Short Communication

The influence of protective and risk factors in individual, peer and school domains on Thai adolescents' alcohol and illicit drug use: A survey

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HIGHLIGHTS

- Low school commitment was strongly associated with illicit drug use.
- Having friends with delinquent behaviors increased the risk of substance abuse.
- Students with high levels of moral belief were less likely to use alcohol.
- Peer influence is a significant contributor in substance abuse.

ARTICLE INFO

ABSTRACT

This study investigates risk and protective factors for substance abuse in a sample of 1778 students attending technical colleges in Bangkok and Nakhon Ratchasima provinces of Thailand using a self-report questionnaire modified from the Communities That Care youth survey. Low school commitment was strongly associated with illicit drug use, with adjusted odds ratios ranging from 2.84 (glue sniffing) to 10.06 (ecstasy). Having friends using drugs, and friends with delinquent behaviors increased the risk of using alcohol and illegal drugs, with adjusted odds ratios of 6.84 and 6.72 respectively for marijuana use. For protective factors, approximately 40–60% of students with high levels of moral belief, participation in religious activities, and social skills were less likely to use alcohol. It is concluded that peer influence is a significant contributor to Thai adolescents' participation in substance abuse and that engaging in religiosity may assist adolescents to internalize negative aspects of harmful drugs into positive perceptions and encourage them to avoid alcohol and illegal drugs.

1. Introduction

Alcohol and drug use in adolescence and early adulthood is acknowledged to be a public health problem worldwide. Comparative cross-national surveys have indicated that alcohol is more widely used by adolescents than illicit drugs (Daosodsai et al., 2007; Vega et al., 2002), although when alcohol consumption is combined with illegal drug use the risk of disease and injury increases significantly. Thailand is a country in South-East Asia where alcohol and illicit drug use is a major cause of mortality and morbidity in youth. In 2007, almost 55% of injured victims and 70% of arrested perpetrators in Thailand were impaired by alcohol consumption (World Health Organization-Kobe Centre, 2007). A Thai national survey of health risk behaviors demonstrated that approximately 40% of students had consumed alcohol in the last month and used at least one illegal drug during their lifetime (Ruangkanchanasetr, Plitponkarnpim, Hetrakul, & Kongsakon, 2005).

In Thailand, technical and vocational education is available for students who have completed Year 9 in junior high school. Students undertake a three-year Vocational Education Certificate, which is equivalent to grade 12 in an academic stream, and can choose to follow this with a two-year Vocational Education Diploma (Hawley, 2003). Compared with students in academic streams, vocational technical students are from low socioeconomic backgrounds and are more likely to participate in alcohol consumption (Assanangkornchai, Mukthong, & Intanont, 2009), substance abuse (Sattah et al., 2002), and violence (fighting and sexual assault) (Liu et al., 2006; Manopaiboon et al., 2003; Wongtongkam, Ward, Day, & Winefield, in press). A school-based survey in Northeast Thailand found that prevalence rates for alcohol, tobacco and illicit drug use were higher in technical colleges

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than in academic schools (39.9% vs 17.3%, 17.9% vs 4.9%, and 3.3% vs 1.4% respectively; Daosodsai et al., 2007).

Risk and protective factors for youth substance abuse occur at individual, peer, family, school, and community levels (Hawkins, Catalano, & Miller, 1992; Oesterle et al., 2012). Individual and peer factors are particularly important in adolescence, with a number of studies indicating that intrapersonal or individual characteristics, such as impulsivity, sensation seeking (Xiao, 2008) and risk-taking behavior (Feldstein & Miller, 2006) are correlated with both antisocial behavior (Griffin, Botvin, Scheier, Doyle, & Williams, 2003) and alcohol and/or illicit drug use (Stephenson, Hoyle, Palmgreen, & Slater, 2003). In adolescence, young people spend substantial time with peers and conform to peer group norms. Thus, the peer relationship has a considerable influence on behavior (Hussong, 2004) and norms and attitudes toward substance use (Beyers, Toumbourou, Catalano, Arthur, & Hawkins, 2004; Van Horn, Hawkins, Arthur, & Catalano, 2007). Despite these individual and peer aspects, school environments provide a setting for building protective factors and reducing rates of health risk behavior in youths. Schools offer many opportunities to influence youths, allowing them to develop academically and vocationally through initiating quality relationships with peers and teachers. There is also evidence that school connectedness acts as an important protective factor against substance use (Bond et al., 2007; Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004).

This study explores aspects of individual, peer, and school protective and risk factors related to alcohol and illicit drug use in Thai adolescents. Identifying the effects of risk and protective factors is necessary to allow the development of prevention and intervention programs to address these problems prior to adulthood, and yet the literature on protective and risk factors related to alcohol and illicit drug use among Asian adolescents is currently limited.

2. Method

The study was a cross-sectional survey of students attending nine public technical colleges in Bangkok (capital city) and Nakhon Ratchasima (a rural province) in Thailand. Students in Years I–III of the Vocational Educational Certificate were invited to participate in the study. A total of 1778 students completed self-report questionnaires (without missing data), representing a 25% response rate. The majority of participants were male (96.97%), with a male to female ratio of 32:1. Just over half were from Bangkok (54.84%), and nearly 50% were enrolled in Year I of the Vocational Educational Certificate, with 20% from the mechanics department. Over half (55%) received a daily allowance of around $US 4, and half (50%) contributed up to $US 335 a month to their families' income.

2.1. Instruments

The self-report questionnaires were modified from the Communities That Care Youth Survey (CTC-YS) (Arthur et al., 2002), which has been shown to have high reliability and validity when used with Thai adolescents (Wongtongkam, Ward, Day, & Winefield, 2013). The CTC-YS instrument was designed for use among adolescents aged 11–18 years to assess a range of risk and protective factors across the domains of individual, peer, school, community, and family, with regard to alcohol/illicit drug use and violence/delinquent behaviors.

2.1.1. Alcohol and illicit drugs scale

Respondents were asked to estimate on how many occasions during the past 30 days they had consumed alcoholic beverages, sniffed glue, or used cocaine, marijuana, heroin, ecstasy or methamphetamine. Response options were 0, 1–2, 3–5, 6–9, 10–19, 20–39, and 40 or more occasions.

2.1.2. School domain

There were four sub-domains in the school domain, including poor academic performance, low school commitment, school opportunities or prosocial involvement, and school rewards for prosocial involvement. For example, *the low school commitment sub-domain* included seven items where respondents indicated whether they thought that school work was important, the courses interesting, and they were learning in school, on a rating scale from 1 ('If the statement is very false') to 4 ('If the statement is very true').

2.1.3. Peer and individual domain

Twelve sub-domains were included relating to *friends' used of drugs*, *friends delinquent behaviors*, *early initiation of drug use*, *favorable attitude toward antisocial behavior scale*, *favorable attitude toward ATOD* (*Alcohol, Tobacco, and Other Drugs*) *use*, *sensation seeking*, *low perceived risks of drug use*, *rebelliousness*, *religiosity*, *social skills*, *belief in moral order and interaction with prosocial peers*. For example, the *friends used of drugs* scale contained 4 items in which respondents were asked to indicate how many of their close friends smoked cigarettes, used alcohol, used marijuana, or used illegal drugs in the past year, on a scale ranging from 0 to 4.

2.2. Data analysis

Descriptive statistics were used to analyze the alcohol and illicit drugs scale. Binary logistic regression was employed to indicate whether the protective and risk factors in the peer/individual and school domains were related to alcohol and illicit drug use. The alcohol and illicit drugs scale was dichotomized into 'never used' and 'used once or more'. Each sub-domain was dichotomized into low risk/protective (below the 75th percentile), and high risk/protective (75th percentile and above). Items below the 75th percentile were the reference group. A model was constructed to calculate maximum likelihood odds ratios (OR) and 95% confidential intervals (95%). The model was presented as crude odds ratios and adjusted odds ratios. An adjusted odds ratio was determined by controlling for confounding variables (age, gender, grade, department, daily income, and family income). A Variance Inflation Factor of 1.05 showed no multicollinearity in the model.

3. Results

3.1. Prevalence of alcohol and drug use

Overall, 40% of respondents reported that they had not used alcohol in the past month, while almost 35% had used alcohol on a couple of occasions. Approximately 98% had not used illicit drugs in the past 30 days.

3.2. School domain predicted substance use

With school risk factors, poor academic performance was not a good predictor for alcohol and illicit drug use (see Table 2). Low school commitment was associated with an elevated risk of using illicit drugs, ranging from adjusted odds ratios of 2.84 (sniffed glue) to 10.06 (ecstasy). In contrast, school opportunities and school rewards for prosocial involvement did not appear to be protective factors against alcohol and illicit drug use, except for marijuana (see Table 1).

3.3. Peer and individual domain predicted substance uses

Nearly all of the risk items for the peer and individual domains were strongly related to alcohol and illicit drug use (see Table 2). Friends use of drugs was strongly linked to use of all substances, particularly marijuana (adjusted odds ratio = 6.94, 95% CI = 4.12–11.71). Similarly, the friends' delinquent behavior sub-domain was a strong predictor for all alcohol and illicit drug use items. Having delinquent friends