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Determinants of self-reported mental health and utilization of mental health services in Canada

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ABSTRACT

Research evidence suggests that the prevalence of mental health conditions in Canada has increased while a considerable percentage of people with a mental health issue do not seek professional mental health services. Weighted logistic regression models were used to determine whether age, sex, income, and education predict the self-reported mental health status of Canadians and their odds of utilizing mental health services. This study found clear disparities in reporting mental health and utilization of mental health services. Young adults (aged 25 to 44) have 1.4 times (95% CI: 1.3 to 1.6 times) higher odds of reporting poorer mental health status than seniors (aged 65 or older). Females are 2.7 times (95% CI: 2.3 to 3.1 times) more likely to utilize mental services than males. The lowest income group (<\$15,000) has 2.2 times (95% CI: 1.9 to 2.4 times) higher odds of rating poorer mental health status than the highest income group (>\$80,000). The least educated group (<high school education) has 1.5 times (95% CI: 1.3 to 1.6 times) higher odds of reporting poorer mental health status than the highest educated group (post-secondary education). However, the highest educated group is 1.6 times (95% CI: 1.3 to 2.0 times) more likely to utilize mental health services than the least educated group. Even in a country that has a universal health insurance system such as Canada, disparities and inequities associated with mental health burden and health care utilization persist, specifically among groups with lower education, lower income, and males.

KEYWORDS

Health disparities; mental health; self-reported; service utilization; social determinants of health

Introduction

Mental health is a concern for many Canadians, with estimates that 1 in 5 Canadians will suffer some form of mental health issue in their lifetime (Lesage et al., 2006). In addition, reports predict that the number of people living with mental illness will increase by 31% over the next 30 years (Smetanin et al., 2011). In terms of economic burden, evidence suggests that mental illness is among the costliest conditions in Canada (Smetanin et al., 2011). In 2007–2008, \$14.3 billion in public expenditures was estimated to

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have been spent on mental health services and supports in Canada, which represents 7.2% of total government health expenditures (Jacobs et al., 2010).

In Canada, there are persistent gaps between the number of people who are affected by a mental health condition and those who actually seek help, with studies showing only around 40–60% of people with a mental health problem seeking professional assistance (Lesage et al., 2006; Andrews & Carter, 2002). The most widely consulted health professionals are general practitioners (GP), social workers/counsellors/psychotherapists, psychiatrists, psychologists, and self-help groups (Lesage et al., 2006). In 2012, the Mental Health Commission of Canada released the first national strategy for mental health (Mental Health Commission of Canada, 2012).

Self-rated mental health is considered to be a secondary indicator of overall mental health according to the Canadian Index of Wellbeing and, as such, can serve as part of a measure of overall population health (Labonte et al., 2010). According to Mawani & Gilmour (2010), self-reported mental health is a measure that captures issues such as psychological distress, depressive symptoms, and emotional functioning. In the same study, the authors noted that only a small percentage of respondents self-rated their mental health as fair/poor (compared to good, very good, and excellent) leading the authors to believe that people tend to report higher self-reported mental health than their true status. Therefore, there is a concern that social desirability bias affects this measure.

In addition to self-reported mental health, measures such as life satisfaction/enjoyment have been used in other studies to capture mental status. Previous studies have shown that having a higher household income is associated with better life enjoyment (Blanchflower & Oswald, 2004). Another study by Helliwell shows that life satisfaction is linked to being employed and being satisfied at work (Helliwell, 2003).

In terms of utilization of mental health services, evidence suggests that a number of factors associated with mental health can serve as important predictors for utilization of mental health services; these include high levels of perceived stress, self-perceived poor general health, depression, and negative life events such as divorce (Sareen et al., 2005). According to Steele, Dewa, Lin, & Lee (2007), education level was positively associated with mental health utilization. In a study by Patten & Beck (Patten & Beck, 2004), women over the age of 44 and those with one or more chronic conditions had higher odds of utilization of mental health care, as measured by anti-depressant medication use. The purpose of this study is to examine the determinants of both self-reported mental health and utilization of mental health services in Canada.

Methods

The dataset used in this analysis is the Canadian Community Health Survey (CCHS), 2005 which collects information related to mental health status,

health care utilization, and health determinants in the Canadian population. This national cross-sectional survey was a stratified random sample, which covered 98% of the population aged 12 years and above. Aboriginal people on reserves, institutional residents, full-time members of the Canadian Forces, and residents of certain remote regions were excluded from the survey (Statistics Canada, 2005). The sample size of this survey is 132,221. We used the 2005 CCHS dataset because it contained a mental health component.

Models

In this study, we used three logistic regression models, as follows: (1) the first model investigates the predictors of lower self-reported mental health status as compared to higher self-reported mental health in the Canadian population; (2) the second model examines the predictors of mental health professional consultation in the Canadian population (in three out of the ten provinces); and (3) the third model examines the determinants of mental health professional consultation only for the subset of the sample which reported “fair” or “poor” mental health status.

In our first model, the sample size was 129,840 participants out of the 132,221 participants (98.2% response rate) who responded to the question on self-reported mental health status. In our second model, data from a special topics mental health service survey question, which was only administered in three Canadian provinces (New Brunswick, Ontario, and Alberta), was used. The sample size of the three provinces was 58,786, out of which 56,568 participants (96.2% response) answered the special topics mental health service question. The same subset of the three provinces was then used to examine the third research question concerning the likelihood of utilizing mental health care services. Since the third model uses an even smaller subset of the data, the sample size of the three provinces self-rating “fair” or “poor” mental health status is 6,835, out of which 3,191 (46.7% response) answered the special topics mental health service question.

Outcome variables

In the first model where we predict the odds of lower self-reported mental health status as compared to the higher self-reported mental health, the outcome variable “self-reported mental health status” was collapsed from five categories to the following two categories: (1) higher reported mental health status and (2) lower reported mental health status. The higher reported mental health status is the combination of participants that identify their mental health statuses as “excellent” or “very good.” The lower reported mental health status is the combination of participants that identify their mental health statuses as “good,” “fair,” or “poor.” The justification for

collapsing good, fair, or poor mental health into one category was based on the assumption that those who self-identify as having the highest need for mental health services tend to report self-reported mental health as good, fair, or poor vs. very good or excellent. This assumption is supported by Labonte et al. (2010), where the distinction between good, fair, or poor as one group, and excellent and very good as another, was based on the findings that the probability of reporting depression increases as the likelihood of reporting very good or excellent decreases.

The second and the third models are where we identify the predictors of mental health professional consultation in the Canadian population; the outcome variable is a dichotomous “yes/no” variable asking the participants: “in the past 12 months, have you seen, or talked on the telephone, to a health professional about your emotional or mental health?”

Predictor variables

In all three models, the following predictor variables were selected for model testing: province of residence of respondent, sex, age (*12 to 24, 25 to 44, 45 to 64, 65 to 80 or more*), marital status (*married, common-law, widow/separated/divorced, single/never married*), working status in the last week (*at work, absent, no job, unable/permanent*), highest level education obtained (*<than secondary, secondary grad., other post-secondary, post-secondary grad.*), has at least one chronic condition (*responded to yes to one the chronic conditions listed in the CCHS survey, excluding anxiety or mood disorder*), total household income (*less than \$15,000, “\$15,000–\$29,999,” “\$30,000–\$49,999,” “\$50,000–\$79,999,” and \$80,000 or more*), and ever consumes 5 or more drinks at one time.

Age was collapsed from sixteen to four categories in order to increase the power to detect significant difference between broader categories. The variable asking if respondents ever consumed 5 or more drinks at one time was collapsed from six categories into a binary variable that reflected whether an individual engaged in risky drinking at any frequency or never engaged in any risky drinking. Risky drinking is defined as more than three drinks for women and more than four drinks for men during one single occasion at least once a month or more (Butt et al., 2011).

Data analytic procedures

A binary logistic regression was used for the three models using the analytical software Stata version 12.1. Backwards model building method was used for all three logistic models. The significance level of the model was chosen to be 5%. Sample weights provided by Statistics Canada survey was used in the analysis. All linearity and absence of multicollinearity assumptions held

true for the variables used in the final models. The goodness-of-fit test and predictive ability of the final models were checked.

Results

According to the survey, 38.7%, 37.9%, 18.8%, 3.8%, and 0.82% of the Canadian population in Canada self-rate their mental health to be “excellent,” “very good,” “good,” “fair,” and “poor,” respectively. Consequently, we observe that 76.6% of Canadians self-rate their mental health status as “excellent” or “very good,” whereas 23.4% of the population self-rates their mental health status as “good,” “fair,” or “poor.”

The use of mental health care services was examined in three provinces: Alberta, Ontario, and New Brunswick. The survey indicated that 8.5% of individuals in the aforementioned three provinces utilized mental health services. In addition, the survey shows that individuals that self-rate their mental health as “excellent,” “very good,” “good,” “fair,” and “poor” have mental health service utilization rates of 2.8%, 7.2%, 14.9%, 38.1%, and 57.2%, respectively (see Table 1). Thus clearly indicating increasing use of mental health services as self-reported mental health descends from favorable “excellent” status to unfavorable “poor” mental health status.

Factors influencing self-rated mental health in Canada

Model 1 presented in Table 2 was used to examine the likelihood of reporting poorer mental health in Canada. The model shows that individuals aged 12 to 24 years, 25 to 44 years, and 45 to 64 years have 1.20 times, 1.41 times, and 1.38 times, respectively, higher odds of rating their mental health status as “poor/fair/good” (versus “excellent/very good” mental health status) than seniors. Therefore, among all the age groups, seniors have the highest odds of rating their mental health status as excellent or very good whereas adults aged 25 to 44 years are most likely to report poorer mental health status.

Our analysis shows that marital status has a significant effect on self-rated mental health. “Common law,” “widow/separated/divorced,” and “single/never married” have 13%, 24%, and 24%, respectively, higher odds of rating their

Table 1. Self-rated mental health and health professional consultation (Canadian Population Health Initiative, 2009).

| Self-rated mental health | Consulted mental health professional | |
|--------------------------|--------------------------------------|-------|
| | YES | NO |
| Excellent | 2.8% | 97.2% |
| Very Good | 7.2% | 92.8% |
| Good | 14.9% | 85.1% |
| Fair | 38.1% | 61.9% |
| Poor | 57.2% | 42.8% |
| Total | 8.5% | 91.5% |

Table 2. Likelihood of reporting “poor/fair/good” versus “excellent/very good” mental health in Canada, 2005. (Model 1; Canadian Population Health Initiative, 2009).

| | Odds Ratio | 95% CI | |
|--|------------|--------|-------|
| | | Lower | Upper |
| <i>Age (Ref: 65 years or more)</i> | | | |
| 12 to 24 years | 1.200* | 1.059 | 1.361 |
| 25 to 44 years | 1.407* | 1.268 | 1.561 |
| 45 to 64 years | 1.376* | 1.252 | 1.513 |
| <i>Sex (Ref: Female)</i> | | | |
| Male | 1.040 | 0.984 | 1.100 |
| <i>Marital Status (Ref: Married)</i> | | | |
| Common law | 1.129* | 1.034 | 1.233 |
| Widow/separated/divorced | 1.240* | 1.138 | 1.352 |
| Single/never married | 1.242* | 1.153 | 1.338 |
| <i>Total household income (Ref: \$80,000 or more)</i> | | | |
| No to <\$15,000 | 2.164* | 1.929 | 2.429 |
| \$15,000–\$29,999 | 1.973* | 1.794 | 2.170 |
| \$30,000–\$49,999 | 1.611* | 1.487 | 1.746 |
| \$50,000–\$79,999 | 1.284* | 1.193 | 1.382 |
| <i>Highest Education (Ref: Post-secondary)</i> | | | |
| <than secondary | 1.482* | 1.347 | 1.631 |
| Secondary graduate | 1.098* | 1.009 | 1.194 |
| Other post-secondary | 1.103 | 0.988 | 1.231 |
| <i>Working status last week (Ref: Present last week)</i> | | | |
| Absent last week | 1.111 | 0.985 | 1.253 |
| No job last week | 1.197* | 1.118 | 1.281 |
| Unable/permanent | 2.889* | 2.384 | 3.501 |
| Chronic condition | 1.742* | 1.632 | 1.858 |
| Ever had 5 or more drinks | 1.110* | 1.047 | 1.176 |
| <i>Province (Ref: Yukon/NWT/Nunavut)</i> | | | |
| NFLD & LAB. | 0.748* | 0.603 | 0.927 |
| PEI | 0.708* | 0.550 | 0.911 |
| Nova Scotia | 0.979 | 0.802 | 1.193 |
| New Brunswick | 1.100 | 0.905 | 1.338 |
| Quebec | 0.802* | 0.676 | 0.951 |
| Ontario | 0.998 | 0.845 | 1.180 |
| Manitoba | 1.028 | 0.844 | 1.253 |
| Saskatchewan | 0.982 | 0.811 | 1.188 |
| Alberta | 0.982 | 0.818 | 1.178 |
| British Columbia | 1.046 | 0.879 | 1.246 |

*Significant at the 0.05 level of significance.

mental health status poorer compared to “married” individuals. Married individuals are most likely to self-rate their mental health status to be excellent or very good.

In terms of total income, households with “<\$15,000,” “\$15,000–\$29,999,” “\$30,000–\$49,999,” and “\$50,000–\$79,999” incomes have 2.2 times, 2.0 times, 1.6 times, and 1.3 times, respectively, higher odds of reporting poorer mental health status compared to households with “\$80,000 or more” income. Therefore, having a higher income is significantly associated with reporting better mental health.

Individuals with “less than secondary school” and “secondary graduate” as highest level of education have 48% and 10%, respectively, higher odds of

rating their mental health status poorer compared to individuals with “post-secondary” education. Therefore, individuals with post secondary education are most likely to self-rate their mental health status as excellent or very good.

Model 1 also shows that individuals who are “unable to or permanently cannot work” have 2.89 times higher odds of reporting poorer mental health compared to individuals who have a job. In addition, unemployed individuals have 1.20 times higher odds of reporting poorer self-rated mental health status compared to individuals with a job. Therefore, employment is strongly associated with reporting better mental health status.

Individuals with any type of chronic condition (one or more conditions) have 74% higher odds of reporting poorer mental health compared to individuals with no chronic condition. In addition, individuals who drink 5 or more drinks at least once a month have 11% higher odds of reporting poorer mental health status compared to individuals who do not drink.

Lastly, province of residence variable shows that Newfoundland and Labrador, Prince Edward Island and Quebec residents have the highest odds of rating their mental health status as excellent or very good.

Factors influencing the likelihood of consulting a mental health professional

Model 2 presented in Table 3 examines factors influencing the likelihood of consulting a mental health professional in 3 provinces in Canada. Model 2 shows that individuals aged 12 to 24 years, 25 to 44 years, and 45 to 64 years have 2.7 times, 5.2 times, and 3.8 times, respectively, higher odds of consulting a mental health professional compared to seniors. Therefore, among all the age groups, adults aged 25 to 44 years are most likely to consult a mental health professional whereas seniors aged 65 years or above are least likely to consult a mental health professional. In addition, our analysis shows that females have 2.7 times higher odds of consulting a mental health professional than males.

This study shows that marital status has a significant effect on the likelihood to consult a health professional. Individuals who are “common law,” “widow/separated/divorced,” and “single/never married” have 32%, 106%, and 61%, respectively, higher odds of consulting a mental health professional compared to “married” individuals. Therefore, widowed/separated/divorced individuals are most likely to consult a mental health professional whereas married individuals are least likely to consult a mental health professional.

In terms of total income, households with income “\$30,000–\$49,999” are 1.29 times ($1/0.775 = 1.29$) higher odds of not consulting a mental health professional compared to households with “\$80,000 or more” income. Therefore, this middle-income group (\$30,000 to \$49,000) is least likely to consult a

Table 3. Likelihood of consulting a mental health professional in New Brunswick, Ontario, and Alberta, 2005. (Model 2; Canadian Population Health Initiative, 2009).

| | Odds Ratio | 95% CI | |
|---|------------|--------|-------|
| | | Lower | Upper |
| <i>Age (Ref: 65 years or more)</i> | | | |
| 12 to 24 years | 2.700* | 1.857 | 3.926 |
| 25 to 44 years | 5.223* | 3.769 | 7.239 |
| 45 to 64 years | 3.767* | 2.743 | 5.174 |
| <i>Sex (Ref: Male)</i> | | | |
| Female | 2.665* | 2.328 | 3.050 |
| <i>Marital Status (Ref: Married)</i> | | | |
| Common law | 1.316* | 1.073 | 1.614 |
| Widow/separated/divorced | 2.063* | 1.672 | 2.545 |
| Single/never married | 1.612* | 1.361 | 1.910 |
| <i>Total household income (Ref: \$80,000 or more)</i> | | | |
| No to <\$15,000 | 1.069 | 0.823 | 1.390 |
| \$15,000–\$29,999 | 0.942 | 0.751 | 1.182 |
| \$30,000–\$49,999 | 0.775* | 0.651 | 0.924 |
| \$50,000–\$79,999 | 0.948 | 0.813 | 1.107 |
| <i>Highest Education (Ref: Secondary graduate)</i> | | | |
| < than secondary | 1.137 | 0.837 | 1.545 |
| Other post-secondary | 1.498* | 1.120 | 2.003 |
| Post-secondary | 1.620* | 1.323 | 1.984 |
| <i>Working status last week (Ref: Present last week)</i> | | | |
| Absent last week | 1.598* | 1.276 | 2.002 |
| No job last week | 1.214* | 1.043 | 1.414 |
| Unable/permanent | 1.841* | 1.336 | 2.536 |
| Chronic condition | 2.817* | 2.322 | 3.416 |
| Ever had 5 or more drinks | 1.068 | 0.940 | 1.214 |
| <i>Province (Ref: Ontario)</i> | | | |
| New Brunswick | 1.034 | 0.846 | 1.263 |
| Alberta | 1.212* | 1.049 | 1.400 |
| <i>Self reported mental health (Ref: Excellent/Very Good)</i> | | | |
| Poor/Fair/Good | 4.549* | 4.031 | 5.134 |

*Significant at the 0.05 level of significance.

mental health professional. The remaining income groups are no different than highest earning group when it comes to consulting a mental health professional.

Individuals with “post-secondary” and “other post-secondary” as their highest level of education have 62% and 50%, respectively, higher odds of consulting a mental health professional compared to individuals with “secondary” education. Therefore, individuals with post-secondary education are more likely to consult a mental health professional than individuals with lower levels of education.

Our analyses show that individuals who are “unable to or permanently cannot work” have 84% higher odds of consulting a mental health professional compared to individuals with a job. In addition, unemployed individuals have 21% higher odds of consulting a mental health professional compared to individuals with a job. During the time of the survey, if the individuals were absent for the past 7 days prior to this survey, such individuals have 60%

higher odds of consulting a mental health professional compared to individuals who were present at work for the past 7 days.

Individuals with any type of chronic condition (one or more conditions) have 2.8 times higher odds of consulting a mental health professional compared to individuals with no chronic condition. In addition, individuals who self-report their mental health status as “poor/fair/good” have 4.5 times higher odds of consulting a mental health professional compared to individuals who self-report their mental health status as “excellent/very good.” Therefore, presence of chronic condition and rating “poor/fair/good” as mental health status are strong predictors of mental health care services utilization.

The province variable shows that Alberta residents have 21% higher odds of consulting a mental health professional compared to Ontario. There is no difference between Ontario and New Brunswick residence in terms of consulting a mental health professional.

Factors influencing the likelihood of consulting a mental health professional among those reporting poorer mental health

Model 3 presented in Table 4 examines factors influencing the likelihood of consulting a mental health professional among those reporting poor or fair

Table 4. Likelihood of consulting mental health professionals provided they perceive “poor” or “fair” mental health, 2005. (Model 3; Canadian Population Health Initiative, 2009).

| | Odds Ratio | 95% CI | |
|--|------------|--------|--------|
| | | Lower | Upper |
| <i>Age (Ref: 65 years or more)</i> | | | |
| 12 to 24 years | 2.582* | 0.959 | 6.957 |
| 25 to 44 years | 4.682* | 1.959 | 11.19 |
| 45 to 64 years | 3.630* | 1.558 | 8.457 |
| <i>Sex (Ref: Male)</i> | | | |
| Female | 2.595* | 1.816 | 3.708 |
| <i>Total household income (Ref: \$80,000 or more)</i> | | | |
| No to <\$15,000 | 2.132* | 1.226 | 3.705 |
| \$15,000–\$29,999 | 1.412 | 0.777 | 2.567 |
| \$30,000–\$49,999 | 1.136 | 0.677 | 1.905 |
| \$50,000–\$79,999 | 1.198 | 0.739 | 1.943 |
| <i>Highest Education (Ref: Secondary graduate)</i> | | | |
| <than secondary | 0.844 | 0.464 | 1.537 |
| Other post-secondary | 2.104* | 1.007 | 4.339 |
| Post-secondary | 2.381* | 1.504 | 3.769 |
| <i>Working status last week (Ref: Present last week)</i> | | | |
| Absent last week | 2.073* | 1.126 | 3.817 |
| No job last week | 1.263 | 0.843 | 1.894 |
| Unable/permanent | 1.843* | 1.043 | 3.226 |
| Chronic condition | 5.546* | 2.427 | 12.677 |
| Ever had 5 or more drinks | 1.375 | 0.956 | 1.978 |

*Significant at the 0.05 level of significance.

mental health. The model shows that individuals aged 12 to 24 years, 25 to 44 years, and 45 to 64 years have 2.6 times, 4.7 times, and 3.6 times, respectively, higher odds of consulting a mental health professional compared to seniors. In addition, females have 2.6 times higher odds of consulting a mental health professional than males.

In terms of total income, households with less than \$15,000 income have 2.1 times higher odds of consulting a mental health professional. The remaining income groups are no different than highest earning group when it comes to consulting a mental health professional.

Individuals with “post-secondary” and “some post-secondary” as highest level of education have 2.4 times and 2.1 times, respectively, higher odds of consulting a mental health professional compared to individuals with “secondary” education. Therefore, even with poor or fair mental health status, individuals with post-secondary education are most likely to consult a mental health professional.

The results indicate that individuals who are unable to or permanently cannot work have 1.8 times higher odds of consulting a mental health professional compared to individuals with a job (given the individual self-rates mental health status as “poor” or fair”). During the time of the survey, if the individuals were absent for the past 7 days prior to this survey, such individuals have 2.1 times higher odds of consulting a mental health professional compared to individuals who were present at work for the past 7 days.

Individuals with any type of chronic condition (one or more conditions) have 5.5 times higher odds of consulting a mental health professional compared to individuals with no chronic condition.

Discussion

Based on our analysis, age, marital status, employment status, income, presence of chronic condition(s), and alcohol consumption were significantly associated with self-rated mental health. Married individuals, people who have higher education, and people with higher income were more likely to report better mental health. People who have chronic condition(s) and those unemployed, and those who drink 5 or more drinks at least once a month were more likely to report poorer mental health. Individuals aged 25–44 were significantly more likely to report worse mental health than all other age groups. These findings are consistent with the literature; for example, research in the United Kingdom show improved mental well-being among individuals with higher wages than those with lower wages (Flint et al., 2014). Also, research shows that older adults and higher income status have better mental health status (Meyer et al., 2014). In addition, research shows that people with lower education and high alcohol consumption are more likely to have lower mental health status (Kurtze et al., 2013). Also, chronic disease is shown to

have association with depression (Maideen et al., 2014). Not surprisingly, marital status is associated with reported mental health as research shows that degree of loneliness predicts the mental health status (La Grow et al., 2012). Finally, there was some provincial variation. Newfoundland and Labrador, Prince Edward Island, and Quebec residents were most likely to self-rate their mental health status as excellent or very good.

According to Goldsmith & Diette (2012), stressful events, which may be experienced in higher frequency among those with less education, no employment, and lower income, have a direct causal effect on an individual's mental health, where the stress associated with not being able to make ends meet leads to depression, helplessness, and poor mental health.

Our results indicate age determines the likelihood of consulting mental health professionals and also determines the self-assessment of mental health status. Middle-aged individuals (aged 25 to 44) are most likely to consult mental health professionals, and they are also most likely to self-rate poorer mental health. Therefore, our results show that age group that have the highest burden of poorer self-reported mental health are also most likely to seek mental health professionals. This is a positive finding because the groups that need the support are most likely to seek professional support.

We see that males are less likely to consult mental health professionals. This finding is consistent with the literature. For example, Berger, Levant, McMillan, Kelleher, & Sellers (2005) found a close association between traditional masculinity ideology and negative attitudes toward seeking psychological help. Our results indicate that targeted strategies towards males to reduce barriers would be prudent to eliminate gender disparities.

The results indicate that education is an important indicator of poorer mental health status and, more importantly, the likelihood of seeking mental health consultation. Higher education reduces the likelihood of poorer self-reported mental health status and also at the same increases the likelihood of seeking mental health consultation. Clearly, education is a very important indicator as it positively affects mental health status in a large population.

Employment status strongly predicts the status of self-reported mental health, and our results indicate the demand for mental health consultation is high among not employed individuals. Results regarding income status indicate that income is a strong indicator of self-reported mental health status. The interesting finding is that individuals in the lower income categories are as likely to consult mental health status as the highest income category.

Limitations

There are several limitations of this study. The first and most important is that data on mental health care services utilization came from only three provinces in Canada: Alberta, Ontario, and New Brunswick. This reduced the power of

model 2 to detect significant associations, and reduces the ability to generalize these findings to all of Canada. In addition, responses to the question pertaining to consultation with specific mental health type (family doctor, psychiatrist, nurse, psychologist, and social worker) were not mutually exclusive questions, and therefore, analyses of utilization of services by type of mental health professional were limited to descriptive analysis, and these results should be interpreted with caution.

Conclusion

This study indicates that married individuals, people who have higher education, and people with higher income were more likely to report better mental health. The evidence generated shows that the age group that experienced the highest burden (age 25 to 44) of poorer self-reported mental health was also the most likely to seek mental health professionals. Also, participants with lower education levels were more likely to report poorer mental health but also less likely to utilize mental health services. Income categories were a highly significant predictor, with the lowest income group most likely to report poorer mental health. However, the results show that the lower-middle income category is least likely to consult mental health professionals, which could be an indication of mental health access disparity in this working poor group.

These findings of this study point to the need for targeted strategies towards males, people with lower education, seniors, and lower-middle income level group to reduce barriers to access mental health professionals in order to eliminate disparities in these groups. Future research should examine utilization by mental health professional type, especially among income groups, and predictors of mental health services utilization among all Canadian provinces and territories.

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