Study of Key Factors Affecting Alcohol and Tobacco Abuse Prevention Behavior of Students in Central Thailand

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Article info

Abstract

The research aimed to (1) investigate the correlation of causal model affecting alcohol and tobacco abuse prevention behavior in students, (2) examine key factors and empirical data affecting alcohol and tobacco abuse prevention behavior and (3) study key factors affecting alcohol and tobacco abuse prevention behavior in students in Central Thailand. The sample group involved 1,342 students in Central Thailand selected by Multi-Stage Sampling. The research instruments were (1) perceived school policy on alcohol and tobacco abuse prevention behavior questionnaires, (2) alcohol harm awareness questionnaires, (3) tobacco harm awareness questionnaires, (4) alcohol abuse prevention behavior questionnaires and (5) tobacco abuse prevention behavior questionnaires. The data was statistically analyzed using Correlation Coefficient and Causal Model Analysis. The research findings were (1) Correlation Coefficient score equals 0.54 and statistical significance score equals.01, (2) The causal model affecting alcohol and tobacco abuse prevention behavior of students in the Central Thailand-Bangkok and surrounding provinces was consistent with the following empirical data (= 3.35, df = 1, p = .06, GFI =1.00, AGFI = 0.99, CFI = 1.00, RMSEA = 0.04, SRMR = 0.01) and (3) alcohol and tobacco abuse prevention behavior was directly influenced by alcohol and tobacco abuse prevention behavior awareness and perceived school policy on anti-alcohol and anti-tobacco abuse prevention behavior with all variables representing 59% of alcohol and tobacco abuse prevention behavior.

Introduction

Alcohol and tobacco abuse has spread widely among both males and females of all ages throughout Thailand. The challenge tends to increase rapidly. According to plenty of research, Thai males are more likely to encounter alcohol and tobacco abuse than females. Regarding ages, the underage youths, starting at 15 years old, are most likely to become alcoholics, the 2nd ranging stated adults between 25-44 years old, young adults between 20-24 years old, the middle-age between 45-59 years old, the retired-age more than 60 years old, and youths between 15-19 years old tend to became abusers, respectively (National Statistical Office of Thailand, 2018). Moreover, the research related to the

study of drinking alcohol found that most adolescences who take drugs, mostly live in the central region about 23 percent, followed by Bangkok and the metropolitan area, about 21 percent. These are enable to health care at high risk such as wrangle smacking, getting pregnant or causing others to become pregnant, depression, gambling and gaming addiction and suicidal. Adolescence, generally called the age of curiosity, tend to start drinking and smoking, they also are hesitant to refuse when invited by peers based on the basic need of acceptance and sense of belonging within peer groups. In contrary, alcohol and tobacco abuse has a tremendous impact on health; directly affects immune functioning both physically and mentally, causes physical illnesses, limits consciousness and the capacity to inhibit impulsive behaviors commonly leading to violence, an increase in high risk of sexual behavior problems, gambling and game addiction. These problems crucially cause low self-responsibility, low academic achievement, high exposure to the more complicated social problems such as dropouts, violence and crimes. (Saengow, Wichitkunakorn & Antsanangkornchai, 2016). The 12th National Economic and Social Development Plan (2017-2021) profoundly focuses to develop learners particularly on self-care, self-awareness; healthy consumption, optimal exercises and sports, alcohol and tobacco abuse prevention behavior and mental health for each individuals' health and well-being through multiple learning strategies (The office of National Economic and Social Development Plan, 2017).

Alcohol and tobacco abuse prevention definitely is one of the key factors to strengthen appropriate behavior and mental immune functioning leading to appropriate adaptations or problem solving skills when problems occur such as peer pressure, distortion and misleading behaviors among friends or strangers. Alcohol and tobacco abuse prevention allows an individual to prevent one-self from alcohol and tobacco abuses. If one realizes the disadvantages of alcohol and tobacco, one tends to reject them immediately. (Otrakun, 1985). In fact, alcohol and tobacco abuse prevention behavior generates when an individual has developed the attitudes against alcohol and tobacco abuse, recognizing the hardship of alcohol and tobacco addiction can be a first step in preventing one from trying them. It is a self-realization process in seeking for appropriate solutions rather than problem avoidance by using alcohol and tobacco (Thanmanta, 2004; Wongsawan & Wongsawan, 2008). Besides, the research showed the

importance of attitudes for living, a person with positive attitudes tend to understand, accept one's ability, and maintain purposeful living even during difficulties in life, one would never rely on using alcohol and tobacco as a solution. In fact, one would determine to seek other appropriate solutions until the problem was successfully resolved. Another key factor was good relationships, a person with good relationships consider appropriate solutions for each problem without involving alcohol and tobacco. A person with weak relationships lacks the skills to prevent alcohol and tobacco abuse, unconsciously and iseasily deceived by strangers. Alcohol and tobacco abuses creates harmful impacts; weak immune functioning and health, mood swings, anxiety, insomnia, self-exclusion, low self-responsibility for either school or workplace and joblessness (Mahakun, 2008). The person tends to be more exposed to crimes that causes the insecurity of a nation (Thunmanta, 2004). On the other hand, alcohol and tobacco abuse prevention behavior increasingly provides the human resource development, an individual's health and well-being is promoted to improve academic achievement and fulfill one's potential (Somjai, 2017). Due to the related research, stating that tobacco abuse prevention behavior of students in Benjamarajanusorn School was highly supported by the exposure to information resources such as media, teachers, and peers that taught about disadvantages, risks, diseases, health benefits between smokers and non-smokers and attitudes against smoking with the statistical significance at .01 (Ruecha, 2007). Another supporting study on tobacco abuse prevention behavior of students in TriamUdom SuksaNomklao School, also showed the correlation of tobacco abuse prevention behavior, anti-smoking attitudes, and tobacco information among peers with the statistical significance at.05, in agreement with the research focused on college students. The Faculty of Law, Bangkok University identified the key factors; general information on tobacco, anti-smoking attitudes, perceived tobacco smoking causes and consequence, media, anti-smoking policy had influence on tobacco abuse prevention behavior with the statistical significance at .01 (Jongcherdchutrakul, 2009; Ponatong, 2010). Due to alcohol abuse prevention behavior, the study showed that these crucial factors; alcohol abuse disadvantages, anti-alcohol attitudes, supportive families, peers, and schools enhanced alcohol abuse prevention behavior with the statistical significance at .01(Planisong & Kamson, 2016). However, there were more key factors; self-efficacy, family traits, genders, family financial

status, general information of alcohol, and peer support enhanced alcohol abuse prevention behavior of college students in private universities with the statistical significance at .01 (Somjai, 2017).

Based on the Theory of Human Development, adolescence rapidly grow physically, emotionally, cognitively and socially called the most significant transition from childhood to adulthood as a path to explore self-identity, basic needs of love, understanding, acceptance and sense of belonging among social groups. They had a vital role to select peers with desirable behaviors in order to live happily and smoothly as they learn and imitate people that surround them. (Katawanich, 2003). Other risk factors affecting college students' health were surveyed and found that 68.70% were drinkers, 31.30 % were non-drinkers, less than 18 year-old youths averagely drink 4 glasses approximately 1-2 hours. Around 40.7% were non-smokers and 59.30% were smokers, 17 year-old youths smoke daily affected by attitudes, thoughts, behaviors and relationship among families and friends (Noimontri & Pipatvanicha, 2015). Regarding the family traits, dysfunctional family with conflict and violence as well as the irresponsible media led to alcohol abuse behaviors in youths with the statistical significance at .01 (Buasorn & Ratchadapunnathikul, 2012). Peer Pressure was one of the most key factors to self-control to prevent tobacco abuse behaviors of middle school students in Suphanburi, as well as school policy, academic achievement, gender, behavior, family and peer support, respectively. Most importantly, alcohol and tobacco abuse would lead to drug abuse. (Voraaroon, Kajornchaikul, Pruthipinyo, Techaboonsermsak & Pitikultang, 2017). Consequently, the team was interested in finding out the correlation of causal model affects on alcohol and tobacco abuse prevention behavior of students in Central Thailand emphasizing on the Theory of Planned Behavior: TPB (Fishbein & Ajzen, 1975) which explains an individual's intention leads to self-control over health. Behavioral intentions are influenced by the attitude about the likelihood that behaviors have the expected outcome and evaluation of risks and benefits of that outcome. The TPB has been widely used successfully to explain the wide range of health behaviors including intentions to drinking, smoking, and health related issues. There are three different types of beliefs, behavioral, normative and control based on the attitudes, behavioral intentions, subjective norms, social norms, perceived power and perceived behavioral control. Social norms has

shown to be the key influence to self-control on alcohol and tobacco abuse prevention behavior in youths. (Waranusantikul, 2003).

The research team highly hopes that this study will benefit the organizations and individuals by sharing profound knowledge and authentic implementation for the success of preventing alcohol, tobacco and substance abuse in Thailand.

Objectives
1. Investigate the relationship of causal model affecting alcohol and tobacco abuse prevention behavior in Central Thailand students.
2. Examine the causal model and empirical data affecting alcohol and tobacco abuse prevention behavior in Central Thailand students.
3. Study the causal model affecting alcohol and tobacco abuse prevention behavior in Central Thailand students.
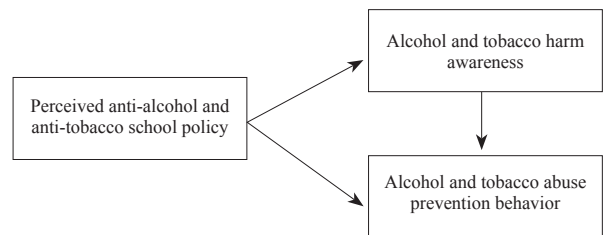
Conceptual Framework

Figure 1 Conceptual framework

Research methodology
1. Research context

The research findings generated profound understanding on the correlation affect of alcohol and tobacco abuse prevention behavior of students in Central Thailand. The authentic knowledge within Thai social context made a tremendous impact on educators such as teachers regarding lesson planning allowed students to develop in-depth understanding on anti-alcohol and anti-tobacco school policy and also increase self-awareness on health impacts and mental immunity for the purpose of decreasing alcohol and tobacco consumption rate in the future. Organizations can support anti-alcohol and anti-tobacco policy in schools and educational sectors. The Ministry of Education can benefit from the evaluation of anti-alcohol and

anti-tobacco policy for the further development and improvement of the future policy.

2. Research Framework

2.1 Samples:

The sample involved 1,342 students who studied in the 1st semester in academic year 2018 in Central Thailand. The samples were selected by structural equation modeling (SEM) (Hair et al. 2010) using 10-20 times per item. The questionnaires consist of 63 items, thus the samples aimed to use 20 times per item and finally had 1,342 students in total selected using Multi-Stage Sampling.

2.2 Steps:

Step 1: Purposive Sampling selected from 3 provinces (Bangkok, Nakornpathom and Ayutthaya)

Step 2:Stratified sampling selected based on the categories of school.

Step 3: Stratified sampling selected based on different classes.

2.3 Variables:

1) Exogenous Latent Variable: perceived school policy on anti-alcohol and anti-tobacco abuse prevention behavior.

2) Endogenous Variables as below;

2.1 awareness of harms caused by alcohol and tobacco consisted 2 components; harms caused by alcohol and harms caused by tobacco.

2.2 alcohol and tobacco abuse prevention behavior consisted of 2 components; alcohol abuse prevention behavior and tobacco abuse prevention behavior.

2.4 Instruments

The research instruments were (1) five rating scales for perceived anti-alcohol and anti-tobacco school policy questionnaires, (2) alcohol harm awareness questionnaires, (3) tobacco harm awareness questionnaires, (4) alcohol abuse prevention behavior questionnaires, and (5) tobacco abuse prevention behavior questionnaires. From the questionnaires 2-5, the research team created them using a four-rating scale.

2.5 Process

1. Research and literatures review: the team reviewed related research and literature as the guideline to create content in the questionnaires.

2. Questionnaire creation: the team then created 10 item-perceived anti-alcohol and anti-tobacco school policy questionnaire, 10 item-alcohol harm awareness questionnaire, 10 item-tobacco harm awareness questionnaire, 15 item-alcohol abuse prevention behavior questionnaire, and 15 item-tobacco abuse prevention behavior questionnaire.

3. IOC: all questionnaires were validated by three experts in Psychology, examined the terminologies and received IOC between 0.66-1.00. The research team improved and adjusted the terminologies accordingly.

4. Trials with the identical groups: the trail questionnaires were conducted with the identical group (100 identical samples). The discrimination was analyzed using Item - Total Correlation, scored from 0.20 upward which were accepted in the questionnaires. The Coefficient Cronbach's Alpha was analyzed for the reliability as showen in Table 1.

Table 1 Discrimination (Item - Total Correlation) and reliability (Coefficient Cronbach's Alpha (n = 100)

Questionnaires	Amount of Item	Item - Total Correlation	Coefficient Cronbach's Alpha
Perceived anti-alcohol and anti-tobacco school policy questionnaires	10	0.55-0.84	0.92
Alcohol harm awareness questionnaires	12	0.43-0.79	0.87
Tobacco harm awareness questionnaires	7	0.23-0.73	0.79
Alcohol abuse prevention behavior questionnaires	13	0.28-0.51	0.65
Tobacco abuse prevention behavior questionnaires	14	0.22-0.61	0.79

3. Data Collection

3.1 Permission Letters: The research team submitted permission letters to all stakeholders; Dean of Faculty of Education, Srinakharinwirot University, School Principles of the schools located in Central Thailand.

3.2 Questionnaire trials: The data were collected during June – August, 2018 using the trial questionnaire with the identical groups (100 samples in total) and then adjusted the content of questionnaires to be more appropriate.

3.3 Data collection: The data were continuously collected from 1,700 samples in total in the selected schools located in Central Thailand.

3.4 Questionnaire Completion Examined; the team examined the completion of all questionnaires, found 78.94 % (1,342 questionnaires) were fully completed and ready to be analyzed.

3.5 Causal Model Analysis; the team analyzed both quantitative data and empirical data provided using Causal Model Analysis and examined the key factors affecting alcohol and tobacco abuse prevention behavior

of students in Central Thailand.

    4. Statistics used

        4.1 Pearson Product Moment Correlation: the key factors affecting alcohol and tobacco abuse prevention behavior was analyzed using Pearson Product Moment Correlation.

        4.2 Structural Equation Modeling (SEM): the causal model affecting alcohol and tobacco abuse prevention behavior was analyzed using Maximum Likelihood (ML), Chi square (x^2), Goodness of Fit Index, Adjusted Goodness of Fit Index, Root Mean Square Error of Approximation and Standard Root Mean Square Residual.

Results

    1. The correlation of causal model affecting alcohol and tobacco abuse prevention behavior of students in Central Thailand using Mean, Standard Deviation, and Coefficient Cronbach's Alpha, identified that perceived alcohol and tobacco school policy (POLI) (Mean = 3.61, S.D. = 0.69), Alcohol harm awareness (AWAL) (Mean = 3.41, S.D. = 0.51), Tobacco harm awareness (AWSM) (Mean = 3.23, S.D. = 0.62), alcohol abuse prevention behavior questionnaires (PRAL) (Mean = 3.08, S.D. = 0.53), tobacco abuse prevention behavior questionnaires (PRSM) (Mean = 2.90, S.D. = 0.39).

    In term of Coefficient Cronbach's Alpha of causal model affecting alcohol and tobacco abuse prevention behavior of students in Central Thailand, revealed that alcohol and tobacco abuse prevention behavior overall was between 0.17-0.53 with the statistical significance at .01 (α = .01), alcohol abuse prevention behavior (PRAL) and tobacco abuse prevention behavior (PRSM) had the highest correlation (α = 0.54). On the other hand, perceived anti-alcohol and tobacco school policy (POLI) and alcohol abuse prevention behavior (PRAL) had the least correlation (α = 0.17).

    2. The correlation of causal model affecting alcohol and tobacco abuse prevention behavior of students in Central Thailand as shown on Figure 2 and Table 2.
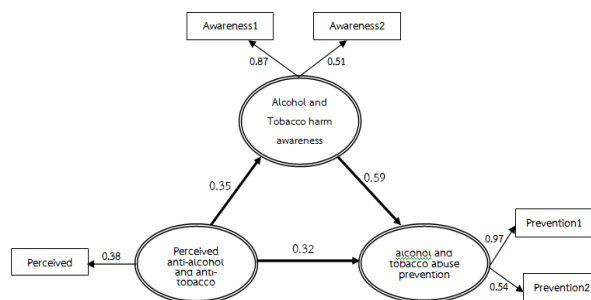
$x^2 = 3.35$, df = 1, p = .06, GFI = 1.00, AGFI = 0.99, CFI = 1.00, RMSEA = 0.04, SRMR = 0.01

Figure 2 Causal model affecting alcohol and tobacco abuse prevention behavior in Central Thailand students

    According to Figure 2, the findings demonstrate the consistence of causal model affecting alcohol and tobacco abuse prevention behavior of students in Central Thailand and the empirical data provided, the absolute index shows chi square ($x^2 = 3.35$), df = 1, p = .06, GFI = 1.00, AGFI = 0.99, RMSEA = 0.04, SRMR = 0.01. In fact, the comparative index shows CFI = 1.00. In contrary, it showed no consistency in chi square. However, all key factors are consistent with the empirical data which allowed to descry be both direct and indirect influences in the model.

Table 2 The correlation of causal model affecting alcohol and tobacco abuse prevention behavior in students in Central Thailand (n = 1,342)

Causal Model	Model of Affect					
	Alcohol and Tobacco Harm Awareness			Alcohol and Tobacco Abuse Prevention Behavior		
	DE	IE	TE	DE	IE	TE
Perceived anti-alcohol and anti-tobacco school policy	0.35**	-	0.35**	0.32**	0.21**	0.53**
Alcohol and Tobacco harm awareness	-	-	-	0.59**	-	0.59**
R^2	0.13			0.59		

*p<.01

    According to Table 2, the findings Influence coefficient of causal model affecting alcohol and tobacco abuse prevention behavior of students in Central Thailand states that alcohol and tobacco abuse prevention behavior was directly influenced by alcohol and tobacco harm awareness with the influence coefficient (IC = 0.59), directly affected by perceived anti-alcohol and anti-tobacco school policy with the influence coefficient (IC = 0.32), and indirectly affected by perceived anti-alcohol and tobacco school policy with the influence coefficient

(IC = 0.21).

Causal model affecting alcohol and tobacco abuse prevention behavior was influenced by perceived anti-alcohol and tobacco school policy with the influence coefficient (IC = 0.35).

Forecast Correlation Coefficient shows 59% of alcohol and tobacco harm awareness influence of alcohol and tobacco abuse prevention behavior ($R^2 = 0.59$), and 13 % of perceived anti-alcohol and anti-tobacco school policy ($R^2 = 0.13$).

Discussion

1. The study shows the correlation of causal model affecting alcohol and tobacco abuse prevention behavior of students in Central Thailand. The findings of alcohol abuse prevention behavior (PRAL) and tobacco abuse prevention behavior (PRSM) ($\alpha = 0.54$) show that students were aware that alcohol and tobacco would harm their health. In fact, the family support, information resources, schooling and learning experience empower students in preventing alcohol and tobacco abuse in accordance with the study supporting alcohol and tobacco abuse prevention behavior definitely is one of the key factors to strengthen mental immune functioning leading to appropriate adaptation or problem solving skills when problem occurs; peer pressure, distortion and misleading behaviors among friends or strangers. This allows an individual to prevent alcohol and tobacco abuse. If one realizes the disadvantages of alcohol and tobacco abuse, one tends to reject them immediately (Otrakun, 1985).

2. The results demonstrates the causal model affects alcohol and tobacco abuse prevention behavior of students in Central Thailand, in agreement with the Theory of Planned Behavior: TPB (Fishbein & Ajzen, 1975) that emphasizes an individual's intention to have self-control over health. Behavioral intentions are influenced by the attitude shows the likelihood that behaviors have the expected outcome and evaluates either risks or benefits of that outcome. TPB has been widely used successfully to describe the wide range of health behaviors including intentions to drinking alcohol, smoking, and health in general. There are three different types of beliefs, behavioral, normative and control based on the attitudes, behavioral intentions, subjective norms, social norms, perceived power and perceived behavioral control. Social norms is shown to be the key influence to self-control on alcohol and tobacco abuse prevention behavior in youths. (Waranusantikul, 2003). While,

Social Learning Theory based on Behavioral Theory describes about human development for adolescences, who are rapidly changing physically, emotionally, cognitively and socially is called the most significant transition from childhood to adulthood as a path to self-identity, basic needs of love, understanding, acceptance and sense of belonging among social groups. Humans basically learn from the social interactions especially parents, siblings, teachers, public figures, or other media as their role models. However, they are also in control of their own learning, imitating and expressing their behaviors appropriately (Katawanich, 2003; Aimsupasit, 2013). Moreover, the Health Belief Model Theory describes the nature of human interactions as the perceived information through surrounding people and media. Despite the fact that smoking, drinking alcohol leads to social acceptance and sense of belonging, an individual may perceive them as harmful behaviors leading to health risks, financial concerns and unexpected accidents. One will determine to avoid alcohol and tobacco and prevent themselves from these sorts of abuses due to Health Belief Model (Kanjanawong, 2008).

The findings indicate that alcohol and tobacco harm awareness affecting alcohol and tobacco abuse prevention behavior (Influence Coefficient = 0.59). In accordance to the empirical data revealed the effects of school campaigns and learning experiences within the classroom focusing on alcohol and tobacco harms and disadvantages, for instance, International Day Against Drug Abuse and Illicit Trafficking, Scout camps and Red Cross camps, Life Skill camps, etc. These activities allowed students to learn and reflect on the negative impacts of alcohol and tobacco abuse, thus they were able to fully develop awareness, and alcohol and tobacco abuse prevention behavior. Alcohol and tobacco abuse prevention behavior was also supported by providing information of alcohol and tobacco, preventive attitudes, media, families and peers. Ruecha (2007) is in agreement with the findings shown with a coherent results of alcohol abuse prevention behavior ($\alpha = .01$). Although, perceived alcohol and tobacco had the least influence (Influence Coefficient = 0.32) (Somjai, 2017). Recently, the report states that if the educational sectors promote anti-alcohol and tobacco policy, students would potentially be cultivated on disciplined due to alcohol and tobacco regulations and policies within the school. (The Office of the Permanent Secretary, Ministry of Education; 2017) Government played a significant role on launching the Anti-smoking campaign leading to the

development of tobacco abuse prevention behavior (Ponatong, 2010). School support also allows students to develop alcohol abuse prevention behavior (Planisong & Kamson, 2016) In addition, perceived anti-tobacco regulation directly affects self-control

Suggestions

1. Suggestion for implications

Regarding the findings, alcohol and tobacco abuse prevention behavior was influenced by perceived alcohol and tobacco harm awareness and perceived anti-alcohol and tobacco school policy, respectively. It is suggested that further research may investigate the risk of alcohol and tobacco and inform students on the negative impacts through various media. In terms of skills, schools may provide workshops on compromise skills and 'say no' to alcohol and tobacco.

2. Suggestion for further studies

2.1 Further research may investigate and develop the group counseling interventions, workshops, and learning experiences enhancing alcohol and tobacco abuse prevention behavior.

2.2 Further research may examine the reliability of the causal model affecting alcohol and tobacco abuse prevention behavior using multiple groups including genders, educational background, school categories.

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