

How Spiritual Values and Worship Attendance Relate to Psychiatric Disorders in the Canadian Population

Marilyn Baetz, MD, FRCPC¹, Rudy Bowen, MDCM, FRCPC², Glenn Jones, MD, FRCPC, MSc³, Tulay Koru-Sengul, MHS, MA, PhD⁴

Objective: Research into risk and protective factors for psychiatric disorders may help reduce the burden of these conditions. Spirituality and religion are 2 such factors, but research remains limited. Using a representative national sample of respondents, this study examines the relation between worship frequency and the importance of spiritual values and DSM-IV psychiatric and substance use disorders.

Method: In 2002, the Canadian Community Health Survey obtained data from about 37 000 individuals aged 15 years or older. While controlling for demographic characteristics, we determined odds ratios for lifetime, 1-year, and past psychiatric disorders, with worship frequency and spiritual values as predictors.

Results: Higher worship frequency was associated with lower odds of psychiatric disorders. In contrast, those who considered higher spiritual values important (in a search for meaning, in giving strength, and in understanding life's difficulties) had higher odds of most psychiatric disorders.

Conclusion: This study confirms an association between higher worship frequency and lower odds of depression and it expands that finding to other psychiatric disorders. The association between spiritual values and mood, anxiety, and addictive disorders is complex and may reflect the use of spirituality to reframe life difficulties, including mental disorders.

(Can J Psychiatry 2006;51:654–661)

Information on funding and support and author affiliations appears at the end of the article.

Clinical Implications

- Higher worship frequency is associated with lower odds of having mood, anxiety, and substance disorders.
- The association between considering spiritual values important and higher odds of having mood and anxiety disorders may reflect the impact of psychiatric disorders on a search for meaning, strength, and understanding of life's difficulties.
- The possible dynamic relation between the course of psychiatric disorders and religion or spirituality indicates that issues of religion and spirituality may need to be revisited at various times during psychiatric treatment.

Limitations

- Inferences regarding causality are limited by the cross-sectional nature of the original study.
- The measure of organizational religion is well established but limited to one question on worship frequency.
- The measures of spiritual values are not as well established and may reflect outcomes or growth related to spirituality.

Key Words: religion, spirituality, spiritual values, national survey, psychiatric disorders, depression, anxiety, addictions

In 1990, the WHO ranked psychiatric disorders second only to ischemic heart disease as the leading cause of disease burden in Western societies and projected that psychiatric disorders will increase from 10.7% to 15% of the total disease burden by the year 2020 (1). To effectively understand and respond to this trend, we require comprehensive research into the risk and protective factors, as well as therapies.

Recent research into the relation between religion or spirituality and depression has concluded that there is a modest but significant association between higher religious commitment and lower levels of depression (2,3). There is less literature about anxiety disorders, and a recent summary revealed a mixture of positive, negative, and neutral outcomes with no overall direction of association (4). In contrast, the relation between religion and addictive disorders is consistent, with higher religious commitment associated with lower substance use or abuse (5,6). This is usually attributed to religious prohibition of excess substance use and to the presence of antiabuse peers, provided these influences occur within a nurturing and supportive religious context (5).

Historically, there was no strong distinction between religiousness and spirituality. The past 40 years in the Western world have seen an increased interest in spirituality as a concept separate from religion (7–10). Religiousness can include personal and institutional beliefs along with institutional practices, such as attending worship services, and usually reflects conformity and adherence to a basic set of tenets and proscribed behaviours. Religiousness also has a component of social reinforcement (9). Although spirituality may be expressed within or as part of a religious tradition, it is often associated with a more personal experience of the

transcendent or with acceptance of a higher power. It may also be understood as a more individualistic process that emphasizes self-expression (7,9,11). Thus spirituality can have a much less traditional connotation, especially for individuals not involved in, or who drop out of, a religious tradition (7,11). Spirituality can also be thoroughly individuated, independent of any human relationships or social support (9).

Individuals seem readily able to describe themselves as spiritual and not religious, religious and not spiritual, both, or neither (8,12,13). They may also endorse spiritual needs and place importance on spiritual values without a consistent understanding of what spirituality means to them (7). Attributes that differ between religion and spirituality could have implications for mental health, but the meaning, if any, to mental health of identifying oneself as distinctly spiritual or both religious and spiritual is just beginning to be explored (12,13).

We used the CCHS 1.2 Mental Health Component (14) to answer 2 questions:

1. What are the associations of worship frequency and the importance of spiritual values to mood, anxiety, and substance use disorders?
2. Are the associations different for the group of respondents with a current diagnosis, compared with those who had the disorder in the past but do not currently have it?

Method

Data Collection

The CCHS 1.2 is a cross-sectional survey that collected information related to mental health and well-being for the Canadian population aged 15 years or older and living in private dwellings between May and December 2002 (14,15). Further information on the survey is available in an overview report published by Statistics Canada (14). The public use micro data file used for these analyses contains responses from about 37 000 individuals (15).

Study Measures

Twelve-Month and Lifetime Psychiatric Disorders. Mental disorders for Cycle 1.2 were diagnosed with the DSM-IV-based WMH-CIDI, with some modifications (16). Of respondents, 12.2% reported suffering from lifetime major depressive episode and 4.8% reported suffering from a 12-month major depressive episode; 2.4% and 1.0%, respectively, reported manic episode; 3.7% and 1.5%, respectively, reported PD; and 8.1% and 3.0%, respectively, reported social phobia. For alcohol dependence (score of 3 or more DSM-III-R criteria) and drug dependence, only 12-month data were available. Of respondents, 2.6% reported alcohol dependence, and 0.8% reported drug dependence.

Abbreviations used in this article

ANOVA	analysis of variance
BD	bipolar disorder
CCHS 1.2	Canadian Community Health Survey: Mental Health and Well-Being
CI	confidence interval
PD	panic disorder
OR	odds ratio
SD	standard deviation
WHO	World Health Organization
WMH-CIDI	World Mental Health Composite International Diagnostic Interview

Worship Frequency and Spiritual Values. The frequency of worship attendance was used as a measure of organizational religiousness (10). Worship frequency ranged from 1 = never to 5 = once weekly or more (mean 2.8, SD 1.6). There was one screening question: “Do spiritual values play an important role in your life?” To this question, 36.6% ($n = 13\ 527$) responded “no” and 62.5% ($n = 23\ 111$) responded “yes.” Those who responded positively were then asked about how they made use of spiritual values:

1. To help find meaning in life.
2. For strength in dealing with everyday difficulties.
3. To help understand life’s difficulties.

Because the correlations among these 3 variables were high ($r = 0.96$ to $r = 0.97$, $P < 0.0005$), we combined the answers with the responses to the initial screening question to form a single spiritual values variable with quartiles of 1 = none to 4 = high (mean 2.39, SD 1.22). Statistics Canada used the importance of spiritual values in providing meaning, strength, and understanding to assess components of spirituality (9,10). The correlation between worship frequency and spiritual values was $r = 0.55$ ($P < 0.0005$).

Covariates. Age was recorded in 14 groups of 5-year blocks ranging from ages 15 to 19 years to age 80 years and older (mean 6.39, SD 3.5; that is, mean age 40 to 44 years). Of participants, 49.2% were male ($n = 18\ 178$) and 50.8% were female ($n = 18\ 806$); 52.4% were married ($n = 19\ 351$); 9.3% were common law ($n = 3451$); 12.8% were separated, widowed, or divorced ($n = 4736$); and 25.4% were single ($n = 9396$). Education ranged from 1 (representing less than secondary education) to 4 (representing graduation from a postsecondary school) (mean 2.77, SD 1.28; that is, the average respondent completed some secondary education). Household income ranged from 1, indicating “no income” to 6, indicating an annual income of “\$80 000 or greater” (mean 4.51, SD 1.25; that is, a mean income of \$40 000 annually). Participants reported whether they had any of 22 nonpsychiatric chronic conditions (range 0 to 21; mean 1.7, SD 1.8). Social support was measured with the Medical Outcome Study Social Support Survey that consists of 19 functional support items, each with a 5-point scale (range 0 to 76; mean 64.8, SD 13.3) (17).

Statistical Analyses

We summarized the data by range, mean and SD (continuous), and frequencies and percentages (categorical). We examined the relations between sociodemographic variables and either worship frequency or spiritual values with Pearson correlation coefficients (continuous) and ANOVA (categorical).

We used logistic regression models to determine the lifetime odds of psychiatric disorders and we determined past or

current disorders by multinomial logistic regression analysis using “never had a corresponding psychiatric disorder” as the reference category. To account for the covariance between the 2 variables, we entered worship frequency and spiritual values in the model together. After adjusting for covariates, we calculated adjusted ORs and 95% CIs of worship frequency and spiritual values for each of the psychiatric disorders. To handle missing values when exploring bivariate and multivariate relations, we used available case analysis (18). We performed statistical analyses separately for each of the psychiatric disorders. We applied the Bonferroni correction for multiple tests with a significance level of $P < 0.005$. All estimates were weighted. We performed statistical analysis with SPSS for Windows, Release 12.0.0.

Results

Demographics Associated With Worship Frequency and Spiritual Values

There were significant associations between sociodemographic variables and both the frequency of worship and the strength of spiritual values (Table 1). There was a strong and positive relation between both worship frequency and spiritual values and older age, higher education, and greater social support, whereas there was an inverse association with income. Female respondents had higher worship frequency and spiritual values, compared with male respondents. Married individuals had significantly higher levels of worship frequency, and participants who were separated, divorced, or widowed had the highest level of spiritual values. There was no association between either worship frequency or spiritual values and chronic conditions.

Lifetime Psychiatric Disorders Associated With Worship Frequency and Spiritual Values

Table 2 shows the adjusted associations of lifetime psychiatric disorders with worship frequency and spiritual values. More frequent worship attendance was associated with lower odds of lifetime depression, mania, PD, and social phobia. In contrast, higher spiritual values were associated with higher lifetime odds of having depression, mania, and social phobia. A similar trend between spiritual values and lifetime PD was not statistically significant.

Current and Past Psychiatric Disorders Associated With Worship Frequency and Spiritual Values

Since lifetime rates encompass both current and past disorders, we separated these and analyzed each. We used current disorder to refer to individuals meeting criteria for a psychiatric disorder within the past 12 months (which could be new onset or chronic). We used past disorder to refer to individuals who have had one or more episodes but did not meet diagnostic criteria for a psychiatric disorder within the past 12 months. These individuals were compared with those who had

Table 1 The association between religious or spiritual factors and sociodemographic variables^a

Variable	Worship frequency (1 to 5) ^b	Spiritual values (1 to 4) ^c
Age (5-year blocks): <i>r</i>	0.12 ^d	0.22 ^d
Sex: mean (SD)		
1 = Male	2.71 (1.58) ^d	2.16 (1.20) ^d
2 = Female	2.96 (1.61)	2.61 (1.20)
Marital status: mean (SD)		
1 = Married	3.06 (1.62) ^d	2.54 (1.22)
2 = Common law	1.94 (1.19)	1.94 (1.10)
3 = Separated, widowed, or divorced	2.89 (1.67)	2.69 (1.21) ^d
4 = Single	2.66 (1.51)	2.08 (1.16)
Education: <i>r</i>	0.02 ^d	0.05 ^d
Income: <i>r</i>	-0.03 ^d	-0.09 ^d
Social support: <i>r</i>	0.04 ^d	0.04 ^d
Chronic condition: <i>r</i>	-0.006	-0.002

^aWe compared worship frequency with spiritual values between categories for sex and marital status with ANOVA and across levels for age, education, income, social support, and chronic conditions using Pearson correlation coefficient (*r*).
^bMeasure of worship frequency in which 1 = never and 5 = once weekly or more
^cMeasure of spiritual values in which 1 = none and 4 = high.
^d*P* < 0.0005

Table 2 The association between worship frequency and spiritual values and lifetime psychiatric disorders^a

Disorder	Lifetime worship frequency		Lifetime spiritual values	
	Adjusted OR	95%CI	Adjusted OR	95%CI
Depression	0.90 ^b	0.87 to 0.92	1.18 ^b	1.14 to 1.23
Mania	0.87 ^b	0.82 to 0.92	1.21 ^b	1.12 to 1.32
PD	0.91 ^b	0.87 to 0.96	1.06	0.99 to 1.13
Social phobia	0.93 ^b	0.90 to 0.97	1.13 ^b	1.08 to 1.18

^aWe adjusted all the logistic regression models for psychiatric disorders for age, sex, education, income, marital status, chronic condition, and social support.
^b*P* < 0.0005

never suffered from the corresponding psychiatric disorder. These results are shown graphically in Figures 1 and 2.

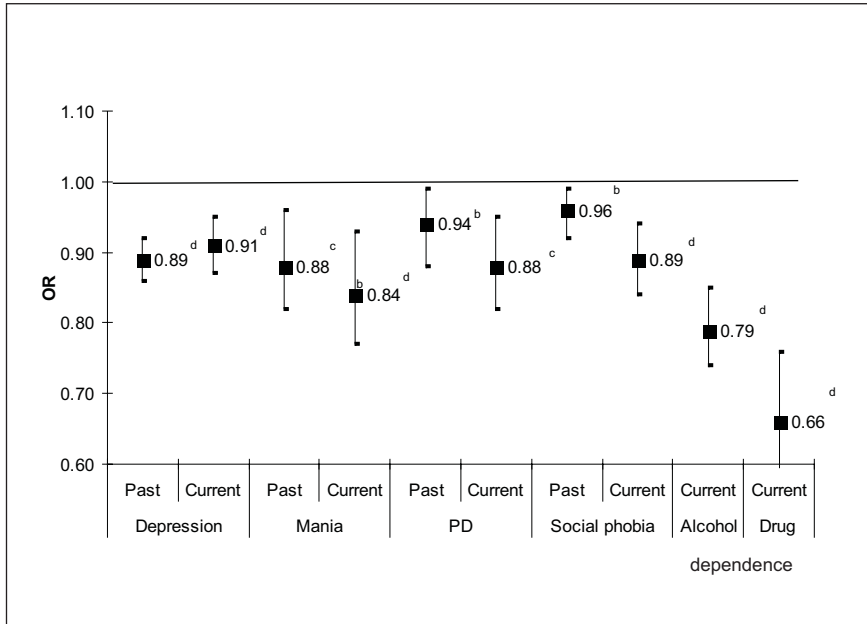
Higher worship frequency was associated with lower odds of both current and past depression, current and past mania, current PD, and current social phobia. When we adjusted for the Bonferroni correction, past PD and social phobia were not significant. Data were only available for current substance dependence; higher worship frequency was associated with both current lower alcohol and drug dependence.

The strength of spiritual values was associated with higher current and past depression, current and past mania, current and past social phobia, and past PD. Conversely, strength of spiritual values was associated with lower current alcohol dependence. Current PD and drug dependence were not significant.

Discussion

This study confirms a national Canadian population survey finding that higher worship frequency is associated with lower lifetime depression (19); however, we expand that

Figure 1 The association between worship frequency and past and current psychiatric disorders^a



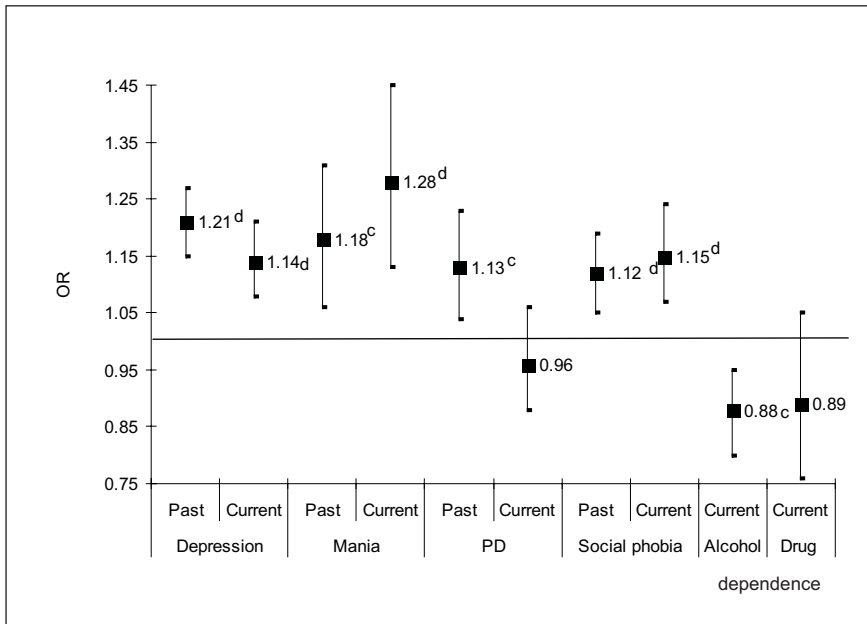
^aThe reference category for the psychiatric disorders is "never had a psychiatric disorder." All the multinomial logistic models for psychiatric disorders were adjusted for age, sex, education, income, marital status, chronic condition, and social support.

^b $P < 0.05$ (not significant with Bonferroni correction)

^c $P < 0.005$

^d $P < 0.0005$

Figure 2 The association between spiritual values and past and current psychiatric disorders^a



^aFor the psychiatric disorders, we used the reference category "never had a psychiatric disorder." We adjusted all the multinomial logistic models for psychiatric disorders for age, sex, education, income, marital status, chronic condition, and social support.

^b $P < 0.05$ (not significant with Bonferroni correction)

^c $P < 0.005$

^d $P < 0.0005$

finding to show associations between higher worship frequency and lower lifetime mania, PD, and social phobia (Table 2). Conversely, placing high importance on spiritual values is associated with higher lifetime depression, mania, and social phobia (Table 2). For these mood and anxiety disorders, we also examined their time of occurrence, which we separated into current (12-month) and past episodes (not currently meeting criteria). Comparing worship frequency (Figure 1) and spiritual values (Figure 2) and current and past disorder with the baseline group of respondents who never had the target disorder provides some ability to see the disorder stage and its relation to religion or spirituality.

The inverse association between worship frequency and depression is consistent (2,3). Our study confirms this for lifetime, current, and past depression, with and without adjustment for relevant sociodemographic, social support, and health variables. It is possible that individuals with current high levels of depression attend worship less frequently, which is consistent with the clinical symptoms of low energy and interest. Conversely, individuals who more frequently attend worship might have lower levels of depression consistent with their attendance being protective against depression. High worship frequency is similarly associated with lower lifetime, past, and current mania. The presence of mania likely reflects a BD in which depressive episodes are more frequent than manic ones; therefore, it is not surprising that the patterns are similar. Prospective data are sparse but do support the possibility of worship attendance protecting against depression. In a study of over 200 elderly medically ill men evaluated at baseline and again at Month 6, religious coping (which includes worship service attendance) was the only baseline variable that predicted lower depression scores at follow-up (20). Personal devotion (including worship attendance) may buffer the depressogenic effect of some stressful life events (21). To more accurately and completely answer questions about directionality, we need prospective studies in large general populations.

The results for anxiety disorders are less consistent. There are lower odds of lifetime and current PD and social phobia with higher worship frequency, but compared with mood disorders, there is only a weak association between worship frequency and either past PD or past social phobia that becomes insignificant after Bonferroni correction. Similar arguments to those for depression would apply to the negative association between current attendance and current disorders (Figure 1). Panic and agoraphobic avoidance or social anxiety may prevent worship attendance, or worship attendance may be protective. However, unlike depression, the lack of association between past disorders and current attendance may possibly be attributed to the early onset of anxiety disorders, which is often at an age prior to that of depression's onset (22).

Anxiety disorders usually begin during childhood or early adolescence when a pattern of worship attendance might not be determined by the individual but, rather, by his or her parents. An analysis of the National Institute of Mental Health Epidemiologic Catchment Area Wave II Study found no association between either lifetime PD or social phobia and church attendance after controlling for similar sociodemographic variables (23). This is possibly because the effect size was reduced by not separating lifetime disorders into current and past disorders. There are not enough longitudinal data to clarify these relations.

High worship frequency is associated with significantly lower adjusted ORs of 12-month alcohol and drug dependence. This is consistent with prior studies that show that the members of religious groups that endorse antisubstance abuse norms have lower levels of substance abuse (5,24,25).

Spiritual values are composite variables of meaning, strength, and understanding. Attaching high personal importance to spiritual values is associated with higher odds of lifetime, current, and past depression. This positive association may mean that high spiritual values produce high levels of depression or that depression leads individuals to seek spirituality. An illness can cause an individual to search for spiritual support and for answers in the face of a life-altering experience (10, 26,27).

Lifetime, past, and current mania is also associated with higher spiritual values. As previously discussed, mania may be a part of a BD of which depression may be a prominent feature, so its similarity to depression is expected. Endorsing very high spiritual values during a current episode of mania may reflect increased sociability, engagement, and religiosity during the episode. Religious and spiritual beliefs are reportedly important to BD patients and they shape the way in which individuals with BD conceptualize their illness; however, there is little research supporting this association (28).

In contrast, high spiritual values are not associated with lifetime or current PD but are associated with increased odds of past PD. This may mean that dealing with the immediate physical and psychic fear of panic does not lead to a search for spiritual values at that time owing to some individuals' inward focus of anxiety or the start of a process of searching for others; thus, there is a lack of association between PD and spiritual values. There is some longitudinal evidence that religion and, possibly, spiritual values are associated with a better outcome for individuals suffering from PD who are in treatment, which is similar to the evidence for anxiety in general (29,30). Individuals with past panic also had high spiritual values, which suggests the seeking explanation is more likely. When past and current PDs are combined into lifetime rates, they cancel each other out (that is, results are not significant). This

may explain in part the inconsistencies or lack of significance in some studies of PD and spiritual variables (24,25).

High spiritual values are associated with lifetime, current, and past social phobia. The same reasoning for an association between depression and spiritual values applies to the past occurrence of social phobia. Although it is unlikely that high spiritual values cause social phobia, perhaps social phobia may lead an individual to seek meaning, strength, or understanding of difficulties through spiritual values.

In a review of spirituality and addiction, Cook summarized 13 different concepts related to spirituality that are found in the addiction literature (31). Providing a sense of meaning is one of the most common concepts. It is one concept used in our study. Placing high importance on spiritual values is associated with significantly lower adjusted ORs of alcohol dependence. This pattern differs from that observed for current mood and anxiety disorders, where endorsement of spiritual values is associated with higher levels of those disorders (with the exception of PD). When an individual is currently suffering from an addictive disorder it is unlikely that he or she has the same desire to reframe what is happening in terms of spiritual values or through worship experiences. Alternately, those individuals to whom spiritual values are important may be much less likely to have a current alcohol dependence disorder. There is no association between spiritual values and current drug dependence. This can largely be explained by the covariance with worship frequency. When worship frequency is removed from the model, the association with spiritual values becomes significant (not shown).

Our study has several limitations. Although we examined a large, nationally representative population, using well-established sampling procedures, inferences regarding causality are limited by the cross-sectional nature of the original study. The use of current and past diagnoses does help to provide some indirect evidence for a temporal association. The measure of organizational religion is well established but limited to one question (worship frequency). While this measure has been challenged as biased (9), other data, including its application across different cultures, strongly support its use (10). Measures of spiritual values are less well established. Some measures are directed at breaking down different ways respondents may endorse the 2 main concepts of religion and spirituality. Spirituality can be “considered a personal quest for understanding ultimate questions about life, meaning, and relationship with the sacred” (p 844, 27). Statistic Canada’s questions do touch on these concepts but measurement is complex because some questions may actually reflect growth or outcomes that are associated with spirituality as opposed to “core” spirituality (27). The psychiatric diagnoses were determined with the WMH-CIDI, which was developed to address the concerns of wording, comprehension, and time

in the WHO-CIDI. There are, however, issues of diagnostic reliability inherent to epidemiologic surveys (32). Although a more stringent level of statistical significance was used, it is possible that the findings may be due to chance, particularly in a large data set. Ultimately, replication and longitudinal studies need to be conducted with the aim of further examining these relations.

This study reveals that worship frequency is associated with lower rates of mood, anxiety, and substance disorders. Conversely, spiritual values are associated with higher rates of mood and anxiety disorders. This may reflect the possibility that the insecurities of living with psychiatric disorders can initiate or intensify a search for meaning, strength, and understanding of life’s difficulties (9,10). Religion or spirituality may not be as highly valued during a current psychiatric illness, but over time, these values may help individuals grow through their experiences. These observations and interpretations suggest a dynamic process that, to be quantified and evaluated, requires further research. Exploring religious and spiritual practices and beliefs has been recommended as part of a standard psychiatric history (33); however, issues of religion and spirituality may need to be revisited at various times throughout psychiatric treatment (26). Further educating physicians and residents about religious or spiritual inquiry may initiate discourses that could enhance patient coping through potential mobilization of spiritual resources.

Funding and Support

This research received no funding and no support.

Acknowledgement

The authors thank Dr Harold Koenig for his helpful comments in preparing the manuscript.

References

1. Murray C, Lopez A. The global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020. Cambridge (MA): Harvard University Press; 1996.
2. Smith TB, McCullough ME, Poll J. Religiousness and depression: evidence for a main effect and the moderating influence of stressful life events. *Psychol Bull* 2003;129:614–36.
3. McCullough ME, Larson DB. Religion and depression: a review of the literature. *Twin Res* 1999;2:126–36.
4. Shreve-Neiger AK, Edelstein BA. Religion and anxiety: a critical review of the literature. *Clin Psychol Rev* 2004;24:379–97.
5. Gorsuch RL. Religious aspects of substance abuse and recovery. *J Soc Issues* 1995;52:65–83.
6. Engs RC, Mullen K. The effect of religion and religiosity on drug use among a selected sample of post secondary students in Scotland. *Addiction Research* 1999;7:149–70.
7. Bibby R. Restless gods: the renaissance of religion in Canada. Toronto (On): Stoddard Publishing; 2002.
8. Zinnbauer B, Pargament KI, Cowell B. Religion and spirituality: unfuzzifying the fuzzy. *J Sci Study Relig* 1997;36:549–64.
9. Woodhead L, Heelas P, Seel B, Szernszynski B, Tusting K. The spiritual revolution: why religion is giving way to spirituality in the modern world. In: Heelas P, Woodhead L, editors. Religion and spirituality in the modern world. Oxford (UK): Blackwell Publishing; 2005. p 49–76.
10. Norris P, Inglehart R. Sacred and secular: religion and politics worldwide. New York (NY): Cambridge University Press; 2004.

11. Larson DB, Swyers JP, McCullough ME. Scientific research on spirituality and health: a consensus report. Rockville (MD): National Institute for Healthcare Research; 1998.
12. Baetz M, Griffin R, Bowen R, Marcoux G. Spirituality and psychiatry in Canada: psychiatric practice compared with patient expectations. *Can J Psychiatry* 2004;49:265-71.
13. Koenig HG, George LK, Titus P. Religion, spirituality, and health in medically ill hospitalized older patients. *J Am Geriatr Soc* 2004;52:554-62.
14. Statistics Canada. Canadian Community Health Survey Cycle 1.2 Mental Health and Well-being public use microdata file documentation. Ottawa (ON): Statistics Canada; 2002. Report nr 82M0021GPE.
15. Statistics Canada. Canadian Community Health Survey, cycle 1.2 [machine readable data file]. 1st ed. Ottawa (ON): Statistics Canada; 2004.
16. Gravel G, Beland Y. The Canadian Community Health Survey: Mental Health and Well-Being. *Can J Psychiatry* 2005;50:573-9.
17. Sherbourne CD, Stewart AL. The MOS Social Support Survey. *Soc Sci Med* 1991;32:705-14.
18. Little R, Rubin D. Statistical analysis with missing data. 2nd ed. New York (NY): John Wiley and Sons Inc; 2002.
19. Baetz M, Griffin R, Bowen R, Koenig HG, Marcoux E. The association between spiritual and religious involvement and depressive symptoms in a Canadian population. *J Nerv Ment Dis* 2004;192:818-22.
20. Koenig HG, Cohen HJ, Blazer DG, Pieper C, Meador KG, Shelp F, and others. Religious coping and depression among elderly, hospitalized medically ill men. *Am J Psychiatry* 1992;149:1693-700.
21. Kendler KS, Gardner CO, Prescott CA. Clarifying the relationship between religiosity and psychiatric illness: the impact of covariates and the specificity of buffering effects. *Twin Res* 1999;2:137-44.
22. Wittchen HU, Kessler RC, Pfister H, Lieb M. Why do people with anxiety disorders become depressed? A prospective-longitudinal community study. *Acta Psychiatr Scand* 2000;102(Suppl 406):14-23.
23. Koenig HG, Ford SM, George LK, Blazer DG, Meador KG. Religion and anxiety disorder: an examination and comparison of associations in young, middleaged, and elderly adults. *J Anxiety Disord* 1993;7:321-42.
24. Kendler KS, Liu XQ, Gardner CO, McCullough ME, Larson D, Prescott CA. Dimensions of religiosity and their relationship to lifetime psychiatric and substance use disorders. *Am J Psychiatry* 2003;160:496-503.
25. Kendler KS, Gardner CO, Prescott CA. Religion, psychopathology, and substance use and abuse: a multimeasure, genetic-epidemiologic study. *Am J Psychiatry* 1997;154:322-9.
26. Pargament KI. The bitter and the sweet: an evaluation of the costs and benefits of religiousness. *Psychological Inquiry* 2002;13:168-81.
27. Moreira-Almeida A, Koenig HG. Retaining the meaning of the words religiousness and spirituality: a commentary on the WHOQOL SRPB group cross-cultural study of spirituality, religion, and personal beliefs as components of quality of life (2005;62:1486-7). *Soc Sci Med* 2006;63:843-5.
28. Mitchell L, Romans S. Spiritual beliefs in bipolar affective disorder: their relevance for illness management. *J Affect Disord* 2003;75:247-57.
29. Bowen RC, Baetz M, D'arcy C. Self-rated importance of religion predicts one-year outcome of patients with panic disorder. *Depress Anxiety* 2006. Forthcoming.
30. Hughes JW, Tomlinson A, Blumenthal JA, Davidson J, Sketch MH, Watkins LL. Social support and religiosity as coping strategies for anxiety in hospitalized cardiac patients. *Ann Behav Med* 2004;28:179-85.
31. Cook CC. Addiction and spirituality. *Addiction* 2004;99:539-51.
32. Kessler RC, Ustun TB. The World Mental Health (WMH) survey initiative version of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI). *Int J Methods Psychiatr Res* 2004;13:93-121.
33. American Psychiatric Association. Guidelines for psychiatric patient assessment. *Am J Psychiatry* 1995;152(Suppl 11):63-80.

Manuscript received December 2005, revised, and accepted May 2006.

This paper was previously presented in poster form at the American Psychiatric Association meeting; May 25, 2005; Atlanta, (GA).

¹Associate Professor, Department of Psychiatry, University of Saskatchewan, Saskatoon, Saskatchewan.

²Professor, Department of Psychiatry, University of Saskatchewan, Saskatoon, Saskatchewan.

³Associate Professor, Department of Medicine, McMaster University, Hamilton Ontario; Radiation Oncologist, Department of Oncology, Credit Valley Hospital, Mississauga Ontario.

⁴Assistant Professor, Department of Clinical Epidemiology and Biostatistics, McMaster University, Hamilton Ontario.

Address for correspondence: Dr M Baetz, Department of Psychiatry, University of Saskatchewan, 103 Hospital Drive Saskatoon SK, S7N 0W8; m.baetz@usask.ca

Résumé : Comment les valeurs spirituelles et la pratique du culte sont liées aux troubles psychiatriques dans la population canadienne

Objectif : La recherche des facteurs de risque et de protection des troubles psychiatriques peut contribuer à réduire le fardeau de ces affections. La spiritualité et la religion sont 2 de ces facteurs, mais la recherche demeure limitée. À l'aide d'un échantillon national représentatif de répondants, cette étude examine la relation entre d'une part la fréquence de la pratique du culte et l'importance des valeurs spirituelles, et d'autre part, les troubles psychiatriques et liés à une substance du DSM-IV.

Méthode : En 2002, l'Enquête sur la santé dans les collectivités canadiennes a obtenu des données sur 37 000 personnes de 15 ans et plus. Tout en contrôlant les caractéristiques démographiques, nous avons déterminé le rapport de cotes des troubles psychiatriques de durée de vie, d'un an et du passé avec la fréquence de la pratique du culte et les valeurs spirituelles comme prédicteurs.

Résultats : La fréquence élevée de la pratique du culte était associée à des risques faibles de troubles psychiatriques. Par contre, ceux qui estimaient que des valeurs spirituelles élevées étaient importantes (dans une recherche de sens, pour donner de la force, et pour comprendre les difficultés de la vie) avaient des risques plus élevés de développer la plupart des troubles psychiatriques.

Conclusion : Cette étude confirme une association entre une fréquence élevée de la pratique du culte et des risques faibles de dépression, et étend ces résultats à d'autres troubles psychiatriques. L'association entre les valeurs spirituelles et les troubles de l'humeur, anxieux et de toxicomanie est complexe et peut refléter le recours à la spiritualité pour remettre en place les difficultés de la vie, y compris les troubles mentaux.