

Risk and Protective Factors for Adolescent Substance Use and Mental Health Symptoms

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ABSTRACT

The purpose of this study was to gain a better understanding of the association between youth substance use patterns and mental health symptoms, and the risk and protective factors unique and common to each of these areas. A survey was administered to a random sample of 663 youth ages 12 to 18 in Victoria, British Columbia. As expected, age was a strong predictor of greater frequency and amounts of alcohol consumption. Males were at higher risk for alcohol consumption and externalizing problems while females were more susceptible to internalizing problems. Youth who scored lower on substance use and reported fewer mental health symptoms rated their parents and peers as being more protective. Youth who scored higher on substance use scored higher on the risky peer affiliations scale.

Mental health surveys have shown that there is a very high prevalence of psychiatric morbidity in youth aged 15–24 years (e.g., Kessler et al., 1994). Many health authorities in Canada, for example in Ontario and British Columbia, have moved to amalgamate addiction and mental health services. The successful implementation of these integrated services for youth requires an understanding of the nature of the association between substance use and mental health in youth, and the risk and protective factors that are shared or unique to each. Research on risk and protective factors related to maladjustment in adolescence has recognized a cluster of problem behaviours, including delinquency and

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substance abuse, as a syndrome (Allen, Leadbeater, & Aber, 1994). However, previous studies have rarely looked at the overlap of these behavioural problems with mental health concerns such as anxiety and depression, which are related to internalizing problems. The co-occurrence of behavioural and mental health problems suggests a need to understand to what extent different problems have common or unique predictors. In this investigation an expanded version of the Jessor et al. model (e.g., Costa, Jessor, & Turbin, 2007; Jessor et al., 2003; Turbin, Jessor, & Costa, 2006) was developed and tested to inform approaches to integrating mental health and substance use services.

In the framework proposed by Jessor and colleagues, risk and protective factors are identified across different social contexts (i.e., family, peer, neighbourhood, and school). Protective factors are associated with a reduced risk while risk factors are associated with an increased risk for engaging in problem behaviours (Costa et al., 2007). Risk and protective factors are classified as either psychosocial or behavioural. Psychosocial protective factors include peer role models, personal and social controls against norm-violating behaviour, and environmental support (e.g., family closeness). Behavioural protective factors include participation in positive or prosocial activities such as religious attendance. Psychosocial risk factors include models for high-risk behaviour, opportunities for engaging in risk behaviour, and personal and social vulnerability (e.g., peer pressure). Behavioural risk factors include problem behaviour involvement.

Our adaptation of the Jessor model, presented in Figure 1, shows interrelated risk and protective factors that are salient for the prediction of either substance use problems or mental health problems (including broad categories of externalizing and internalizing symptoms). The purpose of this study is to investigate the common and unique predictors of substance use and mental health symptoms. By examining the effects of similar risk and protective factors on heterogeneous outcomes, we can gain a better understanding of their common and unique influences.

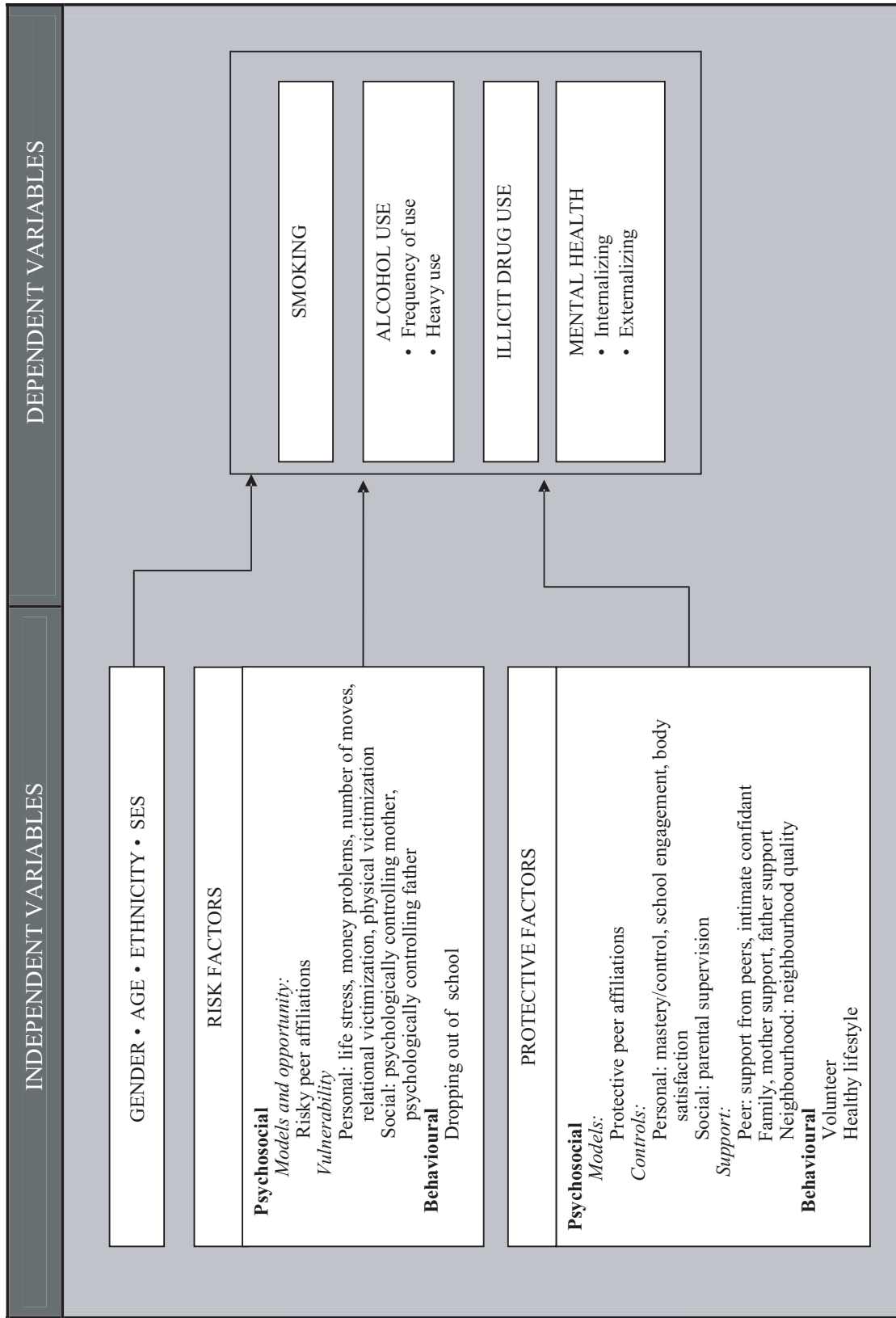
RISK FACTORS

Psychosocial Risk Factors

Models and opportunity: Risky peer affiliations. Current research has generally supported the relationships between peer deviance and alcohol use and abuse (Barnes, Hoffman, Welte, Farrell, & Dintcheff, 2006; Wood, Read, Mitchell, & Brand, 2004), substance use (Barnes, Barnes, & Patton, 2005; Pires & Jenkins, 2007; Simons-Morton & Chen, 2005; Wills, Vaccaro, McNamara, & Hirky, 1996), and delinquency (Reifman, Barnes, Dintcheff, Farrell, & Uhteg, 1998). Recent studies have used longitudinal designs, linear growth modelling, and general population samples. However, the results of these studies are not consistent, with peer influences sometimes predicting a growth in substance use patterns (Barnes et al., 2006; Simons-Morton & Chen, 2005) and sometimes not (e.g., Pires & Jenkins, 2007; Wills et al., 1996).

Personal vulnerability. In our model, life stress was operationalized by a measure of major stressful life events. Although the tension-reduction hypothesis has been popular for a number of years in the addiction field, there have been surprisingly few general population studies on the relationship between life stress and alcohol, and drug consumption and abuse. Two recent studies with different age

Figure 1
Predictive Factors and Substance Use and Mental Health Symptoms Model



Note. SES = socioeconomic status.

groups (Grades 7 to 9 in the Windle, Mun, & Windle [2005] study, and ages 16 to 25 in the Wills et al. [1996] study) reported a significant association between higher life stress and an accelerating substance use trajectory.

In our model, parent education was used as an indicator of family socioeconomic status, a money-problems scale was used as an indicator of perceived socioeconomic vulnerability, and the number of moves was used as an indicator of social instability. Recent research by Lansford et al. (2006) reported a relationship between lower socioeconomic status and higher externalizing in the adolescent period. These authors also noted that lower socioeconomic status, both in early childhood and in adolescence, is associated with internalizing symptoms. DeWit (1998) reported that moving residences was associated with earlier initiation of illicit drug use and a more rapid progression of problems among young adults.

Victimization by peers, both physical and relational, was also included in our model. Recent research by Sullivan, Farrell, and Klierer (2006) found that physical victimization in eighth graders was associated with externalizing problems including cigarette and alcohol use; relational victimization, after controlling for physical victimization, was associated with externalizing problems including all categories of drug use.

Social vulnerability. Parental psychological control was used as an indicator of social vulnerability in our model. Psychological control as described by Barber (1996) is an intrusive parenting style characterized by manipulation and exploitation of the parent-child bond and negative affect-laden communications. This parenting style has been found in association with both internalizing and externalizing symptoms (Barber & Harmon, 2002; Barber, Stolz, Olsen, Collins, & Burchinal, 2005).

Behavioural Risk Factors

In our model, school engagement is treated as an individual-level protective factor, and dropping out of school is treated as a behavioural risk factor. In one longitudinal study, the researchers followed up a sample of first grade students 25 years later (Crum, Ensminger, Ro, & McCord, 1998). They found that dropping out of school prior to completion of grade 12 was associated with a higher risk of alcoholism in adulthood.

PROTECTIVE FACTORS

Psychosocial Protective Factors

Models – Protective peer affiliations. It is generally recognized that adolescents show an increased orientation toward peers, that substance use commonly takes place in a social context, and that young people tend to hang out in crowds of like-minded people (Verkooijen, de Vries, & Nielsen, 2007). In the substance use field the majority of research has focused on the impact of association with delinquent or high-risk peers. Much less attention has been paid to the possible protective effects of association with low-risk peers. Verkooijen et al. (2007) examined the relationship between substance use and involvement in different types of youth crowds including sporty, pop, skate/hip-hop, quiet,

techno, computer nerd, religious, and hippie. Results showed that identification with sporty, quiet, computer nerd, and religious subgroups was associated with lower risks, while association with pop, skate/hip-hop, techno, and hippie subgroups was associated with higher substance use. In the current study a protective peers indicator was established by combining items indicating affiliation with peers who were into computers, worked hard for grades, played sports, and belonged to church or spiritual groups.

Controls – Personal. In our theoretical model, personal controls that are protective against norm-violating or problem behaviours were assessed by measures of mastery/control, school engagement, and body satisfaction. Higher mastery has been found by Herman-Stahl and Petersen (1996) to be associated with lower depression scores in young people (i.e., sixth and seventh graders). The Jessor model (Jessor, Donovan, & Costa, 1991) also identifies a strong attachment to conventional social institutions such as schools as an important protective factor. In our study this was measured by the school engagement variable. School engagement has been shown to be an important protective factor in delaying the onset of smoking and drinking in early adolescence (Simons-Morton & Chen, 2005).

Higher body satisfaction was expected to be a protective factor for mental health symptoms but not for substance use. Research by ter Bogt et al. (2006), for example, reported that dissatisfaction with body weight was associated with higher scores on internalizing and externalizing symptoms in both adolescent girls and boys.

Controls – Social. In our model, social protective controls were measured by parental supervision. Recent studies have been very consistent in showing the protective effect of parental supervision/monitoring on heavy drinking (Barnes et al., 2006; Wood et al., 2004), daily smoking initiation (Hill, Hawkins, Catalano, Abbott, & Guo, 2005), externalizing behaviour (Lansford et al., 2006), and delinquency (Barnes et al., 2006), but not on internalizing symptoms (Lansford et al., 2006). Barnes et al. (2006) followed a general population sample over six waves of data collection, and found that parental monitoring predicted lower levels of alcohol misuse and delinquency, and strongly predicted the rates of increase in this behaviour over time.

Support – Peers. Recent research by Klineberg et al. (2006) found support for the protective effects of peer social support on depression in a young adolescent sample. Similar results were reported by Herman-Stahl and Petersen (1996) in a sample of students in the sixth and seventh grades. In a longitudinal study on symptoms of depression among adolescents in a Canadian general population sample, Galambos, Leadbeater, and Barker (2004) found a relationship between changes in social support and changes in symptoms of depression. Improvements in the level of social support were associated with lower reports of depression.

Support – Family. Numerous studies have now confirmed a relationship between the closeness, cohesion, and nurturance of families and lower risk for offspring substance misuse (Duncan, Duncan, & Strycker, 2003; Hill et al., 2005; Pires & Jenkins, 2007; Sale et al., 2005; Wills et al., 1996). According to Sheeber, Davis, Leve, Hops, and Tildesley (2007, p. 144), “the most widely reported finding with regard to family processes is that depression is inversely related to the level of support, attachment and approval adolescents experience in the family environment.”

Support – Neighbourhood. While the importance of neighbourhood social disadvantage and social capital on well-being has been frequently studied in adult samples, much less is known about the importance of this factor among adolescents. A recent study by Drukker, Kaplan, Schneiders, Feron, & van Os (2006) found that neighbourhood quality per se did not predict change in mental health during the transition to early adolescence. A measure of neighbourhood quality that included perceptions of safety and closeness to neighbours was employed in the current study.

Behavioural Protective Factors

In the Jessor model (Jessor, Van Den Bos, Vanderryn, Costa, & Turbin, 1995), involvement in prosocial activities is considered to be one important behavioural protective factor. In the current investigation, we focused on one facet of this domain using a measure of volunteer activities developed by our research team. We also incorporated a measure of a general orientation toward a healthy lifestyle developed by Gillis (1997).

METHOD

Participants

The data were collected in Victoria, British Columbia, a medium-sized Canadian city, in the spring of 2003. From a random sample of 9,500 private telephone listings, 1,036 households with eligible youth (between the ages of 12 and 18 years) were identified. Complete data were available on 663 youth (64% of households with eligible youth): 321 boys and 342 girls. A detailed description of recruitment and tools appears in Jansson, Mitic, Russell, and Dhami (2006).

Procedures

The Healthy Youth Survey (HYS) was administered in person by trained interviewers who met with individual youth either in their homes or in a location that provided a safe environment in which to respond. Informed consent was first sought from parents or guardians and then from youth. During the one-hour meeting, the youth answered a two-part questionnaire. The first part was administered and recorded by the interviewer. In the second part, which tapped delinquent activities and use of tobacco, alcohol, and other substances, the interviewer read the questions and youth recorded their own answers to enhance privacy and confidentiality. Youth received a \$25 gift certificate for a music or food store for their participation.

Measures

Figure 1 presents an overview of the variables on which data were gathered. These data were used to predict tobacco, alcohol, and other drug use, and the internalizing and externalizing symptoms of mental health. A summary of the measures used, including the reliabilities and sources for the measures, is provided in Table 1. Reliabilities were not computed for several of our indices such as life stress, risky peer affiliations, neighbourhood quality, and protective peer affiliations because these indicators

Table 1
Description of Measures

Independent variable measures with description (number and format of items; Cronbach α)	Sources
Psychosocial risk	
1. <i>Models risk/peers:</i> Risky peer affiliations (6, Yes/No)	Developed by survey research team
2. <i>Vulnerability risk/personal:</i> Life stress (7, Yes/No)	Developed by survey research team
Money problems (3, 4-point Likert; .51)	Developed by survey research team
Number of household moves (1, open-ended)	Developed by survey research team
Relational victimization (5, 3-point Likert; .73)	Crick & Grotpeter (1995)
Physical victimization (5, 3-point Likert; .67)	Crick & Grotpeter (1995)
3. <i>Vulnerability risk/social:</i> Psychologically controlling mother (8, 3-point Likert; .75)	Barber (1996)
Psychologically controlling father (8, 3-point Likert; .79)	Barber (1996)
Behavioural risk	
Dropping out of school (1, Yes/No)	Developed by survey research team
Psychosocial protection	
1. <i>Models protection/peers:</i> Protective peer affiliations (5, Yes/No)	Developed by survey research team
2. <i>Controls protection/personal:</i> Mastery and control (9, 3-point Likert; .63)	Peterson, Schulenberg, Abramowitz, Offer, & Jarcho (1984)
School engagement (4, 5-point Likert; .72)	Wehlage, Rutter, Smith, Lesko, & Fernandez (1989)
Body satisfaction (4, 5-point Likert; .59)	Cash, Cash, & Butters (1983)
3. <i>Controls protection/social:</i> Parental supervision (5, 3-point Likert; .65)	Barber (1996)
4. <i>Support protection/peer:</i> Support from peers (9, Yes/No; .51)	Procidano & Heller (1983)
Intimate confidant (1, Yes/No)	Brown & Harris (1978)
5. <i>Support protection/family:</i> Mother support (5, 3-point Likert; .75)	Schaefer (1965)
Father support (5, 3-point Likert; .77)	Schaefer (1965)
6. <i>Support protection/neighbourhood:</i> Neighbourhood quality (6, 5-point Likert; .55)	Developed by survey research team
Behavioural protection	
Participation in volunteer activities (6, Yes/No)	Developed by survey research team
Healthy lifestyle (8, 3-point Likert; .73)	Gillis (1997)
Dependent variable measures with description (number and format of items; Cronbach α)	Sources
Mental health	
BCFPI internalizing behaviour (18, 3-point Likert; .85)	Cunningham, Pettingill, & Boyle (2001)
BCFPI externalizing behaviour (18, 3-point Likert; .79)	Cunningham, Pettingill, & Boyle (2001)
Substance use	
Smoking (1, 3-point scale)	Adapted from Canadian and province-wide surveys
Alcohol consumed (1, 5-point scale)	Adapted from Canadian and province-wide surveys
Alcohol 3+ (1, 5-point scale)	Adapted from Canadian and province-wide surveys
Drug use index (8, 5-point scale)	

Note. BCFPI = Brief Child and Family Phone Interview.

were not expected to be unidimensional. For example, for protective peer affiliations, the outcomes for affiliation with peers who were academically inclined may not be the same as outcomes for affiliation with peers who were participating in sports, although both types of affiliations would still be protective. The selection of items included in the risky peer affiliation and protective peer affiliation indices was validated by the significant correlations of the individual items with drug use and mental health symptoms.

Analytic Procedures

The risk and protective factor model shown in Figure 1 was tested using a step-wise series of analyses. First, univariate *F* tests and bivariate correlations were performed in each of the three predictor domains (i.e., sociodemographic factors, risk factors, and protective factors) to identify predictors that were significantly associated with the six outcomes shown in Figure 1. Second, significant predictors within each domain were then entered into a domain-specific series of simple multiple-linear regression analyses. Next, the significant predictors for each outcome variable from each of the domains were entered into hierarchical multiple-linear regression models predicting each of the six dependent variables. These analyses were conducted along the lines described by Jessor and colleagues (e.g., Costa, Turbin, & Jessor, 1999) with sociodemographic control variables entered in the first step, risk factors in the second step, and protective factors in the third step. Entering the variables in this order gave priority to the importance of risk factors over protective factors. The order of entry did not affect the end-stage betas that we report.

To avoid problems of multicollinearity in highly correlated parenting measures, the protective parenting measures (mother support, father support, and parental supervision) were combined to form a Protective Parenting Index. Measures of the psychological control of mothers and fathers were combined to form a Risky Parenting Index. For the final regression analyses, these two indicators were combined to form a Protective versus Risky Parenting Index.

RESULTS

Demographic Characteristics of the Sample

The mean age of the sample was 15.5 years (*SD* +/- 1.9), and the sample was evenly distributed with respect to gender (48.5% male, 51.5% female). Most adolescents in our sample (94%) were still in school. A comparison with Canadian census figures for a comparable age cohort and geographic region showed that our sample was similar in terms of demographic characteristics (census data are shown in parentheses in the following statements). A total of 67.9% (64.7%) of our sample reported living with both parents, and 84.6% (83.2%) reported that they were Caucasian. The families in our sample were highly educated; according to the youth reports, 49.5% (48.0%) of fathers had completed college or university, and 53.9% (54%) of mothers had obtained this level of education.

Substance Use Patterns

The most commonly used substances were alcohol (66.8%), marijuana (35.7%), and tobacco (13.1%). Although recent media attention has focused on the use of club drugs and amphetamines, the prevalence of using these kinds of drugs was fairly low (5.3% and 2.6%, respectively).

Bivariate Correlations for Substance Use Patterns and Mental Health Symptoms

Significant positive correlations were found between all substance use measures and internalizing ($r = .18$ for alcohol consumption, $.15$ for 3+ drinks frequency, $.23$ for illicit drug use, and $.21$ for smoking) and externalizing symptoms ($r = .31$ for alcohol consumption, $.26$ for 3+ drinks frequency, $.36$ for illicit drug use, and $.27$ for smoking).

Multiple Linear Regression Analyses for Substance Use and Mental Health Symptoms

Results of the six final regression analyses are presented in Table 2. The amount of variance explained ranged from 29% for smoking to 47% for the frequency of consuming three or more drinks of alcohol per day. The amount of variance explained across the six outcomes by the predictors within the demographic domain ranged from 3% for externalizing symptoms to 31% for the frequency of 3+ drinks per day. Age was the strongest predictor, with age being particularly important in predicting greater frequency and amounts of alcohol consumption. Males were at higher risk for alcohol consumption and externalizing problems.

Considering the risk-factor domain first, the amount of variance explained by predictors across the six dependent variables ranged from 10% for alcohol consumption to 21% for illicit drugs and externalizing variables. The risky peer affiliations variable was significantly associated with all of the dependent variables, and most strongly associated with illicit drug use. Stressful life-events scores were positively associated with both substance use and internalizing problems. Other risk factors had significant associations with specific outcomes. One interesting pattern was that relational victimization predicted internalizing symptoms, whereas physical victimization predicted externalizing symptoms. The school dropout variable was uniquely associated with higher reported levels of smoking. Less stable housing, determined by a higher number of moves over a lifetime, was associated with higher drug use as anticipated.

In the protective-factor domain, the amount of variance explained by predictors across the same six dependent variables ranged from 4% for the frequency of consuming three or more drinks per day to 12% for externalizing and internalizing symptoms. Protective parenting was associated with lower consumption on all of the substance use measures except the frequency of consuming three or more drinks. Protective parenting was also associated with better mental health (i.e., lower internalizing and externalizing scale scores). Protective peer affiliations were significantly associated with lower reported substance use, but not with fewer mental health symptoms. The presence of an intimate confidant did not prove to be a significant protective factor in relation to any of the dependent variables. In fact, the availability of an intimate confidant was associated with higher scores on internalizing symptoms. Further exploration showed that this association applied only to the female sample.

Table 2
Regression Analyses (β at Final Step) Predicting Drug Use and Mental Health Using Demographics, Protective Factors, and Risk Factors

Step/predictor measures	Smoking	Alcohol consumed	Alcohol 3+	Drugs	Externalizing	Internalizing
1. Demographics:						
Age	.00	.32***	.34***	.09*	-.03	.08
Gender		-.07*	-.09**	.00	-.09*	.05
Ethnicity (Asian)		-.06*	-.07*	-.04	-.09*	
Father's education	-.01	.04	.05	.03	.03	.05
R^2 change	.09***	.28***	.31***	.13***	.03***	.04***
2. Risk factors:						
Psychosocial						
<i>Models or opportunities</i>						
Risky peer affiliations	.33***	.22***	.29***	.37***	.23***	.12**
<i>Personal vulnerability</i>						
Stressful events		.12**	.10*	.09*		.13***
Number of moves				.14***		
Relational victimization				-.05	.06*	.20***
Physical victimization					.13**	
Family money problems					.04	
Behavioural						
School dropout	.16***					
R^2 change	.15***	.10***	.11***	.21***	.20***	.19***
3. Protective factors:						
Psychosocial						
<i>Models</i>						
Protective peer affiliations	-.13***	-.22***	-.21***	-.20***		
<i>Controls/personal</i>						
Mastery and control					-.24***	-.22***
Body satisfaction						-.15***
<i>Support</i>						
Intimate confidant	.04	.02	.02	.00	.06	.13***
Protective vs. risky parenting	-.11**	-.10**	-.03	-.13***	-.23***	-.09*
Behavioural						
Healthy lifestyle	-.14***					
R^2 change	.06***	.06***	.04***	.06***	.12***	.12***
Total R^2	.29	.43	.47	.40	.35	.36

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

The personal protective factors showed independent associations with specific outcomes rather than general effects. Higher mastery or control was associated with better mental health, higher body satisfaction was associated with fewer internalizing symptoms, and having a healthy lifestyle was associated with less smoking.

DISCUSSION

The results of our survey identified several areas of concern with respect to substance use. Marijuana and alcohol use were quite common in the sample, with some youth heavily involved. There were some encouraging signs in this study as well. Rates for tobacco use were fairly low among the younger participants, and the use of club drugs was not as common as had been anticipated given the level of media attention.

The relations between substance use and internalizing and externalizing symptoms were confirmed. These results, of course, do not speak to the direction of causation in these associations. Research findings to date seem to suggest that early externalizing symptoms may be predictive of developing substance use later (e.g., Mason & Windle, 2002). There is also some evidence that early drug use may lead to internalizing symptoms (Trim, Meehan, King, & Chassin, 2007). In particular, Galambos et al. (2004) noted that increases in smoking were associated with increases in symptoms of depression in adolescents.

The effectiveness of the set of predictors used in our study to predict substance use and internalizing and externalizing symptoms seems to be in the same order of magnitude as results reported in the Jessor research (e.g., Costa et al., 1999; Costa et al., 2007). Costa et al. (1999) reported that their risk and protective factor model explained 34% of the variance in problem drinking, and Costa et al. (2007) reported that their model explained 33% of the variance in college student smoking. These proportions are comparable to those observed here where 29% of the variance in smoking was explained, and 47% of the variance in heavy drinking (frequency of having three or more drinks) was explained.

In our final regression models, peer and family contexts played an important role in predicting both substance use and mental health symptoms. In this investigation, a risky peers measure was derived that provided an index of the person's affiliation with high-risk peers. This index seems to have worked well in predicting higher scores on substance use and internalizing and externalizing symptoms. These results are consistent with the work of Verkooijen et al. (2007) showing that youth involved in the pop, skate/hip-hop, hippie, and techno subgroups reported higher levels of substance use. Results are also consistent with recent longitudinal studies by Barnes et al. (2006) and Simons-Morton and Chen (2005) showing a relationship between association with deviant peers and substance use.

Protective peer affiliations also play an important role in predicting lower scores on substance use. These results are consistent with the findings of Verkooijen et al. (2007) that youth involved in the sporty, quiet, computer nerd, and religious subgroups were at a lower risk for substance use. It is also important to note, however, that having protective peer affiliations does not seem to predict lower internalizing and externalizing symptoms.

In this investigation, an index of protective versus risky parenting was constructed. Parents who were characterized by the youth as scoring high on support and supervision and low on coercive control scored highest on this variable. Protective as opposed to risky parenting was associated with lower scores on most of the substance use measures and on internalizing and externalizing symptoms.

The presence of an intimate confidant did not have the expected protective effect on either substance use patterns or mental health symptoms. Having an intimate confidant was in fact positively associated with internalizing symptoms. Recent research by Rose, Carlson, and Waller (2007) provides a possible explanation for this finding. They suggested that for some girls close relationships may be characterized by mutual rumination about symptoms, which could be associated with increasing symptoms of anxiety and depression over time. Our findings may be similar because results for this variable were also specific to female participants.

Implications

The findings suggest that both common and unique predictors of substance use and mental health concerns are important for understanding youth maladjustment problems, and that these predictors need to be considered in efforts to integrate addictions and mental health services for youth. Consistent with previous research (e.g., Leadbeater, Kuperminc, Blatt, & Hertzog, 1999), we found that the influences of the risk and protective factors of parents and peers largely cut across substance use and mental health concerns, suggesting that context factors remain highly salient in young adolescents' maladjustment and are likely equally salient in their recovery. Treatments that continue to involve parents, where possible, and that consider the effects of peers are clearly needed in integrated approaches to these problems. In particular, multidimensional family therapy (Liddle, Rowe, & Dakof, 2004) and multisystemic therapy (Henggeler, 2003) are two promising approaches to dealing with youth problem behaviour.

The awareness that specific risk and protective factors are salient in predicting diverse outcomes also suggests that assessments and treatments cannot take a general approach. The salience of peer victimization, for example, for mental health but not for substance use problems suggests that recognition of particular disturbances in peer relationships (beyond peer support or negative peer influences) may be relevant to the heterogeneity of outcomes that youth experience. Physical victimization can provoke retaliation in aggressive youth, while relational victimization can be disruptive of peer relationships and lead to loneliness and depressive symptoms. The greater associations of personal risk and protective factors (e.g., mastery, school engagement) with internalizing problems also suggest that strategic efforts may be needed to address the internalizing aspects of youth maladjustment. Overall, it is clear that care is needed in the assessment of factors that contribute to co-occurring or different outcomes in the context of integrated services. A uniform "one size fits all" treatment modality is unlikely to be sufficient in addressing all of these concerns even in the context of integrated addictions and mental health services.

RÉSUMÉ

Nous avons réalisé cette étude dans le but d'obtenir une meilleure compréhension du lien qui existe, chez les jeunes, entre la consommation d'alcool ou de drogues et les symptômes de maladie mentale, et pour établir les risques et les facteurs de protection particuliers à chacun de ces phénomènes ou communs aux deux. Nous avons fait un sondage auprès de 663 jeunes de Victoria (Colombie-Britannique) âgés de 12 à 18 ans. Comme prévu, nous avons observé que l'âge est un prédicteur fiable de consommation plus fréquente et plus importante d'alcool. Les garçons forment un groupe plus à risque pour ce qui est de la consommation d'alcool et des troubles du comportement extériorisé, alors que les filles sont plus susceptibles d'avoir des perturbations émotionnelles. Chez les jeunes qui consomment peu d'alcool ou de drogues, les parents et les pairs représentent un facteur de protection important ; ceux qui font une plus grande consommation de ces substances ont obtenu des résultats plus élevés sur l'échelle de l'affiliation à des pairs à risque.

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