higher risk of consumption[4], though male adolescents are also at significant risk.[11] Attitudes toward cannabis-infused foods and beverages, which can be both positive and negative[4,12], also play a role. Furthermore, perceived risk of overdose is a critical factor, particularly when adolescents consume these products without checking labels, or when labels do not clearly indicate THC levels. This can lead to overconsumption within a single meal or day.[4,12-13] Enabling factors include access to cannabis-infused foods and beverages. High school students who consume such products often purchase them from peers or seniors at school, as these items are sold at low prices. Other sources of cannabis-infused products include convenience stores, online shops, and markets where ingredients for homemade cannabis-infused foods can be readily obtained.[14] Adolescents living within .5 km of cannabis product outlets are more likely to purchase these products.[15] Additionally, parental acceptance of cannabis consumption increases the risk among adolescents.[14,16] Reinforcing factors such as peer influence significantly heighten the likelihood of cannabis consumption.[14,16] Media, especially social media like Facebook, also plays a role in shaping adolescents' decisions, with both positive and negative information impacting their choices.[14,17]

Studies on adolescent cannabis consumption in Thailand remain limited, and most are descriptive in nature. The majority focus on individual factors such as intention and decision-making related to purchasing cannabis-infused foods and beverages, and these studies primarily target adult populations in Bangkok. As a result, they do not address the specific factors influencing adolescents, limiting the development of targeted prevention strategies for this age group.

This study examines the factors associated with cannabis-infused food and beverage consumption among high school students in Ban Bueng District, Chonburi Province. It uses the PRECEDE-PROCEED model as a conceptual framework, addressing internal and external factors. The predisposing factors include gender, academic performance, attitudes toward cannabis-infused foods and beverages, and perceived risk of overdose. The enabling factors include access to cannabis-infused products and parental acceptance, while reinforcing factors include peer influence and media exposure. The results of this study will provide valuable insights for public health professionals, particularly community nurses working in primary care settings. These professionals are responsible for providing care across all age groups, from individuals to families and communities, with a focus on disease prevention. A deep understanding of the factors driving adolescents' cannabis-infused food and beverage consumption will enable the development of early prevention strategies to mitigate health risks, promoting adolescent health and reducing preventable illnesses, disabilities, and mortality.

OBJECTIVES

1. To examine the consumption behaviors of foods and beverages infused with cannabis among high school students in Ban Bueng District, Chonburi Province.

2. To analyze the relationship between various factors and the consumption behaviors of food and beverages infused with cannabis among high school students in Ban Bueng District, Chonburi Province.

CONCEPTUAL FRAMEWORK

This study employed the PRECEDE-PROCEED model proposed by Green and Kreuter[10] as its conceptual framework. This model posits that individual behavior is influenced by a combination of internal and external factors, highlighting that the complexity of health-related behaviors among adolescents arises from multiple determinants rather than a single cause. The research specifically focused on the PRECEDE phase of the model, particularly step 3, which involves educational and ecological assessment. This approach facilitates the categorization of influential factors into three distinct groups: 1) Predisposing factors: These are intrinsic characteristics of individuals that motivate behavioral expression. They were demographic variables such as gender, academic performance, attitudes towards the consumption of cannabis-infused foods and beverages, and perceived risks associated with their overconsumption. 2) Enabling factors: These encompass resources and conditions that facilitate the manifestation of behaviors. Key enabling factors were included access to cannabis-infused foods and beverages, as well as parental acceptance of such consumption. 3) Reinforcing factors: These factors reflect the extent to which health behaviors are supported or reinforced, thereby influencing individual actions. Important reinforcing factors were peer influence and the impact of media. Through this framework, the study aimed to elucidate the various factors that shape the consumption behaviors of cannabis-infused foods and beverages among high school students.

MATERIAL AND METHODS

This study employed a descriptive correlational design to investigate the relationships among predisposing factors, enabling factors, and reinforcing factors concerning the consumption behaviors of cannabis-infused foods and beverages among high school students in Ban Bueng District, Chonburi Province. Data collection was conducted from December 2023 to January 2024.

Population: The population for this study comprised high school students in grades 10 to 12 enrolled in government secondary schools under the jurisdiction of the Office of Secondary Education Zone 18, located in Ban Bueng District, Chonburi Province. The total population for the 2023 academic-year was 2,300 students.

Sample: The sample for this study comprised high school students in grades 10 to 12 who met the following inclusion criteria as well as ability to access the internet and complete the questionnaire via Google forms, and parental approval to participate in this study. The sample size was determined using G*Power version 3.1, with a significance level (alpha) set at .05 (two-tailed), a power of .95, and a small effect size

of .20, in line with conventional standards for effect size in nursing research.[18] The initial calculation yielded a required sample size of 266 participants. To mitigate the risk of incomplete responses, the sample size was increased by 10%, resulting in an additional 27 participants. Consequently, the final sample size for this study was 293 participants.

Sampling procedure: The first step involved using simple random sampling to select two schools, with the selection based on school size, ensuring the representation of both medium-sized and large schools. Following this, classrooms were randomly selected using cluster random sampling, where each classroom was treated as a distinct cluster. All students within the selected classrooms were included as the sample for the study.

Research Instruments: The research instruments were developed through a comprehensive review of relevant literature and existing studies. The questionnaires were organized into eight sections, with the first section detailed as follows:

Section 1 Personal Information: This section assessed demographic data, including the following variables: gender, age, current grade level, academic performance, religion, daily allowance, sufficiency of income, parental marital status, individuals residing with the participant, and experiences related to the consumption of cannabis-infused foods and beverages within the past year. This section consisted of 11 items, employing both open-ended and multiple-choice question formats.

Section 2 Attitudes Towards the Consumption of Cannabis-Infused Foods and Beverages: This section assessed attitudes towards the consumption of cannabis-infused foods and beverages, encompassing three components: 1) Cognitive understanding, 2) Affective responses, and 3) Behavioral intentions. It consisted of 15 items, including 12 positively framed statements and 3 negatively framed statements. This questionnaire was measured using a 4-point Likert scale, ranging from "strongly disagree" to "strongly agree, " with scores ranging from 1 to 4. Higher scores reflected a more favorable attitude towards the consumption of cannabis-infused foods and beverages.

Section 3 Perceived Risk of Overconsumption of Cannabis-Infused Foods and Beverages: This section assessed the perceived risk associated with the overconsumption of cannabis-infused foods and beverages through a set of six items. This questionnaire was measured using a 4-point rating scale, ranging from "least" to "most." Scores range from 1 to 4, with higher scores reflecting a heightened perception of risk concerning the overconsumption of cannabis-infused foods and beverages.

Section 4 Access to Cannabis-Infused Foods and Beverages: This section assessed the accessibility of cannabis-infused foods and beverages through a set of seven items. This questionnaire was measured using a 4-point rating scale, ranging from "very easy" to "very difficult." Scores range from 1 to 4, with higher scores indicating greater accessibility to cannabis-infused foods and beverages.

Section 5 Peer Influence on the Consumption of Cannabis-Infused Foods and Beverages: This section assessed the influence of peers on the consumption of cannabis-infused foods and beverages through a set of five items. This questionnaire was measured using a 5-point rating scale, ranging from "not at all" to "extremely." Scores range from 1 to 5, with higher scores reflecting a stronger peer influence

on the consumption behaviors related to cannabis-infused foods and beverages.

Section 6 Parental Acceptance of the Consumption of Cannabis-Infused Foods and Beverages: This section assessed parental acceptance of the consumption of cannabis-infused foods and beverages through a set of five items. This questionnaire was measured using a 4-point rating scale, ranging from "not accepted" to "strongly accepted." Higher scores indicate a greater level of parental acceptance regarding the consumption of cannabis-infused foods and beverages.

Section 7 Influence of Media: This section assessed the extent to which high school students receive information from various media sources, including television, newspapers, radio, and social media platforms (Facebook, Line, Instagram, TikTok, YouTube) regarding the consumption of cannabis-infused foods and beverages. It consisted of eight items assessing based on the frequency of exposure to such media. This questionnaire was measured using a 4-point rating scale, ranging from "never" to "always." Higher scores indicated a greater influence of media on students.

Section 8 Consumption Behavior of Cannabis-Infused Foods and Beverages: This section examined the consumption behavior of cannabis-infused foods and beverages through a set of ten items. Responses are measured using a 5 point rating scale, ranging from "never" to "always." Higher scores reflect more frequent consumption behaviors related to cannabis-infused foods and beverages. Consumption behavior levels were categorized as follows: 10-23 points (low), 24-37 points (moderate), and 38-50 points (high).

Validity and Reliability of Research Instrument

Five experts assessed content validity (CVI = .80-1.0) and reliability (.82-.98), and revisions were made based on their recommendations.

Ethics Consideration

This research study received ethical approval from Burapha University, with reference number IRB3-105/2566, on 2023 July 24. An information document was prepared for parents of participants who were minors to obtain permission for data collection. Upon receiving consent forms from the parents, the researcher introduced myself and explained the objectives, procedures, and duration of the data collection process to the participants. The participants were informed that they could withdraw from the study at any time without notifying the researcher, and that such withdrawal would not have any negative consequences for them or their parents. The presentation of research findings would be conducted in an aggregate manner.

Data Analysis

The analysis of personal data was conducted using descriptive statistics, including frequency, percentage, mean, and standard deviation. To assess the relationships between the studied variables and the consumption behavior of cannabis-infused foods and beverages among high school students in Ban Bueng District, Chonburi Province, Pearson's product-moment correlation coefficient were utilized. Additionally, Point-Biserial correlation was applied for the nominal variable, specifically gender.

RESULTS

1. Personal Data: The sample comprised 293 participants, with an average age of 16.12 years (SD=.48, min=16, max=18). Among the participants, 54.3% had an average GPA of 3.33 (SD=53, min=2.00, max=4.00) and received an average daily allowance of 111.85 Baht (SD= 49.18, min=25, max=400). Furthermore, 88.1% reported that their daily expenses were sufficient. The majority of the participants lived with both parents, with 60.4% residing with their mother and father. Additionally, 57.3% of the sample had experience consuming cannabis-infused foods and beverages within the past year, totaling 189 individuals, which represents 64.5%

2. Examined Factors: The sample demonstrated a moderate average attitude score towards the consumption of cannabis-infused foods and beverages (mean=36.17, SD=8.86, min=15, max=52). The average perceived risk score for the overconsumption of cannabis-infused foods and beverages was also moderate (mean=13.92, SD=4.93, min=6, max=24). For enabling factors, the average access score to cannabis-infused foods and beverages was relatively high (mean = 18.49, SD=4.61, min=7, max=28). In contrast, the average score for parental acceptance was low (mean=8.68, SD=3.03, min=5, max=20). Regarding reinforcing factors, the average score for peer influence was low (mean=10.65, SD=5.17, min=5, max=25), as was the score for media influence (mean=16.10, SD=5.73, min=8, max=32)

3. Consumption Behavior of Cannabis-Infused Foods and Beverages: The majority of the sample exhibited low consumption behavior regarding cannabis-infused foods and beverages, with 71.7% classified in this category (mean=19.03, SD=7.92, min=10, max=47). However, it was noted that over 10% of the participants reported frequent or regular consumption of snacks/desserts and ready-to-drink beverages containing cannabis across nearly all types, as detailed in Tables 1 and 2.

Table 1 : Level of cannabis-infused foods and beverages consumption among high school students (n = 293)

Level (Score range)	n	%
Low (10-23)	210	71.70
Moderate (24-37)	78	26.60
High (38-50)	5	1.70

Note. Range=10-47; Mean=19.03; SD =7.92

Table 2 : Frequency and percentage of participants classified by specific consumption behaviors of cannabis-infused foods and beverages (n = 293)

Consumption Behavior	Frequency n (%)					Mean	SD
	Regular	Often	Sometimes	Rarely	Never		
Types of Foods							
1. Boiled	1 (.34)	6 (2.05)	75 (25.60)	88 (30.03)	123 (41.98)	1.89	.88
2. Stir-fry	3 (1.02)	20 (6.83)	51 (17.41)	92 (31.40)	127 (43.34)	1.91	.98
3. Curry	3 (1.02)	12 (4.10)	68 (23.21)	86 (29.35)	124 (42.32)	1.92	.95
4. Fry	8 (2.73)	14 (4.78)	57 (19.45)	91 (31.06)	123 (41.98)	1.94	1.03
5. Cannabis leaves	5 (1.71)	17 (5.80)	47 (16.04)	68 (23.21)	156 (53.24)	1.80	1.02
6. Snacks and desserts	6 (2.05)	35(11.95)	67 (22.87)	65 (22.18)	120 (40.96)	2.12	1.14
Types of Beverages							
7. Pre-packaged drinking water	9 (3.07)	25 (8.53)	63 (21.50)	73 (24.91)	123 (41.98)	2.06	1.12
8. Pre-packaged fruit juice	7 (2.39)	21 (7.17)	57 (19.45)	73 (24.91)	135 (46.08)	1.95	1.08
9. Drinks from shop with known proportions	5 (1.71)	17 (5.80)	49 (16.72)	63 (21.50)	159 (54.27)	1.79	1.03
10. Drinks from shop with unknown proportions	4 (.37)	9 (3.07)	36 (12.29)	76 (25.94)	168 (57.34)	1.65	.91

Table 3: Correlation coefficients between the examined factors and consumption behavior of cannabis-infused foods and beverages among the sample group (n = 293)

Factors	r	p-value
Consumption behavior included parental acceptance	.66 **	<.001
Attitude	.63 **	<.001
Academic performance (GPA)	-.58 **	<.001
Perceived risk of overdose	.45 **	<.001
Peer influence	.43 **	<.001
Media influence	.30 **	<.001
Accessibility	.13 *	<.05
Gender [a]	.091	.12

[a] Analyzed using the Point-Biserial Correlation Coefficient.

As shown in Table 3, academic achievement demonstrated a significant negative correlation with consumption behavior (r=-.58, p<.001). Parental acceptance emerged as the strongest positive predictor (r=.66, p<.001), followed by attitudes toward consumption (r=.63, p<.001). Gender showed no significant correlation with consumption behavior.

DISCUSSION

1. Cannabis-Infused Foods and Beverages Consumption Behavior Among High School Students in Ban Bueng District, Chonburi Province

The study found that 71.7% of the respondents exhibited low levels of cannabis-infused food and beverage consumption. This may be attributed to the education provided in schools about the risks and consequences of consuming cannabis-related products, which raises awareness among students. Additionally, the limited availability of cannabis-infused products near schools may also play a role in reducing consumption. This finding is consistent with some studies conducted by other researchers, such as Harrison et al.[27], which found that an increased understanding of the effects of cannabis-infused product consumption among adolescents is associated with lower levels of use. Also, Palanisong [22] reported that 58 % of high school students demonstrated a high level of behavior in preventing the consumption of cannabis-infused products.

However, over 10% of the respondents frequently consumed cannabis-infused snacks and beverages. This can be explained by the fact that the participants, being in their teenage years, are likely to be curious and eager to try new experiences and follow current social trends. This finding is consistent with some studies conducted by other researchers, such as Friese et al.[14], which found that high school students frequently exchange or share cannabis-infused snacks and beverages, whether from peers or older students, in order to experience novel products. And, It was reported that 55% of adolescents consumed cannabis-infused snacks, while 32% consumed cannabis-infused beverages.[26]

These products are easy to obtain, especially through online stores, with 52.56% of the respondents purchasing them privately. The easy access to these products, coupled with their appealing appearance, likely contributed to their consumption. Students also reported purchasing these products from local markets and shops near their residences (38.23% and 35.15%, respectively).

2. Factors Associated with Cannabis-Infused Foods and Beverages Consumption Behavior

2.1 Predisposing Factors

Attitude

A positive correlation was found between attitudes and consumption behavior. Attitudes, beliefs, values, and preferences are key predisposing factors that motivate behavior. A positive attitude toward cannabis consumption increases the likelihood of engaging in such behavior. More than 50% of respondents believed that consuming cannabis-infused products was safe and could enhance immunity, improve mood, or even increase social status, which aligns with studies by Watanathanakorn [12] and Thaksima et al.[19], which also reported that attitudes influence the decision to purchase cannabis-infused beverages.

Academic Performance (GPA)

A negative correlation was found between academic performance and cannabis consumption. Academic performance, as a measure of intellectual capacity, plays a crucial role in health-related decision-making. The students with higher academic achievement tend to think more critically and are better able to avoid risky behaviors. This finding is consistent with some studies conducted by other researchers, such as Worarun et al.[20], which found that students with higher academic performance were better able to resist smoking. Similarly, Nanakorn[21] reported that students with a GPA below 3.5 were more likely to experiment with smoking compared to those with a GPA above 3.5

Perceived Risk of Overdose

A positive correlation was found between perceived risk and consumption behavior. The students who perceived a higher risk of overconsuming cannabis-infused products were more likely to engage in such behavior. This can be attributed to their understanding of the potential dangers, which may paradoxically lead them to engage in risky behavior as a form of rebellion or experimentation. More than half of the respondents reported consuming cannabis-infused products without reading the label (59.39%) or being unaware of the cannabis content (51.85%). This finding aligns with the report of Libuy et al.[16], who found that low perceived risk among Chilean adolescents influenced cannabis consumption, though it contrasts with Palanisong[22], who found no influence of perceived risk on cannabis consumption among Thai high school students.

However, the results of this study indicate a positive correlation, which may be attributed to adolescents' own high consumption behaviors. Due to Chonburi being a popular tourist destination with a high economic turnover, it is likely to have more outlets and access points for cannabis-infused foods and beverages compared to Kamphaeng Phet. Consequently, adolescents in Chonburi may have a higher likelihood of engaging in consumption behaviors than their counterparts in Kamphaeng Phet.

As a result, adolescents perceive a higher risk of overconsuming cannabis-infused foods and beverages. The perceptions, beliefs, and expectations of adolescents regarding the likelihood of overconsuming cannabis-infused products vary depending on the individual.

2.2 Enabling Factors

Access to Cannabis-Infused Products

A positive correlation was found between ease of access and consumption behavior. The availability of cannabis-infused products in various forms and through multiple channels, such as cafes, online shops, and local markets; has made it easier for adolescents to purchase and consume these products. More than 70% of the respondents report that they can easily access to these products through online platforms, markets, and community stores. This finding aligns with the report of Sea-Lim[23], who found that easier access to alcohol was associated with higher consumption among adolescents.

Parental Acceptance

A positive correlation was also found between parental acceptance and consumption behavior. Parental attitudes and beliefs influence their children's behavior through modeling and reinforcement.[24] The

finding in this study indicates that students whose parents are more accepting of cannabis-infused products are more likely to consume them. This finding aligns with the report of Libuy et al.[16], who found that students whose parents allowed cannabis consumption were eight times more likely to consume cannabis-infused products than those whose parents did not.

2.3 Reinforcing Factors

Peer Influence

A positive correlation was found between peer influence and consumption behavior. Adolescents are highly susceptible to peer pressure, and many find it difficult to refuse when encouraged by friends to engage in risky behaviors.[25] Peer influence, particularly through teasing, sharing, and encouraging consumption, was a significant factor in this study, with 8.19% of respondents reporting that they were influenced by peers to consume cannabis-infused products.

This finding aligns with the report of Libuy et al.[16], who found that peer pressure increased the likelihood of cannabis consumption sixfold.

Media Influence

A positive correlation was found between media influence and consumption behavior. The widespread availability of digital media, particularly platforms like TikTok and Facebook, has a significant impact on adolescents. Over 50% of the respondents reported exposure to cannabis-related advertisements or behaviors on social media. This finding aligns with the reports of Watanathanakorn[12] and Kelleghan[17], who found that frequent use of digital media was associated with an increased likelihood of cannabis product use among adolescents.

3. Factors Not Associated with Cannabis Consumption

Gender was not found to be associated with cannabis consumption behavior. This may be due to the fact that Generation Z is more accepting of gender equality and diversity. Both male and female students exhibited similar consumption patterns, which aligns with the findings of Watanathanakorn[12] and Thaksima et al.[19], who found no significant gender differences in the decision to purchase cannabis-infused products.

In conclusion, the results in this study reveal the important factors related to consumption of cannabis-infused in foods and beverages among high school students, which can lead to effective interventions to address the associated risks in the current situations.

RECOMMENDATION

1. Recommendations for Utilizing Research Findings

This study provides valuable insights for community practice nurses, educators, and families in developing targeted interventions aimed at preventing the consumption of cannabis-infused food and beverages among high school students. Key strategies include fostering accurate attitudes through educational programs that emphasize the risks associated with such consumption, equipping students with the necessary skills to resist

peer pressure, and utilizing media platforms such as Facebook, YouTube, and TikTok to effectively engage adolescents. This approach will contribute to enhancing media literacy and empower students to make informed decisions regarding media consumption. Furthermore, it is crucial to raise awareness among parents about the importance of adopting a stance of non-acceptance towards the consumption of these products, which will serve to reinforce these preventive efforts.

2. Suggestions for Future Research

2.1 Future Research

Future research should explore the consumption behaviors of cannabis-infused foods and beverages among other adolescent groups, such as vocational students, learners in non-formal education (NFE), and youth outside the formal education system. Differences in context and circumstances may influence associated behaviors and factors.

2.2 Effectiveness of Preventive Programs

Future research should evaluate the effectiveness of prevention programs aimed at reducing the consumption of cannabis-infused foods and beverages among adolescents. These programs should focus on key areas, such as fostering positive attitudes toward cannabis use, increasing risk awareness, enhancing peer refusal skills, and promoting parental involvement. Assessing these factors will help identify effective strategies to reduce consumption and contribute to the development of evidence-based interventions that protect adolescent health.

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