

Use of School-Based Health Centres for Mental Health Support in Cape Breton, Nova Scotia

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Objective: To determine whether students with self-reported needs for mental health support used school-based health centres (SBHCs) for this purpose.

Method: A secondary analysis was conducted on self-reported data collected from 1629 high school students from Cape Breton, Nova Scotia. Descriptive statistics and logistic regression analyses were employed to determine the influence of sex, grade, sexual orientation, socioeconomic status (SES), school performance, social involvement, and health risk-taking behaviours on need for mental health support and use of SBHC for that purpose.

Results: One-half of surveyed students reported needs for mental health support. Risk for depression was the most commonly reported indicator of need. Only 13% of students visited a SBHC nurse for mental health support, and 4 times as many females than males used the SBHC for this purpose (20.4%, compared with 5.3%, $P < 0.001$). There was a significantly increased likelihood of use of SBHC for mental health support, given the presence of a greater number of need factors. Multivariate logistic regression determined that female sex (OR 5.57, 95% CI 3.07 to 10.09), lower SES factor (OR 1.19, 95% CI 1.11 to 1.28), sexual health risk-taking behaviours (OR 1.72, 95% CI 1.28 to 2.31), and suicidal behaviour (OR 1.83, 95% CI 1.48 to 2.27) were significantly associated with the use of SBHCs for mental health support.

Conclusions: Substantial need for mental health support and significant unmet need were observed. In particular, male students underused the services relative to their self-reported need. Implications for SBHCs and directions for future research are discussed.

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Clinical Implications

- About 1 in 2 students served by SBHCs was in need of mental health support. Only 1 in every 6 of these students reported visiting the SBHC nurse.
- Reasons for nonuse of the SBHC for mental health support may include a lack of awareness about the range of services offered, a culture of viewing the SBHC as a sexual health clinic rather than a medical clinic, stigma associated with mental illness, and a lack of awareness of need.
- Steps toward meeting mental health needs of the student population may include raising the profile and range of support services for mental health at SBHCs, re-evaluating the way mental health needs are assessed, and widespread clinical use of screening tools for need for mental health support.

Limitations

- Our survey relied on self-report usage data and proxy measures of need for mental health support with no access to secondary sources of information such as clinic records of use, diagnosis, referral, or other information.
- The small number of male users of SBHC for mental health support ($n = 43$) may limit the conclusions that can be made about this group.
- Our study looked at 3 SBHCs in 1 administrative region, which may vary from others in the province of Nova Scotia and across Canada in terms of organization, administration, and provision of services.

Key Words: *adolescence, mental health services, school health*

Mental disorders are a prevalent health problem among youth,¹ constituting the most common cause of disability in this population.² Typically, major mental disorders such as depression, bipolar disorders, anxiety disorders, and schizophrenia have their onset during adolescence or young adulthood.³ Disorders arising during this developmental period often persist across the life course and can pose an increased risk for disability, especially in the absence of mental health services.⁴

Safe and effective interventions exist for a wide range of mental disorders that affect young people. Available interventions are shown to decrease short-term morbidity and improve long-term outcomes.^{5,6} However, a gap exists between the need for mental health care and the use of mental health services by youth. For example, few youth use mental health services even though their perception of unmet need is high.¹ Thus it is necessary to consider novel approaches for mental health care delivery that emphasize ease of access for adolescent populations. Recognizing this problem, the school environment has been promoted as a venue where the mental health needs of youth can be addressed with fewer barriers to services.⁷

In a study of SBHC mental health services use patterns in Nova Scotia, Santor et al⁸ found that while 1 in 5 students screened at risk for mood disturbance (Beck Depression Inventory), only 1 in 20 used mental health services offered by the SBHC. Comparable visit statistics were found for the 13% of students who identified as experiencing emotional and social problems. A longitudinal study of a SBHC located in an urban New York City high school identified 3 key reasons youth accessed mental health services: issues relating to pregnancy and sexuality, dysphoria and depression (for example, history of suicidal ideation), and conflict and violence.⁹ In a subsequent survey among the same student population, Pastore et al¹⁰ found that 34% of students accessed the SBHC for services related to mental health problems such as depression (31%), daily use of alcohol (5%), suicidal ideation (16%), and history of suicide attempt (10%).

The SBHC model of health care delivery has the potential to offer greater service access to youth who are unlikely to use nonschool-based mental health services. In particular, it has been suggested that SBHCs may be well suited to increasing access to mental health services for young males. Juszczak et al¹¹ reported that male youth with need of mental health

counselling were more likely to use SBHC services compared with mental health programming located within community settings.

This secondary analysis examines self-reported data from 1629 students attending 3 high schools in Cape Breton, Nova Scotia, that offer on-site SBHCs. The objectives of our study were to determine whether students with need for mental health support used SBHCs for that purpose, and to determine which indicators of need for mental health support were most prevalent among users.

Theoretical Framework

The design, analysis, and interpretation of our study were guided by Andersen's behavioural model of health services use.¹² Andersen identifies 3 domains that influence a person's service use patterns, including predisposing factors (for example, demographics, social structure, and health beliefs), enabling resources (for example, personal or family and community resources), and need for service, both perceived (as determined by the person) and evaluated (as determined by some diagnostic method).¹² Figure 1 shows the predisposing, enabling, and need factors included in our study.

Methods

Data Collection

A secondary analysis was conducted on data collected for the SBHCs in Cape Breton: the Gathering Evidence to Inform Policy and Practice project.¹³ Details of this study are reported elsewhere.^{13,14} Data were originally collected via self-administered paper questionnaires during regularly scheduled classes under the supervision of trained teachers. Members of the research team were available to assist with survey administration. Parents were sent advance notification of the survey and could exclude their child(ren) from the survey by contacting the school. Written informed consent was obtained from students prior to survey administration. Ethical approval for both the original project and the secondary analysis was granted by Dalhousie University Human Research Ethics Board.

Setting

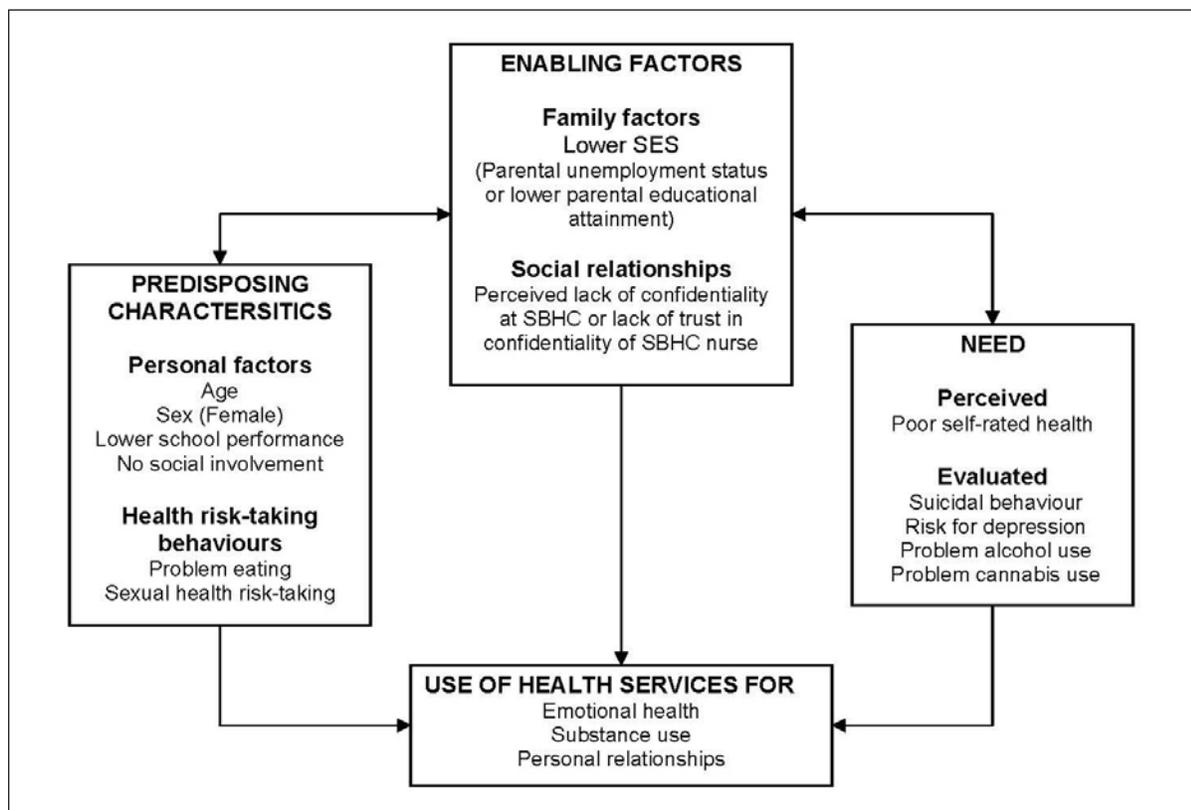
The SBHCs investigated in our study operate in dedicated offices within high schools. Each is serviced by a full-time registered nurse, a full-time administrative assistant, and a part-time general practitioner. Clinic appointments occur on weekday afternoons.

At a student's initial SBHC visit each school year, the nurse completes a general intake form, including questions regarding the student's eating behaviours, substance use, emotions, and self-rated health. When a student presents with a mental health complaint, a semi-structured mental health assessment, including questions about current home and school life, eating behaviours, extracurricular activities, substance use, sexual history, and suicidal ideation, is completed. When

Abbreviations used in this article

CES-D	Center for Epidemiologic Studies—Depression Scale
SBHC	school-based health centre
SES	socioeconomic status

Figure 1 Andersen's¹² behavioural model of health care use applied to use of SBHCs for mental health support



necessary, SBHC staff facilitate external referrals for youth to access additional health or mental health services within the community.

Data Measurement

Use of SBHC for Mental Health Support. Use of SBHCs for mental health support was defined as reporting having visited the SBHC nurse at least once during the past school year for concerns related to emotional health, personal relationships, or substance use.

Predisposing Factors. Predisposing factors include personal factors and health risk-taking behaviours. Personal factors are age, sex, degree of social involvement (dichotomized as none, compared with any involvement in school teams, clubs, or other social opportunities), and overall academic grade on most recent report card (dichotomized as an average mark of 70%, compared with 69% or less). Health risk-taking behaviours included problem eating behaviours and sexual health risk-taking behaviours. Presence of a problem eating behaviour was defined as having reported any of the following in the previous 30 days: fasting for 24 hours or more; taking diet pills, powders, or liquids; or vomiting or taking laxatives to lose weight or to keep from gaining weight. Presence of sexual health risk-taking behaviour was defined as having reported any of the following in the past 12 months: 6 or more sexual partners; unplanned vaginal sex due to being under the influence of alcohol or substances; low frequency of condom

use (sometimes or never); or any of the following at last instance of vaginal sex: not using a condom (both sexes), or not using any form of contraception (females only).

Enabling Factors. Enabling factors include SES and social relationships influencing the patterns of health services use. Parental education level and employment status were used as proxy measures for lower SES.¹⁵ Presence of lower parental educational attainment was measured as one or both parents having high school or lower education (compared with the single parent or both parents having post-secondary education). Presence of lower parental unemployment was measured as one or both parents not having paid employment (compared with the single parent or both parents being employed).

Confidentiality, a measure of the social relationships that influence the use of SBHCs, was measured using a composite of 2 questions. SBHC users were asked if they agreed with the statement, “[P]eople’s secrets are safe at the Health Center.” SBHC nonusers were asked if they disagreed with the following statement, “[W]ere any of the following reasons [for which] you did not use the Health Center during this school year: I was afraid my parent(s) or guardian(s) or friends or teacher(s) or someone other than my parent(s) would find out why I was there.”

Perceived Need for Mental Health Support. Low self-rated health was defined as an answer of poor or fair to the

Characteristic	Male, %	Female, %	P
Personal factors			
Age, years (<i>n</i> = 1582)			0.09
15	9.2	10.0	
16	34.5	34.2	
17	30.2	33.4	
18	21.5	20.4	
≥19	4.7	2.1	
Grade (<i>n</i> = 1629)			0.39
10	35.2	35.5	
11	32.7	35.2	
12	32.2	29.3	
School performance (<i>n</i> = 1622)			<0.001
Average mark < 70% (last report card)	32.0	22.8	
Participation (<i>n</i> = 1510)			0.08
Not involved	17.2	20.7	
Family factors			
Parental education level (<i>n</i> = 1543)			0.56
≥1 Parent high school or lower	57.9	59.3	
Parental employment status (<i>n</i> = 1614)			0.79
≥1 Parent unemployed	20.5	21.0	
Health risk-taking behaviours			
Sexual health risk-taking (<i>n</i> = 1593)			0.04
≥1 Risk behaviour	34.8	39.7	
Problem eating behaviours (<i>n</i> = 1587)			<0.001
≥1 Risk behaviour	10.5	18.8	
Social relationships			
Confidentiality (<i>n</i> = 1477)			<0.001
Does not believe secrets are safe; afraid others will find out reason for visit	11.3	21.9	

continued

question, “How would you describe your health?” (poor, fair, good, very good, or excellent). While this measure does not distinguish between physical and mental health, it has previously been shown that both perceived poor physical and mental health increase odds of mental health service use among youth.¹⁶

Evaluated Need for Mental Health Support. Risk for depression was defined using the CES-D.¹⁷ This measure has displayed acceptable reliability and validity (specificity = 0.90; sensitivity = 0.90; Cronbach’s α = 0.95; test–retest correlation = 0.71¹⁸). Studies¹⁹ in which the CES-D is applied to adolescent populations use a cut-off of 24 or more for females and 22 or more for males to indicate moderate-to-severe depressive symptoms, as the 16 or more cut-off used in adult populations yields prevalence of depression greater than 50% when applied to youth. Previous studies have shown that the 24 or

more or 22 or more cut-off improves the ability to detect the Diagnostic and Statistical Manual of Mental Disorders–defined depression in youth populations.²⁰

Suicidal behaviour was defined as having reported a history of suicidal ideation, suicide plan, or suicide attempt within the previous 12-month period.

Problem alcohol use was defined as having ingested 5 or more drinks in a row on 10 or more days in the past 30 days. This definition was used because binge drinking, defined as drinking 5 or more drinks in a row during an episode of drinking, is common in youth.^{15,21} Thus it was necessary to consider a different measure to define problematic use that may require mental health support.

Problem cannabis use was defined as having used cannabis on 10 or more occasions in the past 30 days, after Langille et al’s¹⁵ definition of substance use as a health risk behaviour.

Table 1 continued			
Characteristic	Male, %	Female, %	P
Need for mental health support			
Suicidal behaviour (<i>n</i> = 1625)			
Ideation, plan, or attempt (12 months)	14.6	19.3	0.01
Suicidal ideation	14.3	19.1	0.009
Suicide plan	9.0	12.7	0.01
Suicide attempt	3.5	6.2	0.01
At risk for depression (<i>n</i> = 1597)			
CES-D \geq 22/24 (male/female)	21.7	32.6	<0.001
Problem alcohol use (<i>n</i> = 1622)			
Binge drinking \geq 10 times (30 days)	19.8	11.8	<0.001
Problem cannabis use (<i>n</i> = 1622)			
Using \geq 10 times (30 days)	13.7	4.8	<0.001
Low self-rated health (<i>n</i> = 1616)			
Poor or fair	8.4	9.7	0.38
Use of SBHC			
Saw nurse for any reason (<i>n</i> = 1607)			
\geq 1 Visit to nurse for any reason	9.7	49.9	<0.001
Saw nurse for mental health (<i>n</i> = 1591)			
\geq 1 Visit to nurse for emotional health, personal relationships, or substance abuse	5.3	20.4	<0.001

Data Analysis

The key independent variable was need for mental health support. The dependent variable was the use of SBHCs for mental health support. The influence of the 2 other sets of independent variables (predisposing factors and enabling factors) on the use of SBHCs for mental health support was also examined.

Data analysis was performed using Stata version 9.0.²² Chi-square tests were used to assess differences in prevalence of need for mental health support, prevalence of use of SBHCs for mental health support, and other variables by sex (Table 1), and by sex and user status (Table 2). Differences were considered to be statistically significant if $P < 0.05$. Multivariate logistic regression was used to test for presence of interaction between school site and respondent characteristics that influence use. Dummy variables representing presence of need for mental health support ranging from no indicators to 4 indicators were constructed, and multivariate logistic regression was used to determine if presence of a greater number of indicators of need for mental health support was associated with the use of SBHCs (Table 3). Principal-component analysis was used to determine if family factors (parental educational attainment and parental employment status) could be combined as 1 variable indicating lower SES. Factor loading scores determined a 1-factor solution, thus a single variable called lower SES was used in the subsequent modelling analysis. Multivariate logistic regression

with robust standard errors clustered by school and including all explanatory variables except confidentiality concerns was used to test the theoretical model of SBHC use for mental health support (Table 4). Confidentiality concerns were not included as the variable was based on differential answers from SBHC users and nonusers. In all cases where logistic regression was used, commands included robust standard errors and clustering by school to account for possible intraclass correlation.

Results

Characteristics of Study Population

Among 2327 eligible students, 1629 provided responses to the questionnaire (70.0% response rate). All variables in the analysis included data from at least 90% of respondents (missing data ranged from 0 to 9.3%). Table 1 presents characteristics of the sample by sex.

The sample was comprised of an almost equal proportion of male and female students in Grades 10, 11, and 12, with most respondents aged between 16 and 18 years (mean 16.7). While lower overall school performance was reported by about one-third of male and one-fifth of female students ($P < 0.001$) there was no significant difference in involvement in school clubs and activities by sex.

Family factors also did not differ significantly among males and females. Fourteen percent of students reported living with their mother only. More than one-half of parents were

Table 2 Personal factors, family factors, and need for mental health support among users and nonusers of SBHC for mental health support (%)

Predisposing, enabling, and need factors	Male			Female		
	Nonusers	Users	<i>P</i>	Nonusers	Users	<i>P</i>
Personal factors						
Mean age, years	17.0	16.8		16.7	16.8	
Average mark <70% on last report card (<i>n</i> = 1581)	30.6	53.5	0.002	20.8	31.4	0.005
Not involved (<i>n</i> = 1472)	17.0	21.1	0.52	19.5	25.9	0.09
Family factors						
≥1 Parent high school or lower (<i>n</i> = 1503)	57.5	62.5	0.53	56.8	69.1	0.006
≥1 Parent unemployed (<i>n</i> = 1573)	19.7	26.2	0.31	20.2	25.6	0.14
Health risk-taking behaviours						
≥1 Sexual health risk-taking behaviour (<i>n</i> = 1551)	33.4	59.5	0.001	36.2	52.2	<0.001
≥1 Problem eating behaviour (<i>n</i> = 1545)	9.8	21.6	0.02	18.9	17.2	0.63
Social relationships						
Confidentiality, does not believe secrets are safe; afraid others will find out reason for visit (<i>n</i> = 1460)	8.7	39.6	<0.001	21.4	23.4	0.59
Need for mental health support						
Thoughts, plan, or attempt suicide, 12 months (<i>n</i> = 1583)	13.9	27.9	0.01	16.5	29.6	<0.001
Depression (<i>n</i> = 1557)						
CES-D ≥ 22/24 (male/female)	20.3	46.3	<0.001	30.7	40.8	0.02
Binge drinking ≥ 10 times, 30 days (<i>n</i> = 1580)	19.4	27.9	0.18	11.0	15.2	0.15
Cannabis use ≥ 10 times, 30 days (<i>n</i> = 1580)	12.7	32.6	<0.001	4.6	5.7	0.56
Low self-rated health, poor or fair (<i>n</i> = 1574)	7.8	18.6	0.01	9.1	12.1	0.26

reported to have education at the community college or university level, with significantly fewer mothers than fathers having high school, junior high school, or elementary school education level (42.0%, compared with 47.7%, $P < 0.01$). Eighty-five percent of mothers and 91% of fathers had paid employment.

Almost 40% of female students (39.7%) and 34.8% of male students reported engaging in one or more sexual health risk-taking behaviours. Problem eating behaviours were reported by 18.8% of females and 10.5% of males.

Ten percent of males and 49.9% of females reported having seen the SBHC nurse for any reason, most commonly for sexual health (females) and physical health (males).

Prevalence of Need for Mental Health Support Among Students

Almost one-half of students self-reported needs for mental health support (49.3%). Risk for depression was the most commonly reported indicator of need for mental health support among both females (32.6%) and males (21.7%) (Table 1). One in 5 females reported a history of suicidal ideation (19.1%), 12.7% reported having made a suicide plan, and 6% reported having made a suicide attempt. All suicidal

behaviours were significantly less common among males than females. However, problem substance use was more common among males than females; almost twice as many males reported problem alcohol use (19.8%, compared with 11.8%, $P < 0.001$), and almost 3 times as many males reported problem cannabis use (13.7%, compared with 4.8%, $P < 0.001$), compared with females. Low self-rated health was reported by 9.0% of students, with no sex difference.

Use of SBHC for Mental Health Support Among Students With Need

In total, 20.4% of females and 5.3% of males reported using the SBHC for mental health support at least once during the preceding school year. Among students with a need for mental health support, 24.9% of females and 9% of males used the SBHC for that purpose. Seeking help with personal relationships was the most common reason for use of the SBHC for mental health support among females with need (18.6%), followed by emotional health (14.4%), and substance use (10.9%). Among male users with need, the most common reason for visiting the SBHC for mental health support was substance use (5.2%), followed by emotional health and personal relationships (both 4.1%).

Table 3 ORs for multivariate analysis of use of SBHC for mental health support using theoretical model (n = 1268)

Predisposing, enabling, and need factors	OR	95% CI
Personal factors		
Sex (female) ^a	5.57	3.07 to 10.09
Age	1.12	0.97 to 1.28
School performance	1.33	0.98 to 1.80
Participation	1.35	0.84 to 2.14
Family factors		
Lower SES factor ^{a,b}	1.19	1.11 to 1.28
Health risk-taking behaviours		
Sexual health risk-taking ^a	1.72	1.28 to 2.31
Problem eating behaviours	0.84	0.51 to 1.39
Need for mental health support		
Suicidal behaviour ^a	1.83	1.48 to 2.27
At-risk for depression	1.25	0.85 to 1.84
Problem alcohol use	1.36	0.51 to 3.62
Problem cannabis use	1.04	0.48 to 2.23
Low self-rated health (poor or fair)	1.00	0.85 to 1.17

^a $P < 0.05$

^b Factor is the combination of parental educational attainment and parental unemployment status

Goodness-of-fit probability $> \chi^2 = 0.2061$, $df = 10$, $P = 0.2061$

Area under the receiver operating characteristic curve = 0.7665

Characteristics of Users of SBHCs for Mental Health Support

Characteristics of users and nonusers of SBHCs for mental health support were analyzed by sex (Table 2). Significantly more users than nonusers of both sexes reported lower school performance, sexual health risk-taking behaviours, suicidal behaviour, and risk for depression. Problem alcohol use was higher among both male and female users, but these differences were not significant. Significantly more female users than nonusers reported parents with lower educational attainment, and significantly more male users than nonusers reported problem eating behaviours, confidentiality concerns, problem cannabis use, and low self-rated health.

There were no significant interactions between school and any respondent characteristic, except for a small interaction between school and grade for females in Grade 10 at one school (in the range of OR 1.20).

Use of SBHCs for mental health support was analyzed using multivariate logistic regression simultaneously, including the variables included in the theoretical model (Table 3). At least 1 variable from each block of theoretical factors (predisposing factors, enabling factors, or need factors) emerged as a

Table 4 ORs for univariate analysis of use of SBHC for mental health support given indicators of need for mental health support as a cumulative variable

Need for mental health support	Users (nonusers), n	OR	95% CI
0 indicators present	72 (715)	1.00	—
1 indicator present	55 (343)	1.59 ^a	1.07 to 2.38 ^a
2 indicators present	43 (193)	2.21 ^a	1.92 to 2.55 ^a
3 indicators present	21 (60)	3.48 ^a	2.05 to 5.89 ^a
4 indicators present	4 (14)	2.84	0.44 to 18.25

n = 1502

^aSignificant at $P < 0.05$

significant predictor of use of SBHCs for mental health support. Female sex (OR 5.57, 95% CI 3.07 to 10.09), lower SES factor (OR 1.19, 95% CI 1.11 to 1.28), sexual health risk-taking behaviours (OR 1.72, 95% CI 1.28 to 2.31), and suicidal behaviour (OR 1.83, 95% CI 1.48 to 2.27) were significantly associated with the use of SBHCs for mental health support.

Association of Need With The Use of SBHCs for Mental Health Support

Likelihood of the use of SBHCs for mental health support, given presence of 1, 2, 3, or 4 indicators of need for mental health support, ranged from OR 1.59 (95% CI 1.07 to 2.38), given presence of 1 indicator, to OR 2.84 given 4 indicators (95% CI 0.44 to 18.25) (Table 4).

Discussion

A Need for Mental Health Support

Among the 49.3% of students identified as needing mental health support, 35.0% reported a history of suicidal behaviour, 56.2% screened at risk for depression, 32.6% reported problem alcohol use, 19.0% reported problem cannabis use, and 19.2% reported low self-rated health (total exceeds 100% as some people had more than 1 reason for need). The overall prevalence estimates are similar to results reported elsewhere for suicidal behaviour,^{23,24} risk for depression,^{23–25} and cannabis use.^{23,26} The prevalence of heavy alcohol use found here is higher than rates reported by Poulin et al²⁵ in the 2007 Student Drug Use Survey in the Atlantic Provinces of Canada (which includes Nova Scotia),²⁶ higher than those found in the Adolescent Health Project in Chignecto, Colchester and East Hants, Cumberland, and Pictou districts of Nova Scotia,²³ and higher than the prevalence reported in the most recent US Youth Risk Behaviour Survey.²⁴ The prevalence of low self-rated health among youth in our study was also higher than estimates previously reported in the 2005 Canadian Community Health Survey for youth aged 15 to 19 years.²⁷

An Unmet Need for Mental Health Support

Despite the substantial need for mental health support reported by students, only 1 in 6 reported having visited the SBHC nurse for that purpose. The finding of unmet need for mental health support among this student population is supported by data from other studies. A recent US study found that two-thirds of adolescents needing psychiatric care did not receive services.²⁸ This finding echoes the results of an earlier study, which found that mental health problems made up almost one-half of identified unmet health care needs among high school students but represented the lowest proportion of reasons for health care use.²⁹ Similarly, a Canadian review found that fewer than 25% of adolescents suffering from mental disorders receive specialized treatment services.³⁰

Reasons for nonuse of the SBHC for mental health support are likely numerous and may include lack of awareness among students about the range of services offered, a culture of viewing the SBHC as a sexual health clinic rather than as a medical clinic, stigma associated with mental illness, as well as a lack of awareness of own need. Further, a significant barrier to health services use by youth is lack of confidentiality.^{11,31} Our findings regarding confidentiality concerns affecting the use of SBHCs among students with need for mental health support are consistent with previous research that shows adolescents with high depressive symptoms, suicidal ideation, suicide attempt, and past-year alcohol use identify confidentiality concerns as a reason for forgone health care.³²

Male Students Particularly Underserved

Our findings of lower prevalence of use of health services among males than females are consistent with previous literature.^{33,34} While adolescent males are less likely than females to use health services, and mental health services in particular, they have higher rates of morbidity and mortality related to alcohol use, drug use, accidental trauma, and violence, both directed against oneself as well as others.³⁵

Clearly, males are a population with need of health services, and this need is unmet. Research around facilitators and barriers for the use of health services by males suggests numerous factors that may be at play to keep males from accessing services. For example, there are differences in reported health status and health beliefs among adolescent males and females, with females more likely to report poorer emotional and physical well-being, more concerns about health status, and a wider range of health problems than males.³⁶ The nature of health concerns has also been implicated as a barrier to the use of health services, with greater reluctance among adolescent males to seek help for mental health complaints than for physical health problems,³⁷ possibly owing to fears of parental disapproval and stigma associated with the use of mental health services.³⁸ Other factors associated with lower use of health services among adolescent males includes gender construction that associates help-seeking with vulnerability and weakness^{37,39}; lack of knowledge or awareness about services⁴⁰; and sex of service provider, with some research suggesting more comfort with female sources of support³⁷ and some

suggesting higher likelihood of use given presence of male providers.³⁶

Correspondence With Theoretical Model

Our study's findings support the theoretical model, as at least 1 variable from each block of theoretical factors emerged as a significant predictor of use of SBHCs for mental health support, with female sex (a predisposing factor) and suicidal behaviour (a need factor) of greatest importance in the multivariate analysis. Further, differences in the results of univariate and multivariate analyses support the existence of relations between theoretical variables, as indicated by the double ended arrows linking the theoretical factor blocks in Figure 1.

Limitations

This study has several limitations. First, the survey relied on self-report data, with no access to secondary sources of information such as clinic records of use. Demographic factors that could decrease accuracy of self-report in this sample include current drug use and mental conditions,⁴¹ both of which were measured to some extent in this survey. Services associated with stigma such as mental health services are generally underreported.⁴² It is possible that underreporting is a problem in this study, as the main variable of interest is the use of SBHCs for mental health support.

Further, as none of the measures used to determine need for mental health support in this survey were diagnostic instruments, it is impossible to ascertain the proportion of students actually in need of mental health services for depression, current suicidal behaviour, alcohol, or drug abuse. Nevertheless, the fact that nearly one-half of all students participating in the survey were identified as needing mental health services according to the proxy measures has important implications for SBHC service delivery.

Another limitation of our study is the small number of male users for SBHCs mental health support ($n = 43$), which may limit the extent to which conclusions can be made about this group. However, few significant differences and no differences in direction of association were found among male and female users for any of the variables analyzed in this study (data not shown).

Finally, diversely organized SBHCs serve thousands of students across Nova Scotia, providing a comprehensive range of services from sexual health care to medical health care to health education. Our study looked at 3 SBHCs in 1 administrative region, which may vary from others in the province of Nova Scotia and across Canada in terms of organization, administration, and provision of services.

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Résumé : Le recours aux centres de santé en milieu scolaires pour soutenir la santé mentale, au Cap-Breton, Nouvelle-Écosse

Objectif : Déterminer si les élèves ayant des besoins autodéclarés de soutien de leur santé mentale utilisaient les centres de santé en milieu scolaires (CSMS) à cette fin.

Méthode : Une analyse secondaire a été effectuée sur des données autodéclarées recueillies auprès de 1629 élèves du secondaire du Cap-Breton, Nouvelle-Écosse. Des statistiques descriptives et des analyses de régression logistique ont servi à déterminer l'influence du sexe, du niveau scolaire, de l'orientation sexuelle, du statut socioéconomique (SSE), du rendement scolaire, de la participation sociale, et des comportements à risque pour la santé sur le besoin de soutien de la santé mentale et sur l'utilisation des CSMS à cette fin.

Résultats : La moitié des élèves interrogés ont déclaré des besoins de soutien en santé mentale. Le risque de dépression était l'indicateur de besoin le plus souvent mentionné. Seulement 13 % des élèves ont consulté le personnel infirmier d'un CSMS pour un soutien en santé mentale, et 4 fois plus de filles que de garçons ont eu recours à un CSMS à cette fin (20,4 %, comparé à 5,3 %, $P < 0,001$). Il y avait une probabilité significativement accrue d'utilisation des CSMS pour soutien en santé mentale, en présence d'un plus grand nombre de facteurs de besoin. La régression logistique multivariée a déterminé que le sexe féminin (RC 5,57; IC 95 % 3,07 à 10,09), le facteur SSE plus faible (RC 1,19; IC 95 % 1,11 à 1,28), les comportements sexuels à risque (RC 1,72; IC 95 % 1,28 à 2,31), et le comportement suicidaire (RC 1,83; IC 95 % 1,48 à 2,27) étaient significativement associés avec le recours aux CSMS pour le soutien de la santé mentale.

Conclusions : Un besoin substantiel de soutien de la santé mentale et des besoins significatifs non comblés ont été observés. En particulier, les élèves masculins sous-utilisaient les services liés à leurs besoins autodéclarés. Les implications pour les CSMS et des orientations pour la recherche sont présentées.