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A Moderator Analysis of the Relationship Between Mental Health Help-Seeking Attitudes and Behaviours among Young Adults
Analyse modératrice de la relation entre les attitudes et les comportements de recherche d'aide en santé mentale chez les jeunes adultes

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ABSTRACT

To explore how psychological factors influence mental health help seeking among young adults, an online questionnaire was administered to 486 participants assessing their mental health attitudes and experiences, symptom acuity, and psychological fortitude in relation to mental health help seeking. Results showed that help-seeking attitudes were predicted by self-stigma, fortitude, symptom acuity, and level of familiarity with mental health problems. However, not all of these variables directly influenced help-seeking behaviour. Moderator analyses indicated that self-stigma, level of familiarity with mental health problems, and symptom acuity moderated the relationship between help-seeking attitudes and behaviours. Implications for increasing help seeking among young adults are discussed.

RÉSUMÉ

Pour étudier l'influence de facteurs psychologiques sur la recherche d'aide en santé mentale chez de jeunes adultes, on a diffusé un questionnaire en ligne auprès de 486 participants afin d'évaluer leurs attitudes et leurs expériences, l'acuité de leurs symptômes, et leur courage psychologique en lien avec la démarche de recherche d'aide en santé mentale. D'après les résultats, les attitudes de recherche d'aide étaient déterminées par l'autostigmatisation, le courage, l'acuité des symptômes, et le degré de connaissance des problèmes de santé mentale. Toutefois, les variables n'influençaient pas toutes directement le comportement de recherche d'aide. Les analyses modératrices ont indiqué que l'acuité des symptômes, le niveau de connaissance des problèmes de santé mentale, et l'autostigmatisation exerçaient une certaine modération sur la relation entre les attitudes et les comportements de recherche d'aide. L'article présente une discussion des implications pour un accroissement de la recherche d'aide chez les jeunes adultes.

Within the next 20 years, mental health problems are projected to be the leading cause of disability in Canada (Canadian Institute for Health Information, 2011);

as a result, mental health has emerged as a national priority (Kirby & Keon, 2006), culminating with the recent release of Canada's first national mental health strategy (Mental Health Commission of Canada, 2012). As most mental disorders have an onset prior to age 24, young adults are highly at risk for developing mental health problems (Kessler, Chiu, Demler, & Walters, 2005). What is particularly alarming is that despite having higher prevalence rates of mental health problems, young adults constitute the cohort least likely to seek mental health services (Statistics Canada, 2011). This has spurred specific interest in identifying factors that influence help-seeking by young adults with mental health problems, including the Mental Health Commission of Canada's (2009) *Opening Minds* program that aims to reduce mental health stigma among Canadian youth, and the *Mobilizing Minds* (2011) initiative designed to identify and reduce barriers to accessing mental health services for young adults in Canada.

In line with this, postsecondary institutions across Canada are acknowledging increased awareness of mental health problems among their students (Hanlon, 2012), which has garnered considerable media attention and a range of proposed solutions (e.g., CBC News, 2012; Craggs, 2012; Reavley, McCann, & Jorm, 2012; Vanheusden et al., 2009). To illustrate the extent to which mental health issues prevail on Canadian postsecondary campuses, results from a survey at six Ontario postsecondary institutions revealed that approximately 53% of students indicated they felt overwhelmed by anxiety and 36% felt so depressed it was difficult for them to function (Clapham, Jahchan, Medves, Tierney, & Walker, 2012). In addition to this, a survey of 950 McMaster University undergraduate students revealed that one third of these students reported battling depression but did not seek help for their mental health problems until it started to affect their schoolwork (Craggs, 2012). Previous research shows that this delay in help-seeking behaviour is to be expected in the young adult population (Statistics Canada, 2003; Wang et al., 2005), and helps to underscore the importance of increasing service utilization as a means to reduce rates of mental health problems and increase positive mental health among this vulnerable population.

Although many variables play a role in service utilization, including resource accessibility (De Jong et al., 2012), mental health knowledge and treatment preferences (Stewart, 2010; Stewart et al., 2014), and a range of psychological factors (Stewart et al., 2012; Stewart & Ritchot, 2010), it is likely that these latter variables may exert a particularly strong influence on mental health help-seeking by young adults (cf. Eisenberg, Downs, Golberstein, & Zivin, 2009; Hunt & Eisenberg, 2010). To explore this possibility, we investigated whether psychological factors moderate the relationship between young adults' help-seeking attitudes and help-seeking behaviours. More specifically, we assessed whether mental health attitudes and experiences (self-stigma, mental health literacy, and level of familiarity with mental health problems), symptom acuity (level of distress x severity of symptoms), and psychological fortitude influenced the relationship between help-seeking attitudes and help-seeking behaviours among a cohort of young adults.

MENTAL HEALTH ATTITUDES AND EXPERIENCES

One in five Canadians develop a mental disorder in their lifetime (Mental Health Commission of Canada, 2013), which suggests that a person's likelihood of encountering a mental health problem—whether it is their own problem or that of a family member, friend, or co-worker—is quite high. *Level of familiarity*, defined in this context as a person's knowledge of and experience with mental health problems (Corrigan, Edwards, Green, Diwan, & Penn, 2001), has been shown to be highly associated with attitudes about people diagnosed with a mental health problem (Holmes, Corrigan, Williams, Canar, & Kubiak, 1999; Link & Cullen, 1986; Penn et al., 1994). Results from a study by Holmes et al. (1999) showed that both people who were more familiar with mental health problems and people diagnosed with a mental disorder were less likely to endorse negative stereotypes of people with mental disorders than those who were less familiar or undiagnosed. However, if negative public stereotypes about mental health problems become internalized (Vogel, Wade, & Hackler, 2007), there may be substantial negative effects on willingness to seek help.

Previous research has shown that *self-stigma*, defined as an individual's perception that he or she is socially unacceptable (Vogel, Wade, & Haake, 2006), can lead to a reduction in self-esteem if that individual chooses to seek psychological help. Therefore, in order to maintain a positive self-image, people higher in self-stigma may decide to forego psychological services (Miller, 1985; Vogel et al., 2006, 2007). This decision ultimately obstructs a person's opportunity to improve his or her mental health and contributes to the underutilization of mental health resources (Miller, 1985; Vogel et al., 2006, 2007). A study by Vogel et al. (2006) measured the role of self-stigma in predicting mental health help-seeking attitudes and found that above other factors measured, self-stigma uniquely predicted attitudes toward help-seeking and willingness to seek counselling. This supports the idea that self-stigma functions as a barrier to seeking psychological help.

However, previous research has not conclusively demonstrated that stigma acts solely as a barrier to mental health help-seeking. Interestingly, researchers found that young adults who conceptualize mental disorders as dangerous and unpredictable may in fact be more likely to seek help from professional sources (Yap, Wright, & Jorm, 2011). This shows that stigmatizing beliefs, although generally believed to exert maladaptive effects, may instead have an adaptive effect on help-seeking intentions of young people under certain conditions, and therefore constitute an essential variable to explore with respect to help-seeking.

Along with stigma, a person's knowledge and beliefs about mental health disorders and treatments, known as *mental health literacy* (Barney, Griffiths, Jorm, & Christensen, 2006), has also been found to influence intentions to seek help for mental disorders (Coles & Coleman, 2010; Schomerus, Matschinger, & Angermeyer, 2009). In a study by Klineberg, Biddle, Donovan, and Gunnell (2011), participants were asked to identify if characters from a vignette had depression and,

if so, what they thought the character would do regarding help-seeking. Results showed that more than half of the participants who identified mild mental health problems and nearly one third who recognized severe symptoms thought that the characters would do nothing about their mental health problems (Klineberg et al., 2011).

Research such as this has been interpreted to suggest that respondents may lack knowledge about treatments and that an increase in mental health literacy regarding treatment options would result in a more proactive response (e.g., Stewart, 2010). In line with this, mental health educational programs have been developed with the goal to increase awareness and help-seeking among the young adult population (Mobilizing Minds, 2011; Reavley et al., 2012). However, despite these efforts, there is mounting evidence that educational intervention strategies may not be enough to overcome barriers to help-seeking (Klineberg et al., 2011; Reavley et al., 2012) and that additional factors also need to be explored.

SYMPTOM ACUITY

In addition to mental health attitudes and experiences, a range of other factors, including levels of psychological distress and symptoms related to mental disorders (e.g., Leahy et al., 2010), have also been examined as factors influencing help-seeking. Intuitively, it makes sense that a person's level of psychological distress (Kessler, Barker, & Colpe, 2003) and severity of symptoms may be key predictors of mental health help-seeking (Leahy et al., 2010; O'Neil, Lancee, & Freeman, 1984). In line with this, a study by Leahy et al. (2010) found that postsecondary students who reported receiving treatment for a mental health problem had significantly higher distress levels compared to students who did not report treatment use. This finding suggests that people experiencing a great deal of distress or an increase in symptoms may be in such a desperate state that the barriers associated with self-stigma may not deter them from seeking the help they need (Outram, Murphy, & Cockburn, 2004). Stewart and Ritchot (2010) similarly found that among a sample of Canadian university student mental health help-seekers, level of distress was a better predictor of service utilization than readiness to change or coping abilities, again suggesting that students were driven to seek help by their degree of distress.

In contrast, a recent meta-analysis examining psychosocial correlates of college students' help-seeking intentions found that psychological distress had a nonsignificant correlation with both help-seeking attitudes and intentions (Li, Dorstyn, & Denson, 2014). However, the authors note that their sample was composed largely of students who were not reportedly facing specific mental health issues, acknowledging that additional empirical research examining both clinical and nonclinical samples is necessary to fully examine the role of distress in help-seeking.

psychological fortitude

Young adults from postsecondary institutions in particular have been shown to exhibit much higher distress levels than age-matched counterparts (Leahy et al., 2010). Although a state of severe distress may be sufficient in getting young adults to seek help for their mental health problems (e.g., Leahy et al., 2010; Stewart & Ritchot, 2010), it may be advisable to also examine characteristics that enable young people to stay healthy rather than solely focusing on how to help them once they are symptomatic and experiencing negative consequences (Eisenberg, Hunt, & Speer, 2012).

One promising area of exploration involves the construct of *psychological fortitude*, described as the strength individuals possess to manage stress and stay well, as derived from an individual's appraisal of the self, the family, and support from others (Pretorius & Heyns, 2005). In a recent interview (CBC News, 2012), the director of the University of Ottawa's Student Academic Success Service is quoted as saying that with the transition to university being more challenging for students, a lack of resiliency and fortitude might be what is preventing them from overcoming problems in their academic studies and increasing their need and reliance on treatments, such as antidepressant medication. From this, it could be inferred that people with higher levels of fortitude would have more positive help-seeking attitudes and stronger help-seeking behaviours because they would know how to effectively cope with problems and access resources should the need arise. However, the specific relationship between psychological fortitude and help-seeking has not yet been directly examined.

help-seeking attitudes and behaviours

It is evident that young adults do experience specific barriers-to-care (e.g., De Jong et al., 2012; Stewart, 2010; Stewart et al., 2014); however, what is unclear about this finding is which barriers or factors are most important or predictive of help-seeking (Vanheusden et al., 2008). Many studies have been conducted in the area of help-seeking attitudes and intentions, and a number of factors have been identified as significant, including self-stigma (Vogel et al., 2007; Vogel, Zipora, & Wade, 2010; Wrigley, Jackson, Judd, & Komiti, 2005), mental health literacy (Reavley et al., 2012; Smith & Shochet, 2011), and level of familiarity with people experiencing mental health symptoms (Holmes et al., 1999; Jagdeo, Cox, Murray, & Sareen, 2009).

However, despite this research looking at help-seeking attitudes and intentions, there is a lack of research on actual help-seeking behaviours. This is an important distinction, as researchers have questioned whether help-seeking attitudes and intentions actually equate with help-seeking behaviour, and have thereby recommended that future studies explore these constructs separately and in more depth (e.g., Barney et al., 2006; Jorm et al., 2000). In particular, it seems important to use help-seeking behaviour as a criterion variable going forward, given that it is

both observable and the culmination of all factors that could potentially influence help-seeking.

In summary, a range of psychological variables have been shown to influence help-seeking by young adults, including self-stigma, mental health literacy, level of familiarity, symptom acuity, psychological fortitude, and help-seeking attitudes. However, few studies have specifically investigated help-seeking behaviours, and much of the literature is based on samples with minimal pathology, limiting its utility when applied to clinical samples. To address these concerns, we examined both help-seeking attitudes and behaviours in the present study, which sought to identify psychological factors that influence help-seeking among young adults with and without experience with mental health problems.

METHOD

Participants

Participants were 486 undergraduate students (females = 76%, males = 24%) between the ages of 17 and 25 (M = 19.36, SD = 2.06) attending a large central Canadian university in the fall 2012 and summer 2013 semesters. Participation was limited to students up to the age of 25 years, 11 months, consistent with previous studies looking at young adults and their help-seeking tendencies (Christie et al., 1988; Cotton, Wright, Harris, Jorm, & McGorry, 2006; Kessler et al., 2005; Wright, Jorm, Harris, & McGorry, 2007).

In an effort to obtain a sample inclusive of young adults who had experience with mental health problems and those who had not, participants were recruited from two sources. Participants who had experience with mental health problems were drawn from students attending the student counselling centre, a multidisciplinary unit that provides services to students seeking help for stress, anxiety, depression, and relationship issues, among other concerns. These participants were informed of the study through an information sheet provided by reception staff at the counselling centre, and students who participated from this location were entered in a draw to win a $75 gift card to the university bookstore. Participants not seeking counselling services were recruited through an online subject pool composed of introductory psychology students. Students participating through the online Psychology Research Participation System received one research participation credit toward a course credit requirement in return for their participation.

Procedure

This study was approved by the university institutional research ethics board. The self-report questionnaire package was administered online through Qualtrics, a survey software program. Students who were interested in participating were instructed to complete the questionnaire independently and on their own time to ensure privacy. Once respondents were on the survey website, a consent form was provided that required them to read and agree to the form before the ques-

tionnaire period could begin. A list of local mental health resources and service providers was provided to all participants in the consent form and at the end of the questionnaire. Participants were debriefed following their completion of the survey, which included a brief description on the importance of studying young adults' mental health and how this study will make a contribution to the literature.

Measures

Consistent with the format of the Canadian Community Health Survey (Statistics Canada, 2011), and to reflect the same flow of topic areas that was designed for this highly regarded national survey of Canadians' health and mental health needs and experiences, the survey questions were administered in the following order: demographic information, Fortitude Questionnaire (FORQ; Pretorius & Heyns, 2005), Kessler Measure of Psychological Distress (K10; Kessler et al., 2003), Depression Anxiety Stress Scale (DASS-21; Lovibond & Lovibond, 1995), Canadian Community Health Survey – help-seeking behaviour questions (CCHS; Statistics Canada, 2011), Inventory of Attitudes Toward Seeking Mental Health Services Scale (IASMHS; Mackenzie, Knox, Gekoski, & Macaulay, 2004), Self-stigma of Seeking Help Scale (SSOSH; Vogel et al., 2006), Level of Familiarity Scale (LOF; Corrigan, 2012; Holmes et al., 1999), and Mental Health Literacy Scale (MHL; Jorm et al., 1997).

Demographic information. Participants were asked about their age, gender, ethnicity, relationship status, household income, and education. To determine their mental health status, participants were asked, "Have you ever been diagnosed with a mental health condition?" Follow-up questions included "What were you diagnosed with?" and "Were you treated for your mental health condition?"

Psychological fortitude. Psychological fortitude was measured using a slightly modified version of the Fortitude Questionnaire (FORQ; Pretorius & Heyns, 2005). Minor changes were made to the wording of the sample item and descriptors to make these more applicable to Canadian postsecondary students. The 20-item scale was designed to measure a person's ability to cope with life stressors and comprises three subscales: self-appraisals, family appraisals, and support appraisals. Items such as "I trust my ability to solve new and difficult problems" were measured on a 4-point scale ranging from 1 (*does not apply or does not describe you and/or your situation*) to 4 (*applies very strongly or very strongly describes you and/or your situation*). Evidence of concurrent validity was supported in a sample of university students, with fortitude correlating positively with measures of psychological well-being and negatively with measures of distress (Pretorius & Heyns, 2005). The authors report a Cronbach's alpha for the scale of .85 (Pretorius & Heyns, 2005), comparable to our attained value of .89. Significant correlations between the subscales and the total scale were calculated for our study, confirming that the self, family, and support factors are all strongly associated with the overall construct of fortitude (.73, .81, and .81 respectively, all $p < .001$).

Level of distress. The Kessler Measure of Psychological Distress (K10) was used to assess emotional distress (anxiety and depressive symptoms) experienced by

participants in the previous 4 weeks (Kessler et al., 2003). The 10-item screening instrument consisted of questions such as "In the past 4 weeks, about how often did you feel tired out for no good reason?" Respondents were instructed to rate items on a 5-point scale ranging from 1 (*none of the time*) to 5 (*all of the time*). A total score from the 10 items indicated the level of distress a participant was experiencing, which can be categorized as *likely to be well* (score of 10–19) or *likely to have a mild* (score of 20–24), *moderate* (score of 25–29), or *severe* (score of 30–50) *mental disorder* (Andrews & Slade, 2001). Previous psychometric analyses support the scale's ability to discriminate between community cases and noncases of DSM-IV mental disorders (Kessler et al., 2002) and report a Cronbach's alpha of .93. In the current study, the Cronbach's alpha coefficient was similarly high at .92.

Level of symptoms. Level of symptoms was measured using the short-form version of the Depression Anxiety Stress Scale (DASS-21; Lovibond & Lovibond, 1995). Convergent and discriminative validity for the short form is consistent with findings from the full version of the DASS (Henry & Crawford, 2005). The DASS-21 was chosen to measure mental health symptoms in this study because anxiety and depressive disorders are the two most prevalent mental disorder groupings among young adults (Kessler et al., 2007). The 21-item questionnaire assessed participants' depression, anxiety, and stress symptoms over the past week and consisted of questions such as "I felt that I had nothing to look forward to." Participants were to rate their response on a 4-point severity/frequency scale ranging from 0 (*Did not apply to me at all*) to 3 (*Applied to me very much, or most of the time*). Lovibond and Lovibond (1995) reported a Cronbach's alpha coefficient of .93 along with similarly high subscale coefficients. The value calculated in our sample was .94 for the total scale, with individual subscale coefficients of .92 for depression, .84 for anxiety, and .85 for stress.

Help-seeking behaviour. Help-seeking behaviour was measured with 10 questions assessing service utilization in the previous 12 months for mental health concerns derived from the Canadian Community Health Survey (CCHS; Statistics Canada, 2011). The CCHS was selected as reference for this study because it was the first national-level survey developed to formulate descriptive data for mental health service use (Statistics Canada, 2011). In the current study, help-seeking behaviour questions were computed as a continuous variable. Responses to the CCHS question, "During the past 12 months, have you seen, or talked on the telephone to a _____ about your problems?" were coded 1 if participants indicated "*Yes*" and a 0 if they indicated "*No*." This score was then multiplied by the frequency that they had made contact with the person from whom they were seeking help (1 = *less than 2 times*, 2 = *3 to 5 times*, 3 = *6 to 8 times*, 4 = *9 to 11 times*, 5 = *12 to 14 times*, 6 = *more than 15 times*). A total score was then computed with participants' results ranging from a minimum score of 0 to a maximum of 27. Both professional and personal sources of help were assessed. However, for the purpose of our study the help-seeking behaviour variable was computed with professional sources only. A professional source included psychiatrists, psychologists, nurses, general

practitioners, social workers, counsellors, psychotherapists, university personnel, and spiritual leaders (see Table 1).

Table 1
Sources of Professional Help Used by Young Adults

Professional source	*n*	%
Psychiatrist	50	23.8
Psychologist	61	29.0
General practitioner	102	48.6
Nurse	30	14.4
Social worker, counsellor, psychotherapist	82	39.0
University instructor/teacher	20	9.5
Spiritual leader	4	1.9

Note. N = 210. Help-seeking behaviour questions were derived from the Canadian Community Health survey (Statistics Canada, 2011). Respondents were asked, "During the past 12 months, have you seen, or talked on the telephone to a _____ about your problems?"

Help-seeking attitudes. Help-seeking attitudes were measured with the Inventory of Attitudes Toward Seeking Mental Health Services Scale (IASMHS; Mackenzie et al., 2004). The 24-item questionnaire comprises three internally consistent factors: psychological openness, help-seeking propensity, and indifference to stigma. Items were measured on a 5-point scale ranging from 0 (*disagree*) to 4 (*agree*) and consisted of questions such as "People should work out their own problems; getting professional help should be a last resort." Each factor showed high internal consistency (.82, .76, and .79, respectively), and the full-scale IASMHS had a Cronbach's alpha of .87. In the current sample, the Cronbach alpha coefficient for the full scale was .79.

Self-stigma. Self-stigma was measured with the 10-item Self-Stigma of Seeking Help Scale (SSOSH; Vogel et al., 2006). This scale assessed internal reactions for seeking psychological help and consisted of items such as "I would feel okay about myself if I made the choice to seek professional help." Items were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores reflecting greater self-stigma. The SSOSH scale's validity was supported by negative correlations with attitudes toward seeking psychological help and the intent to seek counselling. According to Vogel et al. (2006), the SSOSH scale has very good internal consistency (Cronbach's alpha ranging from .86 to .90 in previous reports). In the current study, the Cronbach's alpha was .84.

Level of familiarity. Contact and experience with mental health problems were measured using the Level of Familiarity Scale (LOF; Corrigan, 2012; Holmes et al., 1999). The 11-item LOF scale measured how familiar a respondent was with mental health problems and included questions such as "I have watched a documentary on television about severe mental illness" and "I have a relative who has

a severe mental illness." Participants were asked to respond in a yes/no format to each statement. All items are ranked in level of intimacy ranging from 11 (*most intimate contact with a person with mental illness*) to 1 (*little intimacy*), with higher scores indicating a higher degree of familiarity and contact with mental health problems. For example, if a respondent answered "yes" to "A friend of the family has a severe mental illness," a rank order score of 9 would indicate this participant has a higher familiarity with mental health problems compared to a respondent who answered "yes" to "I have watched a documentary on television about severe mental illness" (rank order score = 4). Interrater reliability for the scale was .83 and a subsequent sample of 100 research participants validated the rank order used (Holmes et al., 1999).

Mental health literacy. A modified version of the Mental Health Literacy Questionnaire (MHL) was used to measure participants' ability to recognize mental disorders and assess their beliefs about the effectiveness of treatment (Jorm et al., 1997). This measure was used as a means to assess knowledge and recommendations participants would make based on their level of understanding. Respondents were instructed to read three vignettes, which described characters with signs of depression, early schizophrenia, or social phobia, but which did not disclose the actual diagnosis. The symptoms described met DSM-IV minimum diagnostic criteria (American Psychiatric Association, 2000) for each respective diagnosis. After reading a vignette, three questions were administered: (a) "What, if anything, would you say is wrong with John?" (b) "What do you think is the primary cause of this problem?" and (c) "How do you think John could best be helped?" (Coles & Coleman, 2010; Jorm et al., 1997). Participants were given options to choose from and were instructed to pick the answer they felt was the best choice.

Tabulations were made across the responses based on whether respondents correctly identified the diagnosable conditions, their putative cause, and appropriate method(s) of treatment. Previous research by Jorm et al. (1997) found that the character's gender in the vignette makes little difference to participants' responses, so for the sake of consistency with the literature, a male protagonist was used in each vignette. Higher scores reflected a greater level of mental health literacy.

RESULTS

Data Screening

Data were examined for missing values, multicollinearity, and outliers. In cases where items were left unanswered, data analysis was conducted using a pairwise deletion of missing data. Outliers were identified by examining the histogram and boxplot of each scale. Scores that were identified as outliers were examined by looking at the participants' overall profile in order to decide if their extreme scores were justified by how they responded on additional similar measures. All participants' data were retained and included in the analysis. as the few extreme scores recorded were reconcilable within the context of the respondents' overall profiles of responses.

Sociodemographic Information

The mean age of participants was 19 years old, and approximately 50% were White and 33% were Asian. A large majority of participants were single (52%) or dating (44%) and living with their family of origin or relatives (78%). One fourth of the sample reported having a household income of less than $20,000 a year and just under half of the sample (45%) reported having a household income of more than $50,000. The majority of participants were either in their first or second year of university (84%) and taking an average of four courses in a semester. On average, participants reported obtaining a GPA of 3.0 while working full-time (14%) or part-time (56%). See Table 2 for complete demographic information on the sample.

Table 2
Descriptive Statistics for Demographic Variables

Characteristics	*n*	%
Age range = 17–25, *M* = 19.36, *SD* = 2.06	486	100
Gender		
Males	115	24.2
Females	361	75.8
Relationship status		
Single	252	52.1
Dating	214	44.2
Married/common law	14	2.9
Divorced	4	0.8
Ethnic identity		
Aboriginal/First Nations/Inuit/Metis	18	3.7
Asian	158	32.6
Black	10	2.1
White	239	49.3
Latin American/Hispanic, Middle Eastern, other	60	12.3
GPA		
Below 2.5	67	14.5
2.5 to 3.0	130	28.1
3.0 to 3.4	100	21.6
3.4 to 3.7	71	15.4
Above 3.7	94	20.3
Working		
Part-time	271	56
Full-time	68	14
Previously diagnosed with mental health condition	79	16.3

Note. *N* = 486.

Descriptive Statistics

Initially, Pearson product-moment correlations were computed, and the resulting correlation matrix, including the LOF, SSOSH, MHL (modified total score), K10, DASS-21, FORQ, IASMHS, and CCHS (modified total score) is presented in Table 3. For the most part, correlations between the main study variables and the demographic variables, including age, course load, GPA, and hours of work per week were either not significant or of no relevance to the research hypotheses, so the demographic data were not used in subsequent analyses.

Table 3
Correlations Among the Psychological Measures

Variable	1	2	3	4	5	6	7	8
1. Familiarity (LOF)	--	-.09	.07	.16**	.17**	-.07	.11*	.23**
2. Self-stigma (SSOSH)		--	-.15**	.29**	.30**	-.30**	-.68**	-.13**
3. Mental health literacy (MHL)			--	-.03	-.01	.01	.15**	.16**
4. Distress (K10)				--	.82**	-.51**	-.32**	.24**
5. Symptoms (DASS21)					--	-.52**	-.33**	.18**
6. Fortitude (FORQ)						--	.33**	-.13**
7. Help-seeking attitudes (IASMHS)							--	.15**
8. Help-seeking behaviours (CCHS)								--

Note. $N = 474$. FORQ = Fortitude Questionnaire; K10 = Kessler Measure of Psychological Distress Scale; DASS21 = Depression Anxiety Stress Scale (short version); IASMHS = Inventory of Attitudes Toward Seeking Mental Health Services Scale; SSOSH = Self-Stigma Of Seeking Help Scale; LOF = Level Of Familiarity Scale; MHL = Mental Health Literacy Questionnaire; CCHS = Canadian Community Health Survey (*modified*).
*$p < .05$; **$p < .01$.

Overall, patterns of relationships among the main variables were consistent with expectations. There was a small positive correlation between distress (as measured by K10) and help-seeking behaviour, $r = .24$, $p < .01$, with higher levels of distress associated with more help-seeking behaviour. A similar relationship was found between symptoms (as measured by DASS-21) and help-seeking behaviour, $r = .18$, $p < .01$, with an increase in symptoms associated with more help-seeking behaviour. Given that distress (as measured by K10) and symptom level (as measured by DASS-21) were found to be highly positively correlated ($r = .82$, $p < .01$), the product of these variables was computed into a new variable (K10

x DASS-21) identified as *symptom acuity* to reflect the combined impact of high distress along with high levels of symptoms. As expected, symptom acuity (K10 x DASS-21) was positively correlated with help-seeking behaviour, $r = .21$, $p < .01$, with higher levels of psychological distress and symptoms associated with more help-seeking behaviour. The relationship between fortitude (as measured by the FORQ) and help-seeking attitudes (as measured by the IASMHS) had a moderate positive correlation, $r = .33$, $p < .01$, with higher levels of fortitude associated with more positive help-seeking attitudes. Additionally, mental health literacy (as measured by the MHL modified total score) had a small positive correlation with help-seeking attitudes, $r = .15$, $p < .01$, with a higher level of mental health literacy associated with more positive help-seeking attitudes. Self-stigma (as measured by the SSOSH scale) had a large negative correlation with help-seeking attitudes, $r = -.68$, $p < .01$, with higher levels of self-stigma associated with more negative help-seeking attitudes. Self-stigma had a similar relationship with help-seeking behaviour (as measured by the CCHS modified total score), with higher levels of self-stigma associated with fewer help-seeking behaviours ($r = -.13$, $p < .01$). Additionally, a small positive correlation was found between help-seeking attitudes and help-seeking behaviour, $r = .15$, $p < .01$, with more positive help-seeking attitudes associated with more help-seeking behaviour.

Prior to running regression and moderator analyses involving help-seeking attitudes and behaviours, we used the CCHS modified total score to separate our sample into subgroups based on presence vs. absence of mental health service use. We then conducted independent samples *t*-tests to determine if there were significant differences between the participants who reported using mental health services and those who had not reported using such services. Although significant differences between the subgroups were observed for some noncriterion variables (see Table 4), there was no significant difference in help-seeking attitudes between the groups, $t\,(469) = -1.27$, $p = 0.21$, which allowed us to use an inclusive sample for all of the subsequent analyses.

Stepwise Regression Analysis

Help-seeking attitudes model. To first explore how various psychological variables affected help-seeking attitudes, we conducted a stepwise multiple regression analysis on help-seeking attitudes using level of familiarity, self-stigma, mental health literacy, symptom acuity, and fortitude as the predictor variables. A forward stepwise selection technique was used in which each predictor variable was entered in sequence and then its value to the model was assessed, resulting in the smallest set of predictor variables that accounted for additional variance in the model. The obtained sample size ($n = 486$) exceeded the minimum required to observe an effect of moderate size ($f^2 = .15$) through a multiple regression procedure employing five independent variables with a p value of .05 and power set at .80 (Cohen, Cohen, West, & Aiken, 2003). Results from the stepwise regression analysis indicated that *help-seeking attitudes* is a linear function of self-stigma, fortitude, symptom acuity, and level of familiarity with mental health problems.

Table 4
Descriptive Statistics for Psychological and Help-Seeking Scales

	Help-seekers		Non-help-seekers			Total	
Measure	*M*	*SD*	*M*	*SD*	*t*-test	*M*	*SD*
Fortitude (FORQ)	53.28	9.40	57.58	10.10	4.66**	55.71	10.02
Self-appraisals	18.08	3.75	19.68	3.47	4.83**	19.00	3.68
Family-appraisals	17.90	4.88	18.55	5.16	ns	18.26	5.04
Support-appraisals	17.27	4.01	18.36	4.21	2.85**	17.89	4.15
Distress (K10)	24.65	7.45	21.44	6.18	-5.03**	22.82	6.93
Symptoms (DASS-21)	19.13	11.26	13.87	10.15	-5.34**	16.16	10.95
Depression	6.13	4.69	4.47	4.33	-4.04**	5.19	4.56
Anxiety	5.08	4.01	3.89	3.55	-3.46**	4.40	3.80
Stress	7.90	4.31	5.52	3.54	-6.46**	6.55	4.07
Self-stigma (SSOSH)	25.25	6.62	26.00	6.61	ns	25.68	6.62
Mental Health Literacy (MHL)	9.44	2.90	7.98	3.47	-4.91**	8.61	3.32
Level of Familiarity (LOF)	7.15	2.65	5.74	2.60	-5.81**	6.36	2.71
Help-seeking Attitudes (IASMHS)	56.72	14.33	55.13	12.73	ns	55.80	13.44
Psychological openness	17.15	6.46	16.57	5.73	ns	16.82	6.05
Help-seeking propensity	21.11	5.18	19.20	5.54	-3.84**	20.02	5.46
Indifference to stigma	18.50	6.80	19.26	6.16	ns	18.94	6.44

Note. $N = 474$.
**$p < .001$.

This model explained 50% of the variance in mental health help-seeking attitudes, with self-stigma making the largest contribution (R^2 = .46). Based on this model, help-seeking attitudes were best predicted by low levels of self-stigma; however, lower levels of symptom acuity in conjunction with higher levels of psychological fortitude and increased familiarity with mental health problems also contributed a small amount of predictive value (see Table 5).

Table 5
Variables Predicting Help-Seeking Attitudes: Stepwise Multiple Regression

Model	Predictor variable	R^2	*F*	Standard error	*Beta*	*t*	*p*
1	Self-stigma	0.46	364.57	.072	-.68	-19.09	.001
2	Self-stigma	0.48	198.70	.074	-.64	-17.34	.001
	Fortitude			.049	.16	4.24	.001
3	Self-stigma	0.49	135.54	.075	-.62	-16.79	.001
	Fortitude			.056	.11	2.66	.001
	Symptom acuity			.001	-.10	-2.28	.001
4	Self-stigma	0.50	103.82	.075	-.61	-16.39	.001
	Fortitude			.055	.11	2.70	.001
	Symptom acuity			.001	-.11	-2.64	.001
	Level of familiarity			.177	.08	2.21	.001

Note. Self-stigma = SSOSH scale total score; Fortitude = FORQ total score; Symptom acuity = K10 total score X DASS21 total score; Level of familiarity = LOF total score.
Model 1: *df* = 1, 417, $p < .001$; Model 2: *df* = 2, 416, $p < .001$; Model 3: *df* = 3, 415, $p < .001$; Model 4: *df* = 4, 414, $p < .001$.

Moderator Analyses

Although it was clear that self-stigma accounted for most of the variance in help-seeking attitudes, this finding did not address the role of psychological variables in predicting help-seeking behaviour, nor the relationship between help-seeking attitudes and behaviour. In an effort to address this, we conducted a series of individual moderator analyses to test whether these psychological variables moderated the relationship between help-seeking attitudes and behaviour. In these moderator analyses, separate hierarchical multiple regression analyses were first conducted involving level of familiarity, self-stigma, mental health literacy, symptom acuity, and fortitude. If the results indicated that the moderator variable in conjunction with help-seeking attitudes accounted for a significant amount of variance in help-seeking behaviour, the interaction term was added to the regression model and another regression analysis was conducted to gauge whether a moderation effect was occurring. To avoid potentially problematic high multicollinearity with

the interaction term, the variables were centred and an interaction term between help-seeking attitudes and the moderator variables was created (Aiken, West, & Reno, 1991). If the interaction term accounted for significantly more variance than just the moderator variable or help-seeking attitudes alone, this indicated that there was a potentially significant moderation effect. Lastly, we ran the regression on the centred terms to examine the effect and explored the relationship among the variables using interaction plots.

Self-stigma. Self-stigma and help-seeking attitudes accounted for a significant amount of variance in help-seeking behaviour, R^2 = .014, F (2, 458) = 3.18, p < .05, and the interaction term accounted for significantly more variance in participants' help-seeking behaviour, ΔR^2 = .011, ΔF (1, 457) = 4.56, p = .05, b = -.001, t(457) = -1.93, p < .01. Examination of the interaction plot showed that, while more positive help-seeking attitudes are associated with increased levels of help-seeking behaviour, level of self-stigma moderates this relationship (see Figure 1). More specifically, participants with high levels of self-stigma are

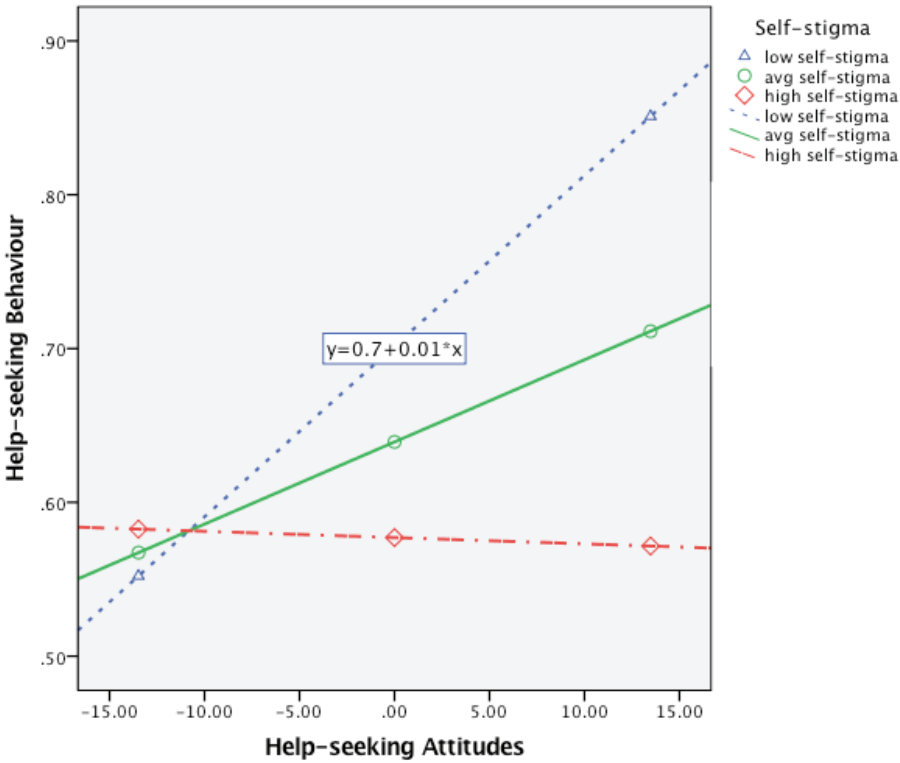

Figure 1. A moderator analysis examining how self-stigma influences the relationship between help-seeking attitudes and behaviours. Self-stigma = SSOSH total score; help-seeking attitudes = IASMHS total score; and help-seeking behaviour = CCHS (*help-seeking professional source–modified)* total score.

unlikely to engage in help-seeking behaviour, even when they hold positive attitudes toward help-seeking.

Familiarity with mental health problems. A similar finding was observed for level of familiarity with mental health problems, which was also shown to moderate the relationship between help-seeking attitudes and behaviours. Help-seeking attitudes and level of familiarity accounted for a significant amount of variance in help-seeking behaviour, $R^2 = .072$, $F\,(2, 442) = 17.82$, $p < .001$, and the interaction term accounted for significantly more variance in participants' help-seeking behaviour, $\Delta R^2 = .010$, $\Delta F\,(1, 457) = 4.74$, $p = .05$, $b = .003$, $t\,(452) = 1.89$, $p < .01$. Examination of the interaction plot showed that participants with little exposure to mental health problems are unlikely to seek help even when holding positive attitudes toward help-seeking (see Figure 2). This suggests that it is essential to increase familiarity with mental health problems in efforts to translate positive help-seeking attitudes into actual help-seeking behaviour.

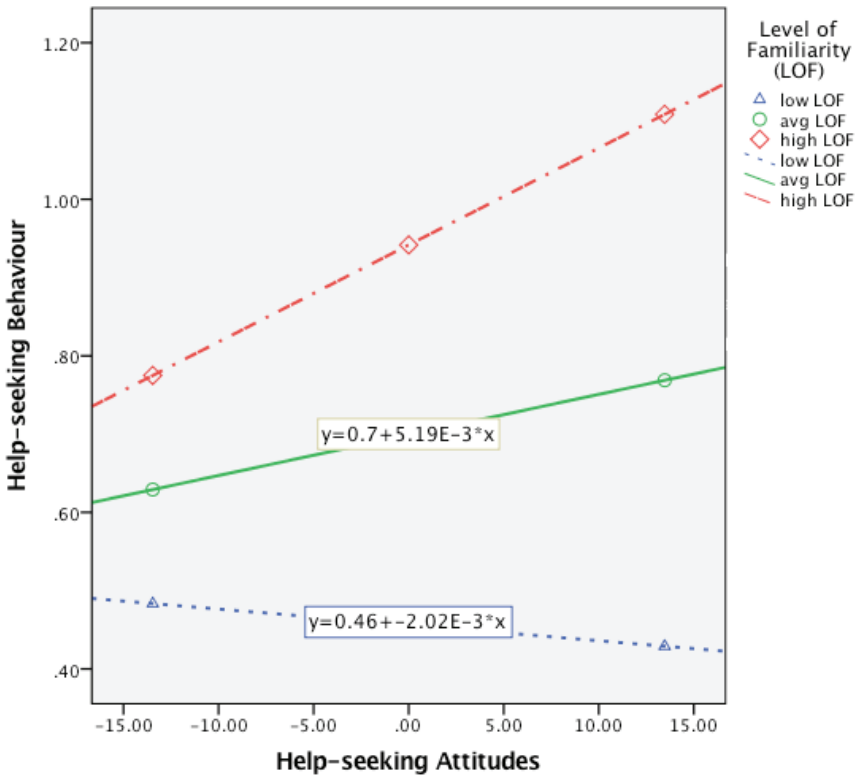

Figure 2. A moderator analysis examining how level of familiarity with mental health problems influences the relationship between help-seeking attitudes and behaviours. Level of familiarity = LOF total score; help-seeking attitudes = IASMHS total score; and help-seeking behaviour = CCHS (*help-seeking professional source–modified)* total score.

Symptom acuity. Symptom acuity was also shown to moderate the relationship between help-seeking attitudes and behaviours. Help-seeking attitudes and symptom acuity accounted for a significant amount of variance in help-seeking behaviour, $R^2 = .101$, $F(2, 453) = 25.57$, $p < .001$, and the interaction term accounted for significantly more variance in participants' help-seeking behaviour, $\Delta R^2 = .021$, $\Delta F(1, 452) = 10.36$, $p = .001$, $b = .000$, $t(452) = 2.11$, $p < .01$. Examination of the interaction plot showed that participants with positive help-seeking attitudes were more likely to actually seek help as their level of symptom acuity increased (see Figure 3). Moderator analyses conducted with mental health literacy and fortitude did not indicate that these variables influenced the relationship between help-seeking attitudes and behaviours. Taken together, the results of the moderator analyses indicate that there is a complex relationship between help-seeking attitudes and behaviours that is influenced by self-stigma, symptom acuity, and level of familiarity with mental health problems.

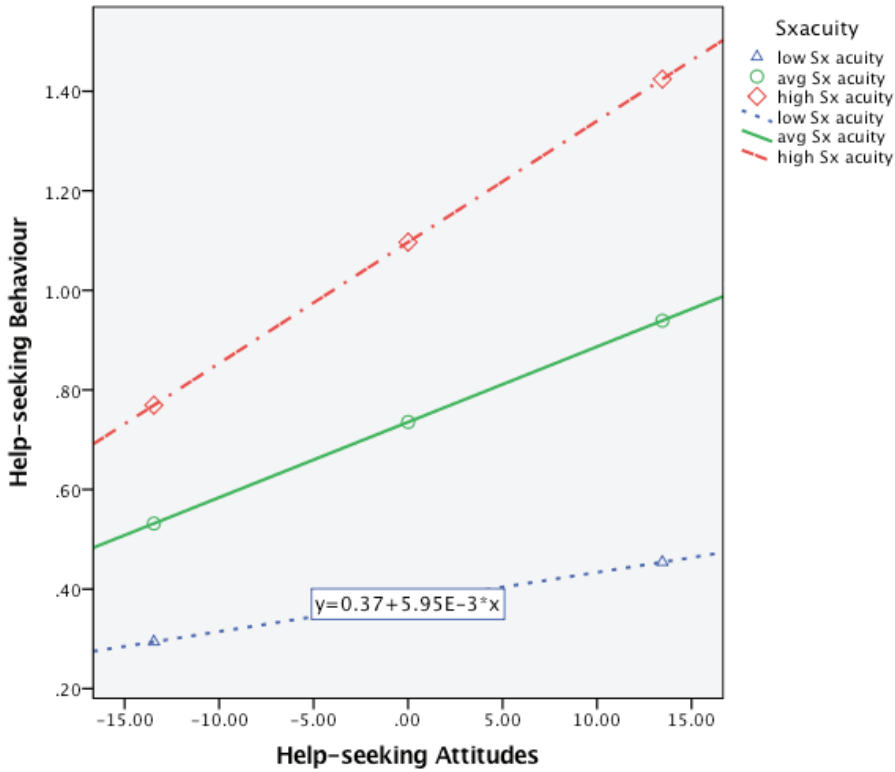

Figure 3. A moderator analysis examining how symptom acuity influences the relationship between help-seeking attitudes and behaviours. Symptom acuity = K10 total score x DASS21 total score; help-seeking attitudes = IASMHS total score; and help-seeking behaviour = CCHS (*help-seeking professional source–modified)* total score.

DISCUSSION

Young adults are among the most vulnerable cohorts with respect to mental health concerns, with very high rates of symptoms, conditions, and diagnoses (Kessler et al., 2005; Leahy et al., 2010; Reavley et al., 2012), and a tendency to underutilize mental health services (e.g., Craggs, 2012; Statistics Canada, 2011; Wang et al., 2005). The primary purpose of this study was to identify psychological factors that influence help-seeking attitudes and behaviours in a sample of young adults with and without experience with mental health problems.

Although previous research has identified a range of psychological variables shown to influence help-seeking by young adults, few studies have addressed how these variables influence the separate constructs of help-seeking attitudes and behaviours and how they affect the relationship between help-seeking attitudes and behaviours. Results showed that self-stigma made the strongest contribution to the prediction of help-seeking attitudes, accounting for almost half of the variance, which is consistent with previous research demonstrating a strong relationship between self-stigma and help-seeking attitudes (Vogel et al., 2006, 2007). Interestingly, we found that the next strongest predictor of attitudes was psychological fortitude, which had not been directly examined in the previous literature on help-seeking. However, as it added only a small amount of predictive value (2%), the heretofore unexamined variable of psychological fortitude does not seem to have a strong role to play in comparison to self-stigma as a factor in determining help-seeking attitudes. Similarly, symptom acuity and level of familiarity with mental health problems each provided 1% additional predictive value, suggesting that these variables alone are not strongly predictive of help-seeking attitudes. Based on this, it would appear that efforts to change young adults' mental health help-seeking attitudes could have substantial impact by focusing primarily on reducing self-stigma.

However, we found only a small correlation (.15) between help-seeking attitudes and behaviour in our sample, consistent with earlier findings that help-seeking attitudes are not always depictive of actual help-seeking behaviour (Barney et al., 2006; Jorm et al., 2000). As such, it was necessary to examine the relationship between help-seeking attitudes and behaviour to determine which variables are most likely to predict whether young adults actually seek help for their mental health problems. Using moderator analyses, we found that self-stigma, level of familiarity with mental health problems, and symptom acuity all moderated the relationship between help-seeking attitudes and behaviours, and as such all deserve consideration in efforts to enhance mental health help-seeking among young adults.

In line with previous studies (e.g., Stewart, 2009), our results showed that high levels of self-stigma tend to inhibit help-seeking behaviour, even when participants hold positive attitudes toward help-seeking. Given that self-stigma has a negative impact on help-seeking attitudes and also actively reduces the likelihood of help-seeking among those who hold favourable attitudes, self-stigma is clearly a priority to address directly in any efforts to enhance young adult mental health

help-seeking. As such, the findings from this study lend support to the current emphasis on anti-stigma campaigns (cf. Bell Let's Talk, 2013; Mental Health Commission of Canada, 2009).

Additionally, we found that individuals with little exposure to mental health problems are unlikely to seek help, regardless of whether they hold positive attitudes toward help-seeking. Therefore, in addition to reducing self-stigma, it is critical to increase familiarity with mental health problems among young adults in an effort to translate positive help-seeking attitudes into actual help-seeking behaviour. However, it is important to note that this familiarity ought to be contact-based (Arboleda-Flórez & Stuart, 2012), as mental health literacy alone (i.e., the ability to identify mental health problems as such) was not found to be predictive of either mental health help-seeking attitudes or behaviour in our study.

Lastly, participants with positive help-seeking attitudes were much more likely to actually seek help as their level of symptom acuity increased. This finding is consistent with previous reports (e.g., Stewart & Ritchot, 2010) that suggest young adults may be compelled to seek help for their mental health problems due to their level of symptoms rather than embracing or seeking out such help because of their positive attitudes or readiness to change. Therefore, it is imperative to have accessible services in place for young adults who do come forward to seek help. Given that 63% of men and 75% of women in Canada will have acquired some postsecondary education by the age of 25 (Shaienks & Gluszynski, 2009), ensuring resources are readily available for young adults on campus is essential. Advertising drop-in counselling hours, web resources, and other campus supports through social media, on-campus programming such as info booths, and participation in orientation programs for new students may be beneficial for individuals who are unaware such resources exist on their campus.

Strengths and Limitations

Although psychological variables have been identified in previous literature as exerting a particularly strong influence on mental health help-seeking by young adults (cf. Eisenberg et al., 2009; Hunt & Eisenberg, 2010), this study makes a unique contribution to the literature on help-seeking through (a) employing a comprehensive set of psychological variables directly related to the help-seeking process, including attitudinal and experiential measures, in efforts to predict the criterion variable and further explore relationships through moderator analyses; (b) the novel use of psychological fortitude as a possible predictor of help-seeking attitudes; and (c) including a diverse sample of students with and without contemporary help-seeking experience.

Despite these positive attributes, findings from this study should be considered in light of the following limitations. First, the present results describe predictive and interactive relationships among the variables but do not show causation. Second, the proportion of variance in help-seeking behaviour accounted for by any of the predictors employed, singly or in combination, was quite modest—even if statistically significant. Thus it remains for future research to explore the extent

to which additional factors are influencing young adult help-seeking, including perceptions of structural barriers (e.g., De Jong et al., 2012) and concern about efficacy of treatments or misconceptions about what treatment may involve (e.g., Stewart et al., 2014). Third, the sample comprised mostly White and Asian participants, and different ethnic backgrounds may lead to differences among factors that influence help-seeking attitudes and behaviours. Additionally, a higher proportion of females than males participated, so the experiences of male students may be underrepresented. Furthermore, participants from this study were recruited from university students at a single campus, so we do not know how representative they are of young adults or postsecondary students in general.

Implications

Efforts to increase service utilization by young adults with mental health problems should take both help-seeking attitudes and help-seeking behaviours into account, along with the psychological variables that influence the dynamic relationship between these aspects of help-seeking. By identifying specific needs, such as educational campaigns targeting self-stigma and marketing to increasing awareness of services, findings from this study may help improve the process of actively seeking and utilizing mental health resources. As a complement to this process, it would also be advisable to begin focusing attention on characteristics that enable and encourage young adults to stay healthy or monitor their level of mental health. For example, Eisenberg et al. (2012) suggested that postsecondary institutions could develop mental health check-up programs in which all students would have a mental health assessment at the beginning of the semester. If students pass, they would be able to opt out of the check-up program. However, if students do not pass, they would be offered continuing check-up appointments, ensuring students in need would get the help they require. Other methods that could enhance student mental health and wellness include efforts to build relationships and support systems among the student body in postsecondary institutions, including peer support programs, mentoring, or buddy systems, which would provide personal resources to students and also enable them to seek help more readily (Hanlon, 2012).

In conclusion, it is abundantly clear that young adult mental health is a pressing social problem in Canada that appears to be increasing over time. Unfortunately, a lack of or delay in help-seeking behaviour is common in the young adult population (Statistics Canada, 2003, 2011; Wang et al., 2005). As such, any efforts to increase knowledge about this issue and increase accessibility and service utilization will prove helpful in reducing young adult mental health problems among this vulnerable population.

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