Substance use and related risk behaviors among junior high school students in Nakhon Pathom province, Thailand

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Abstract

Purpose – The spread of drug use has been consistently increasing in Asia, posing a serious public health problem, especially among new addicts. In Thailand, the problem has persisted for decades leading to a consistent decline in the age of drug use initiation, making drug use an important social problem, especially among youngsters. This study aimed to examine the factors related to substance abuse risk behaviors among lower secondary school students.

Design/methodology/approach – A cross-sectional survey was conducted using a self-administered questionnaire to collect the data from a sample of 624 students aged 12 through 18 years. Data analysis was performed using descriptive statistics and multiple linear regression to identify factors related to substance use risk behaviors.

Findings – Factors associated with drug use risk behavior were access to drugs (0.882; <0.001), which had the highest predictive power, family relationships (−0.555; <0.001), self-esteem (−0.516; <0.001) and awareness about drugs (−0.412; <0.005).

Originality/value – Prevention interventions that incorporate reducing access to drugs, strengthening family ties, boosting adolescents' self-esteem and increasing their awareness about drugs should be tailored to target homes, schools and communities. As the problem appears to be multidimensional, the full participation of all relevant stakeholders such as teachers, parents, religious and community leaders in the intervention programs is as essential as the interventions themselves.

Keywords Substance use, Related factors, Risk behavior, High school, Thailand

Paper type Research paper

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Introduction

Substance abuse has become an important public health problem for many countries the world over. According to the United Nations Office on Drugs and Crime, approximately 275 million people, which is equivalent to approximately 5.6% of the world population aged 15–64 years, and around 450,000 people died from drug-related disorders [1]. This shows that the spread of drug use extends beyond a specific market, and the major markets which are in East and Southeast Asia are still growing; Southeast Asia and North America are still the two major sub-regions for the global drug trade. The trends of the drug epidemic show that amphetamine use has been on the increase between 2013 and 2016, and in 2016, the drug was reported to be the biggest threat in the United States, as consumption increased [2].

Regionally, the spread of drug use has been consistently increasing in Asia, posing a serious problem, especially among new addicts. The age at initiation of drug use has been seen to consistently decline over the decades [3]. For decades, drugs have been an important social problem in Thailand. As one of the region's major drug hubs, Thailand has been both a producer and a market for drugs, selling to both neighboring and distant countries. The sales within the country have also been rapidly spreading more, especially to primary and secondary school youth groups. The Thai strategic policies on substance abuse prevention have continued to focus on controlling the spread of substance abuse and the individuals involved in the trade. At a certain time, the policies were more focused on suppression rather than prevention [4]. According to spatial data in Nakhon Pathom province, the problem of substance abuse is at a high level with the potential to progress to the highest level (6.0%). When compared to the other geographical regions of the country, the southern region, where Nakhon Pathom is situated, has the substance abuse problem at the highest level, with the highest proportion of people who use drugs (13.7%). Additionally, Nakhon Pathom's proximity to the country's border to the South, which has been characterized as a drug production center around Thailand, makes it an easy way to export drugs into other provinces. This peculiar characteristic of the Nakhon Pathom province, therefore, makes it appear difficult to control the problem of drug abuse among youth groups [5].

Previous studies in drug abuse management have proposed many promising ways to contain the problem. One of the ways is building youths' life skills to engage them in productive activities, thereby preventing them from substance abuse [6, 7]. The literature suggests that preventing youths from substance use is multifactorial and includes academic achievement, access to drug information and having enough pocket money. Other factors are parental marital status, access to drugs, area of residence, family relationships, peer group influence and receiving support from educational institutions and government agencies [8–12].

Recent statistics have shown that the prevalence of new drug groups among youth groups aged 15–19 years and even under 15 was 21.5%. Consequently, drug use tendencies have been on the rise both outside and within educational institutions, especially in primary and lower secondary schools [13]. This study examined the factors related to substance abuse risk behaviors among lower secondary school students.

Methodology

Study design and instrument

This was a cross-sectional research design conducted among junior high school students in Nakhon Pathom province, Thailand. Data were collected using a carefully developed and well-validated research instrument. The instrument comprised four sections, namely (1) general information; (2) personal factors; (3) sociocultural factors and (4) risk behaviors of substance use, which centrally focused on whether or not students or their friends had been involved in attending night venues such as clubs, sleeping over in a friend's house, smoking,

drinking and/or using a substance. These questions were later averaged to arrive at a single variable – substance use risk behavior – which was the research outcome variable.

Except in section 1, all questions in the remaining sections were measured on a five-point Likert scale (from strongly agree (5) to strongly disagree (1)), and the mean score for each variable was calculated with their respective standard deviations. Based on predefined cut-off points (0–1.67 = low; 1.68–3.33 = moderate and 3.34–5.00 = high), the mean scores were interpreted as low, moderate or high. For the outcome variable, the higher the mean score, the more likely the risk of substance use among the students.

The content validity of the questionnaire was examined by three experts in the field of substance abuse. Items with an item objective congruence (IOC) index of >0.5 were retained. Similarly, the reliability of the questionnaire was determined by testing the instrument on 30 similar target groups. The coefficients of Cronbach's alpha were 0.79 and 0.72 for internal factors and sociocultural factors.

Study area and sample selection

The samples for the study were selected from Nakhon Pathom province, covering the entire seven districts of the province. A sample of 624 students was drawn from six schools in seven districts using a systematic multistage random sampling. The schools were grouped, according to the Management of the Office of Secondary Education Service Areas, into three, namely large size, medium size and small size. From each of these groups, two schools were purposively selected. The population studied were students of a junior high school who were between 12 through 18 years old who were at risk of substance abuse. The participants comprised both males and females who were able to communicate in the Thai language. Systematic random sampling was used. The sampling interval was calculated by dividing the target population by the sample size. A table was used to randomly select the participants, starting the initial order at number 3. The registration system of junior secondary schools' students was used for the sample selection.

Inclusion and exclusion criteria

Participants were included in the study if they were (1) between 12 through 18 years of age. (2) junior high school students in Nakhon Pathom province and consented to participate, (3) capable of reading and writing with no communication challenges and (4) willing to participate in the study. Excluded from the study were those who presented with a sudden illness or were uncomfortable disclosing their personal information.

Data collection

Permission was sought from the relevant authorities such as the directors of the schools. Because the research included minors, parents and guardians of the students were equally informed; only after they consented by signing the consent form, their children were included in the study. Both the students and their parents were briefed about the data collection processes, including the benefits and the protection of rights of all participants. The data were collected in the selected schools at quiet and conducive venues provided by the schools. Students were urged to respond to the questionnaire as best and as accurately as they could. No discussions among the students were allowed to ensure information collected was not influenced. Participants' information was treated and kept confidential.

Data analysis

General information data were analyzed by descriptive statistics and the results were presented as frequency, percentage, mean and standard deviation. All variables measured on

a five-point Likert scale were averaged, and the mean scores and their corresponding standard deviations were presented. To determine the factors associated with substance use risk behaviors among the study participants, a stepwise multiple regression was performed.

Ethical consideration

The research was approved by Nakhon Pathom Rajabhat University Institutional Review Board (IRB) with a certificate of approval (CoA) number 012/2562.

Results

General characteristics

Table 1 shows that almost two-thirds of the participants (63%) were males. More than 62% of the participants were aged between 14–15 years (62.0%), with a median age of 14 ± 1.095 living with both parents (68%). The participants were distributed almost equally across the three levels of education as approximately 30% were in level 1, 33% in level 2 and 37% in

General information	*n*	Percentage
Gender		
Male	392	62.80
Female	232	37.20
Age (years)		
12–13	236	37.80
14–15	383	62.40
16–18	5	0.80
Residence		
Living with both parents	425	68.10
Living with father or mother	139	22.30
Staying with relatives or friends	56	9.00
Living with the siblings	2	0.30
Living alone	2	0.30
Student education level		
Level 1	188	30.10
Level 2	206	33.00
Level 3	230	36.90
Cumulative grade point average		
≤2.00	52	8.30
2.01–3.00	345	55.30
3.01–4.00	227	36.40
Daily income from parents (baht)		
10–50 (0.3–1.5 US$)	464	75.00
51–100 (1.5–3 US$)	131	20.00
101–150 (3–5 US$)	6	1.00
151–200 (5–7 US$)	23	4.00
Parental marital status		
Married	443	71.10
Divorced	65	10.40
Separated	104	16.70
Other	12	1.80

Table 1. Participants' general characteristics (n = 624)

level 3. While a little more than a third of the students had a Cumulative Grade Point Average (CGPA) ranging from 3.01–4.00, more than half of them (55%) had a CGPA between 2.01–3.00. In total, three-quarters of them (75%) had a daily income of 10–50 baht from their parents, while 71% of whom were married.

In Table 2, six internal factors were measured. Besides access to drugs (mean 2.54 ± 1.17) that was moderate, on average, participants scored high in all other factors such as life skills in substance rejection (mean 4.07 ± 0.40), self-esteem (mean 3.86 ± 0.34), emotional immunity and coping (mean 4.23 ± 0.60), self-efficacy (mean 4.57 ± 0.50) and drug awareness (mean 3.90 ± 0.39). This implies that, for the most part, students agreed that substance abuse behavior could be affected by these outlined factors. On the other hand, students scored exceedingly high in all the sociocultural factors. For example, students agreed that good family relationships (mean 4.01 ± 0.66) can potentially reduce the risk of substance abuse. Other factors included, strict parenting (mean 3.56 ± 0.58), social support from friends (mean 3.76 ± 1.25), technology awareness (mean 4.32 ± 0.69), the environment at risk of drug use (mean 4.42 ± 0.87), drug surveillance at schools (mean 3.99 ± 0.69) and campaigns against substance abuse (average 3.88 ± 0.77). The mean score for substance use risk behaviors was equally high (mean 3.93 ± 1.44). This means that the vast majority of the students agreed that they or their friends went out at night, slept over at a friend's house, smoked, drank and/or ever tried a substance.

Although the mean scores for the majority of the variables were high, only four variables were identified to be the significant predictors of substance use risk behavior, Table 3. With a unit change in access to drugs, the risk of substance use increased by 0.882 (p-value <0.001).

Variables	$\bar{x}$	SD	Interpretation
Personal factors			
Life skills in substance abuse rejection	4.07	0.40	High
Self-esteem	3.86	0.34	High
Emotional immunity and coping	4.23	0.60	High
Self-efficacy	4.57	0.50	High
Drug awareness	3.90	0.39	High
Access to drugs	2.54	1.17	Moderate
Sociocultural factors			
Family relationship	4.01	0.66	High
Strict parenting	3.56	0.58	High
Social support from friends	3.76	1.25	High
Technology awareness	4.32	0.69	High
The environment at risk of drug use	4.42	0.87	High
Drug surveillance at educational institutions	3.99	0.69	High
A campaign against substance abuse	3.88	0.77	High
Substance use risk behaviors	3.93	1.44	High

Table 2. The mean score of factors related to substance use risk behaviors

Variables	β	SE	Beta	p-value
Access to drugs	0.882	0.042	0.649	<0.001*
Family relationships	−0.555	0.114	−0.232	<0.001*
Self-esteem	−0.516	0.135	0.112	<0.001*
Drug awareness	−0.412	0.146	−0.102	0.005*

Note(s): *p-value < 0.05, constant = 10.906 and R^2 = 0.650

Table 3. Predictive factors related to the risk of substance abuse (n = 624)

This implies that youths who had access to drugs were at an increased risk of substance use behavior as compared to those who did not. Additionally, the risk of substance use behavior decreased by 0.555 for a unit change in a family relationship (p-value <0.001). Further, a unit change in self-esteem was associated with a 0.516 decreased risk of substance use (p-value <0.001). Finally, a change in drug awareness by a unit decreased the risk of substance use by 0.412 (p-value <0.005) This means that youths who were more informed about the consequences of substance use were less likely to use drugs.

Discussions

The most important factor influencing drug use was drug accessibility. It was found that students who hang out with friends at night or stay at a friend's place overnight have easier access to drugs. This could be true especially if the friends are smokers or drinkers or both. When such availability is combined with potential peer pressure, the risk of substance use could rise. This is in line with the previous study, which suggested that while friends could be an important support for youths to live happily and productively, and they could nevertheless influence harmful behaviors such as drug use [14]. Additionally, it was further emphasized that in an environment where the use of drugs is prevalent, young people become overly curious, and usually, the power of wanting to try becomes overwhelming [15], which could directly or indirectly be connected to encouraging risky sexual behaviors [16]. Therefore, when prevention interventions are designed, authorities should give importance to modeling a way of reducing access to drugs. This could be achieved by focusing on building youth groups to understand that they must not go to venues or events such as nightclubs, which are known for drugs being available. Youth should also be taught to not socialize with people who frequently go out at night, smoke, drink or have body tattoos. Additionally, families, teachers and community and religious leaders should focus on creating joint activities at school, family and community levels, which promote and cultivate morality and ethics among youths. These are important values that could be useful in reducing the risk behaviors in substance use among students.

Second, family relationship, which we defined as the level of connectedness between parents and their children, was an important determining factor for substance abuse. This is undebatable as a family is the first fundamental social institution that teaches values to its members. When this essential societal force is not properly cultivated, youths raised in such a background may be at an increased risk of drug use. More so, adolescents raised in a domestically violent family may also suffer the same fate. This may be connected to the fact that the adolescents might have been deprived of love, affection, tenderness and warm closeness that they so rightfully deserve at this critical age of their lives. This coincides with a preceding study, which found family conflicts have been shown as an important predisposing factor for drug use. The evidence suggested that the risk of teenage drug use is higher among adolescents who experienced domestic violence [17]. Similarly, adolescents living in a single-family (mother or father) tend to display delinquent behaviors than their counterparts living with both parents [18]. More importantly, this study was conducted in a metropolis where teenage drug use was prevalent and most parents were too busy with their careers, which creates a huge communication distance between them and their adolescent children. Consequently, the children are poorly educated by their parents about the dangers and negative impacts of drug use or adequate moral guidance that could teach them about strategies to prevent themselves against substance abuse, making them more susceptible and easily disposed toward using drugs.

Not surprisingly, self-esteem was associated with increased risk behavior of drug use. It was found that youths who were not proud of their abilities and felt that they were not

accepted or appreciated were more likely to engage in high-risk behaviors of substance use. This is quite plausible because adolescence is the period in which teenagers pay considerable attention to their image and how they are perceived among their peers, which is caused by the hormonal changes that take place during this period. This may have direct effects on their mood and therefore could incite intentional dangerous behaviors. Previous evidence has suggested that adolescents with low self-esteem are more likely to have health risk behaviors [19]. Therefore, monitoring adolescent self-esteem and drug use risk behaviors by the relevant agencies should be encouraged. Activities that could boost their sense of self-worth and aptitude should be incorporated in schools. According to Tebes *et al.* [20], developing positive attitudes in youths must include focusing on methods of promoting their aptitude in and outside the school to enhance their effective decision-making skills, which could help in preventing them from drug use and substance abuse. Another study reported that programs that focus on experience teaching and cooperative learning activities that allow children to interact with adults were found to improve children's life skills [21].

Lastly, drug awareness has been seen to affect adolescent risk behavior for substance use. It was found that youths believed that the use of drugs was essential for socializing with their peers, and this fueled their curiosity to try it. Additionally, because teenagers usually want to be accepted and revered by their groups at all costs, they are inclined to do anything to make it happen. Besides, there is also a belief among teenagers that one-time substance abuse does not cause any harm, which they describe as normal. Teens who are unable to control themselves and those who lack confidence in themselves often try to imitate the behaviors of those they admire [22]. Our findings support previous studies which suggested that curiosity is an important cause of drug use among children and young people leading to numerous drug-related offenses [23]. Therefore, parents and teachers must educate adolescents about the dangers of drugs, with an emphasis on teaching them the health consequences and law ramifications.

Conclusion

Prevention interventions that incorporate reducing access to drugs, strengthening family ties, boosting adolescents' self-esteem and increasing their awareness about drugs should be tailored to target homes, schools and communities. The full participation of all relevant stakeholders such as teachers, parents, religious and community leaders in the intervention programs is as essential as the interventions themselves as the problem appears to be multidimensional. Instituting drug use behavior surveillance in schools would be an important component of such interventions, so that students are closely monitored while in schools. At home, parents should be more vigilant about their children's whereabouts and who they associate with; the parents should also create or increase family activities at home that could instill the adolescents with the consciousness to distinguish between right and wrong. This, in turn, could help in boosting their self-esteem without seeking validation from their peers.

Conflict of Interest: None

References

1. United Nations Office on Drugs and Crime [UNODC]. World drug report 2016. [cited 2019 July 20]. Available from: https://www.unodc.org/doc/wdr2016/WORLD_DRUG_REPORT_2016_web.pdf.
2. United Nations Office on Drugs and Crime [UNODC]. World drug report 2018. [cited 2019 July 20]. Available from: https://www.unodc.org/wdr2018/prelaunch/WDR18_Booklet_1_EXSUM.pdf.

3. Thailand, Ministry of Justice. Office of the narcotics control board. Brief history of drug addiction in. 2017. [cited 2019 May 13]. Available from: https://www.oncb.go.th/Pages/main_old.aspx.
4. Thailand, Ministry of Justice. Office of the narcotics control board. Brief history of drug addiction in. 2015. [cited 2019 June 18]. Available from: https://www.oncb.go.th/Pages/main_old.aspx.
5. Thailand, Ministry of Justice, Office of the Narcotics Control Board. A brief history of drug addiction in. 2014. [cited 2019 July 22]. Available from: https://www.oncb.go.th/Pages/main_old.aspx.
6. Huang CM, Chien LY, Cheng CF, Guo JL. Integrating life skills into a theory-based drug-use prevention program: effectiveness among junior high students in Taiwan. J Sch Health. 2012; 82(7): 328-35. doi: 10.1111/j.1746-1561.2012.00706.x.
7. Netzelmann TA, Savova S, Vassileva S, Dreezens-Fuhrke J, Steffan E. WEDworks: enhancing participatory drug research and prevention with resources of the Roma community. Effective community-based intervention model and practice recommendations. Univers J Public Health. 2016; 4(2): 88-96. doi: 10.13189/ujph.2016.040207.
8. Yong-en N. Factors affecting mathayomsuksa 1 students' behavior of drugs prevention in schools under Loei primary educational service area. Loei: Loei Rajabhat University; 2013.
9. Pooncharoen A. A study of the cause of drug using of high school students in Chanthaburi. Chonburi: Burapha University; 2015.
10. Ruangkij P. Risks and protective factors for Amphetamine use among adolescent students, Pathumthani province: unmatched case - control study. Pathumthani: Thammasat University; 2011.
11. Suksang S, Kahkomwong R, Ngamingyaod W, Chotchoung A. Surveillance model in preventing and solving drug abuse problem by public sector: a case study in Tha Pae district, Satun province, and Rataphum district, Songkhla province. Southern College Network Journal of Nursing and Public Health. 2015; 4(Special Issue): S230-42.
12. Nasri S. Administrative factors affecting participation in drug prevention and problem solving of the coordination of national force in the victory overdrugs, Hindad subdistrict, Huai Thalaeng district, Nakhon Ratchasima province, Khon Kean: Khon Kaen University; 2014.
13. Office of the Narcotics Control Board, Bureau of Drug Prevention and Development. Conclusion of the progress of the implementation of the indicators goals according to the strategic plan of the land force over drugs 2015. [cited 2019 June 5]. Available from: https://www.oncb.go.th/Home/PublishingImages/Pages/ProgramsandActivities/strategic_plan2558-2560.pdf.
14. Danielsen AG, Samdal O, Hetland J, Wold B. School-related social support and students' perceived life satisfaction. J Educ Res. 2009; 102(4): 303-20. doi: 10.3200/JOER.102.4.303-320.
15. Sherman SG, German D, Sirirojn B, Thompson N, Aramrattana A, Celentano DD. Initiation of methamphetamine use among young Thai drug users: a qualitative study. J Adolesc Health. 2008; 42(1): 36-42. doi: 10.1016/j.jadohealth.2007.07.002.
16. Roberts AB, Oyun C, Batnasan E, Laing L. Exploring the social and cultural context of sexual health for young people in Mongolia: implications for health promotion. Soc Sci Med. 2005; 60(7): 1487-98. doi: 10.1016/j.socscimed.2004.08.012.
17. Herrenkohl TI, Lee JO, Kosterman R, Hawkins JD. Family influences related to adult substance use and mental health problems: a developmental analysis of child and adolescent predictors. J Adolesc Health. 2012; 51(2): 129-35. doi: 10.1016/j.jadohealth.2011.11.003.
18. Hoffmann JP. Family structure, community context, and adolescent problem behaviors. J Youth Adolesc. 2006; 35(6): 867-80. doi: 10.1007/s10964-006-9078-x.
19. Sussman S, Lisha N, Griffiths M. Prevalence of the addictions: a problem of the majority or the minority? Eval Health Prof. 2011; 34(1): 3-56. doi: 10.1177/0163278710380124.
20. Tebes JK, Feinn R, Vanderploeg JJ, Chinman MJ, Shepard J, Brabham T, *et al.* Impact of a positive youth development program in urban after-school settings on the prevention of adolescent substance use. J Adolesc Health. 2007; 41(3): 239-47. doi: 10.1016/j.jadohealth.2007.02.016.

21. Junge SK, Manglallan S, Raskauskas J. Building life skills through afterschool participation in experiential and cooperative learning. Child Stud. J. 2003; 33(3); 165-74.

22. Santrock JW. Adolescence: an introduction. 6th ed. Madison: Brown & Benchmark; 1996.

23. Mungkung W. Family factors influencing substance abuse of male adolescents in the Banbueng Juvenile Vocational Training Centre at Banbueng district, Chonburi province. Chonburi: Burapha University; 2015.

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