Psychotropic Medication Use in Canada

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Background: Psychotropic medication use can be employed as an indicator of appropriate treatment for mental disorders. The Canadian Community Health Survey: Mental Health and Well-Being (CCHS 1.2) offers the first opportunity to characterize Canadian psychotropic medication use on a national level within diagnostic groups as assessed by a full version of the Composite International Diagnostic Interview (CIDI).

Method: We assessed the prevalence of antidepressant, sedative-hypnotic, mood stabilizer, psychostimulant, and antipsychotic use over 2 days overall and in subgroups defined by CIDI-diagnosed disorders and demographics. We employed sampling weights and bootstrap methods.

Results: Overall psychotropic drug utilization was 7.2%. Utilization was higher for women and with increasing age. With any lifetime CIDI-diagnosed disorder assessed in the CCHS 1.2, utilization was 19.3%, whereas without such disorders, it was 4.1%. Selective serotonin reuptake inhibitors (SSRIs) were the most commonly used antidepressants for those with a past-year major depressive episode (17.8%), followed by venlafaxine (7.4%). Among people aged 15 to 19 years, antidepressant use was 1.8% overall and 11.7% among those with past-year depression; SSRIs made up the majority of use. Sedative-hypnotics were used by 3.1% overall, increasing with age to 11.1% over 75 years.

Conclusions: International comparison is difficult because of different evaluation methods, but antidepressant use may be higher and antipsychotic use lower in Canada than in recent European and American reports. In light of the relative lack of contemporary evidence for antidepressant efficacy in adolescents, it is likely that antidepressant use among those aged 15 to 19 years will continue to decline. The increased use of sedative-hypnotics with age is of concern, given the associated risk of adverse effects among seniors.

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Clinical Implications

- Psychotropic medication use is common, with 7.2% of the general population taking at least one such medication.
- Only a minority (approximately 19%) of those with a lifetime history of a mental disorder are using a psychotropic medication.
- Canadians over age 75 years are the highest users of sedative-hypnotic drugs, in spite of significant risks of adverse effects in the elderly.

Limitations

- Comparison with other surveys is complicated by different evaluation time frames and different methods of assessment of medication use.
- A detailed assessment of treatment quality was not possible, since information on daily dosage and treatment duration was not collected and the indication for which each medication was used was not recorded.
- The CCHS 1.2 assessed a limited number of mental disorders. Thus the prevalence of "any" lifetime mental disorder may be underestimated, while that of "no" lifetime disorder may be overestimated; drug utilization estimates in these groups may also be affected.

Key Words: *cross-sectional studies, drug utilization, psychotropic drugs, antidepressive agents, hypnotics and sedatives, antianxiety agents, antimanic agents, antipsychotic agents, mental disorders, Canada*

Psychotropic drug utilization rates can be useful in monitoring treatment for mental disorders on a population basis. Moreover, they provide information regarding rational drug use, given current knowledge regarding the risks and benefits of a given medication.

Although data from administrative sources such as physician billings and prescription drug plans are often used in drug utilization studies, these data can be inaccurate and generally do not cover the entire population. Moreover, they cannot provide information on whether medications are actually taken. Population-based surveys that include detailed questions on medication use provide an opportunity to circumvent these problems. While the dependence of such surveys on self-report could potentially introduce error, strategies to minimize this include the use of shorter evaluation times to improve recall and verification of drug names against respondents' medication containers.

A recent European survey (the ESEMeD) highlighted the importance of such data to public health by pointing out that, among individuals with past-year major depression, treatment with an anxiolytic (32.5%) was more common than treatment with an antidepressant (21.2%) (1). Although the NHANES-III examined American psychotropic medication use between 1988 and 1994, there has been no American nationally representative drug utilization survey reported since then (2).

In Canada, reports on psychotropic drug use date back at least to the early 1970s (3,4). These early investigations were followed by numerous studies focusing on specific medications, populations, and geographic areas (for example, antidepressants, the elderly, and provinces) (5–8). Since 1994, detailed population-based national data on medication use have been available biannually from the NPHS (9–11). However, the NPHS does not provide comprehensive assessment of psychiatric diagnoses. The CCHS 1.2 offers the first opportunity to examine patterns of psychotropic medication use on a national level, within diagnostic groups as assessed by the full version of the CIDI.

In addition to providing data on general population medication use, drug utilization studies can answer contemporary questions regarding appropriate use of specific medications. For example, there is considerable evidence that, although they have their place in therapeutics, sedative-hypnotic and anxiolytic medications are associated with potentially serious adverse effects, particularly in the elderly (5,12–17). No recent nationally representative study has reported age-specific frequencies of use of these medications over a broad age range and within multiple diagnostic categories.

Another timely issue is the use of antidepressants in adolescents (18–20). The Canadian Psychiatric Association recently published a position statement on antidepressants, emphasizing a lack of compelling evidence for efficacy in adolescents and a need for consideration of potential risks (21). The CCHS 1.2 was conducted prior to the emergence of widespread concern about this subject and can provide a baseline for determining future trends.

As such, the specific objectives of this work were to estimate the following:

- psychotropic drug utilization (antidepressants, sedative-hypnotics, mood stabilizers, antipsychotics, and psychostimulants) in the general population and (where possible) stratified by age and sex
- psychotropic drug utilization in several CIDI-diagnosed DSM disorders (including mood, anxiety, and substance use disorders) and in self-reported schizophrenia (22)
- antidepressant utilization by antidepressant class in the overall population, in specific diagnostic groups, and in persons aged 15 to 19 years
- sedative-hypnotic utilization in people aged over 45 years.

In this report, we use the term "sedative-hypnotic" to denote medications that are commonly used for either sleep or

Abbreviations used in this article

ATC	Anatomic Therapeutic Classification
BZD	benzodiazepine
CI	confidence interval
CIDI	Composite International Diagnostic Interview
CIHR	Canadian Institutes of Health Research
CCHS 1.2	Canadian Community Health Survey : Mental Health and Well-Being
ECA	Epidemiologic Catchment Area
ESEMeD	European Study of the Epidemiology of Mental Disorders
MDE	major depressive episode
NCS	National Comorbidity Survey
NHANES-III	Third National Health and Nutrition Examination Survey
NPHS	National Population Health Survey
SHA	sedative-hypnotic or anxiolytic
SNRI	serotonin norepinephrine reuptake inhibitor
SSRI	selective serotonin reuptake inhibitor
TCA	tricyclic antidepressant
ZOP	zopiclone

anxiety (benzodiazepines and non-benzodiazepine compounds, mostly zopiclone).

Method

Survey and Subjects

The survey methodology is described in detail elsewhere in this issue (23). Briefly, the CCHS 1.2 was a cross-sectional survey of a nationally representative sample of individuals aged 15 years and over, conducted by Statistics Canada between May and December 2002 (n = 36 984). The survey content included measures of several mental disorders, including major depression, mania, 3 anxiety disorders (panic disorder, agoraphobia, and social phobia), and self-reported schizophrenia, as well as psychotropic medication use (24).

Measurement of Drug Utilization

Detailed drug utilization data were collected and processed in 2 stages (24). Participants were first asked about their use of each of the major classes of psychotropic drugs over the past year; for example, antidepressant use was determined with the question, "In the past 12 months . . . did you take antidepressants such as Prozac, Paxil, or Effexor?" The specific classes that were probed were sedatives, diet pills, anxiolytics, mood stabilizers, antidepressants, antipsychotics, and psychostimulants.

For participants who reported 12-month use of at least one of these drug classes (n = 7221), the CCHS 1.2 collected more accurate pharmacotherapy data. Specifically, respondents were asked to produce medication containers for psychotropic drugs taken in the 2 days preceding the interview. Medication names were recorded and coded with a modification of the WHO's ATC codes (25). We used these data for the current analysis.

Measurement of Mental Disorders

For assessment of mental disorders, the CCHS 1.2 employed a Canadian adaptation of the CIDI version used in the WHO Mental Health 2000 initiative (26). The mood, anxiety, and illicit drug dependence modules in the CCHS 1.2 corresponded to the DSM-IV, whereas alcohol use was measured with a short form of the CIDI (that is, the CIDI-SF) that employed DSM-III-R criteria. For the purpose of this report, "mood disorder" refers either to manic or to major depressive episodes as identified by the CIDI. "Bipolar disorder" implies a lifetime episode of mania. "Anxiety disorder" denotes any combination of panic disorder, agoraphobia, and (or) social phobia. "Substance dependence" is defined as illicit drug dependence and (or) alcohol dependence. Disorder definitions were not "pure"; that is, comorbidity exists within each of the diagnostic classes. References to "lifetime disorder" imply a CIDI-diagnosed lifetime mood, anxiety, or substance use disorder.

The evaluation of psychotic disorders in population-based surveys is complicated by low prevalence and questionable validity, and schizophrenia was measured only by self-report in the CCHS 1.2 (24). Participants were asked the following: "I'd like to ask about . . . conditions which . . . have been diagnosed by a health professional. . . . Do you have schizophrenia?"

Analysis

We calculated estimates of drug utilization as proportions, using CCHS 1.2 sampling weights to deal with the complex sampling strategy; we obtained 95%CIs with a bootstrap program provided by Statistics Canada and used SAS Version 8.01 (27) to conduct the analyses.

A few estimates deriving from the present analyses were imprecise, owing to insufficient numbers, and should be interpreted with caution. These will be denoted by a superscript 'E.'

Results

Overall, the prevalence of psychotropic medication use was 7.2% (Table 1). Use was higher among women (9.5%) than among men (5.0%) and increased with age from 2.5% among respondents aged 15 to 19 years to 11.8% among those aged over 65 years . In fact, the very low frequency of adolescent use of several drug classes led to poor precision of estimates.

Mental Disorders

The overall 2-day psychotropic drug treatment rate among individuals with a lifetime CIDI-diagnosed mental disorder was 19.3%. This was higher for those with major mood disorders active in the past year, of whom 33.3% received psychotropics. Notably, of those with a past-year MDE, 28.6% took an antidepressant, while 11.3% used a sedative-hypnotic. Those with a lifetime anxiety disorder also used more antidepressants than sedative-hypnotics. However, further analysis demonstrated that for those aged over 65 years, these antidepressant-sedative-hypnotic patterns no longer held. In this older age group, 29.5% of those with a past-year MDE used antidepressants (95%CI, 20.1 to 39.2) and 29.6% used sedative-hypnotics (95%CI, 18.6 to 40.5)^{E}. With lifetime anxiety, 15.9% (95%CI, 10.0 to 21.8) aged over 65 years used an antidepressant, while 20.0% (95%CI, 14.2 to 25.7) used a sedative-hypnotic.

For those with bipolar disorder, the utilization of antidepressants (20.1%) was higher than it was for sedative-hypnotics (8.6%) or mood stabilizers (8.2%), which in turn were used more than antipsychotics (3.7%)^{E}. Further breakdown of mood stabilizer use demonstrated that 5.0% (95%CI, 2.9 to 7.1)^{E} of subjects with bipolar disorder took lithium, while 3.2% (95%CI, 2.0 to 4.3)^{E} took anticonvulsants. Bipolar disorder had a weighted prevalence of 2.4% (95%CI, 2.1 to 2.6).

Table 1 Percentage distribution of 2-day psychotropic medication use among those aged 15 years and over

	Frequency of use (%)[a] (95%CI)[b]				
	Antidepressant (*n* = 2143)	SHA (*n* = 1530)	Mood stabilizer (*n* = 257)	Antipsychotic (*n* = 228)	Any psychotropic (*n* = 3343)
Total (*n* = 36 984)	4.7 4.4–5.0	3.1 2.8–3.3	0.6 0.5–0.7	0.5 0.4–0.5	7.2 6.9–7.6
Sex					
Male (*n* = 16 773)	3.1 2.7–3.4	2.3 2.0–2.6	0.4 0.3–0.5	0.4 0.31–0.52	5.0 4.5–5.4
Female (*n* = 20 211)	6.3 5.8–6.8	3.9 3.5–4.2	0.8 0.6–1.0	0.5 0.4 –0.6	9.5 8.9–10.0
Age (years)					
15 to 19 (*n* = 2866)	1.8 1.3–2.4	[F]	[F]	[F]	2.5 1.8–3.1
20 to 44 (*n* = 15 620)	4.1 3.7–4.5	1.2 0.9–1.4	0.5 0.3–0.6	0.4[E] 0.3–0.5	5.0 4.6–5.5
45 to 64 (*n* = 10 762)	6.6 5.9–7.3	4.2 3.7–4.8	0.9[E] 0.6–1.3	0.6 0.4–0.8	9.7 8.9–10.5
65 and over (*n* = 7736)	4.7 4.0–5.3	8.3 7.4–9.1	0.5 0.3–0.7	0.5 0.3–0.7	11.8 10.9–12.8
DSM diagnosis					
Mood disorder, lifetime (*n* = 5112)	18.1 16.6–19.7	7.8 6.7–8.8	3.1 2.4–3.9	1.8 1.4–2.2	23.4 21.6–25.1
Mood disorder, 12 month (*n* = 2122)	27.5 24.7–30.4	10.9 9.1–12.7	4.7[E] 3.1–6.3	3.0 2.1–3.9	33.3 30.3–36.4
Anxiety disorder, lifetime (*n* = 4268)	15.5 14.1–16.9	7.2 6.1–8.3	1.8 1.3–2.3	1.9 1.4–2.4	20.1 18.4–21.8
MDE, lifetime (*n* = 4713)	18.9 17.3–20.5	8.1 7.0–9.1	2.7 2.0–3.4	1.8 1.3–2.2	23.7 21.8–25.5
MDE, 12-month (*n* = 1944)	28.6 25.6–31.6	11.3 9.5–13.2	4.5[E] 2.9–6.2	3.2 2.2–4.1	34.3 31.1–37.5
Bipolar disorder (*n* = 938)	20.1 16.7–23.5	8.6 6.4–10.8	8.2 5.8–10.5	3.7[E] 2.4–4.9	28.0 24.1–32.0
Substance dependence, 12 month (*n* = 1215)	7.8 5.7–9.9	2.4[E] 1.5–3.3	1.1[E] 0.5–1.8	1.3[E] 0.6–2.1	10.0 7.7–12.2
At least one lifetime disorder (*n* = 7585)	14.7 13.5–15.9	6.7 5.8–7.5	2.1 1.6–2.6	1.5 1.2–1.8	19.3 18.0–20.6
No lifetime disorder (*n* = 28 470)	2.1 1.9–2.4	2.1 1. 9–2.3	0.2 0.2–0.3	0.2 0.1–0.3	4.1 3.8–4.4

[a]Weighted percent

[b]95% bootstrap CI

Antidepressant includes TCAs (desipamine, imipramine, clomipramine, trimipramine, amitryptyline and doxepin), SSRIs (fluoxetine, fluvoxamine, paroxetine, sertraline, and citalopram), a SNRI (venlafaxine), and other antidepressants (trazodone, nefazodone, mirtazepine, bupropion, phenelzine, tranylcypromine, isocarboxazid, moclobemide, tryptophan).

SHA includes zopiclone and benzodiazepines (clonazepam, diazepam, chlordiazepoxide, oxazepam, lorazepam, alprazolam, flurazepam, nitrazepam, triazolam, and temazepam).

Mood stabilizer includes lithium, carbamazepine, valproic acid, gabapentin, lamotrigine, and topiramate.

Antipsychotic includes risperidone, olanzapine, quetiapine, clozapine, chlorpromazine, promazine, methotrimeprazine, fluphenazine, perphenazine, prochlorperazine, trifluoperazine, thioproperazine, acetophenazine, pericyazine, thioridazine, mesoridazine, pipotiazine, haloperidol, droperidol, flupenthixol, thiothixene, zuclopenthixol, fluspirilene, pimozide, loxapine, and other antipsychotics (for example, remoxipride and chlorprothixene).

[E]low estimate precision; interpret with caution

[F]estimate not released by Statistics Canada owing to inadequate precision

Table 2 Percentage distribution of 2-day antidepressant use by antidepressant class among those aged 15 years and over

	Frequency of use (%)[a] (95%CI)[b]				
	TCA (*n* = 422)	SNRI (*n* = 336)	SSRI (*n* = 1292)	Other antidepressant (*n* = 276)	≥ 1 antidepressant (*n* = 2143)
Total (*n* = 36 984)	0.8 0.7–1.0	0.8 0.7–1.0	2.8 2.6–3.1	0.6 0.5–0.7	4.7 4.4–5.0
Mood disorder, lifetime (*n* = 5112)	2.0 1.5–2.4	3.8 2.9–4.7	11.3 10.0–12.5	3.0 2.4–3.5	18.1 16.6–19.7
Mood disorder, 12 month (*n* = 2122)	2.4[E] 1.6–3.3	7.1 5.1–9.1	17.2 15.0–19.4	4.4 3.3–5.5	27.5 24.7–30.4
Anxiety disorder, lifetime (*n* = 4268)	2.2 1.6–2.8	2.6 1.9–3.2	10.2 9.0–11.5	2.1 1.6–2.5	15.5 14.1–16.9
MDE, lifetime (*n* = 4713)	2.1 1.6–2.6	4.0 3.0–4.9	11.7 10.4–13.1	3.0 2.4–3.6	18.9 17.3–20.5
MDE, 12-month (*n* = 1944)	2.6[E] 1.7–3.5	7.4 5.3–9.5	17.8 15.4–20.1	4.7 3.5–5.9	28.6 25.6–31.6
At least one lifetime disorder (*n* = 7585)	1.9 1.5–2.3	2.9 2.2–3.5	9.3 8.3–10.2	2.2 1.8–2.6	14.7 13.5–15.9
No lifetime disorder (*n* = 28 470)	0.6 0.5–0.7	0.3 0.2–0.4	1.2 1.0–1.3	0.2 0.2–0.3	2.1 1.9–2.4

[a]Weighted percent

[b]95% bootstrap CI

TCA includes desipamine, imipramine, clomipramine, trimipramine, amitryptyline, and doxepin.

SSRI includes fluoxetine, fluvoxamine, paroxetine, sertraline, and citalopram.

SNRI includes venlafaxine.

Other antidepressant includes trazodone, nefazodone, mirtazepine, bupropion, phenelzine, tranylcypromine, isocarboxazid, moclobemide,and tryptophan.

[E]Low estimate precision; interpret with caution

Self-Reported Schizophrenia

A previous diagnosis of schizophrenia was reported by 121 respondents, with a weighted prevalence of 0.25% (95%CI, 0.18 to 0.32)[E]. The frequency of psychotropic drug use was higher in this group than in any of the CIDI-diagnosed mental disorders, at 64.0% (95%CI, 49.9 to 78.0): 47.9% used antipsychotic agents (95%CI, 34.3 to 61.5), 25.2% used antidepressants (95%CI, 15.3 to 35.1)[E], and 19.2% used sedative-hypnotics (95%CI, 11.2 to 27.1)[E].

Psychostimulants

Forty-five individuals used psychostimulants, for a weighted utilization rate of 0.1% (95%CI, 0.1 to 0.2)[E]. Among people aged 15 to 19 years, the frequency was 0.4% (95%CI, 0.2 to 0.7)[E]. Otherwise, the small number of stimulant users precluded analysis within demographic and diagnostic subgroups.

Antidepressants

Table 2 presents a further breakdown of antidepressant utilization by antidepressant type. SSRIs made up the majority of use, followed by venlafaxine, both overall and within specific diagnostic subgroups.

Antidepressant use among those aged 15 to 19 years was lower than in the overall sample, at 1.8% (95%CI, 1.3 to 2.4). SSRIs were the most commonly used class, at 1.5% (95%CI, 0.9 to 2.0)[E]. Among those with a past-year MDE, 13.5% (95%CI, 7.5 to 19.4) used an antidepressant, and 10.4% (95%CI, 5.1 to 15.7) used SSRIs.

Sedative-Hypnotics

Table 1 shows that 3.1% of the general population and 7.2% of those with anxiety disorders took a sedative-hypnotic over the previous 2 days. Further analysis of the anxiety disorders subgroup revealed that 6.6% (95%CI, 5.5 to 7.6) were taking benzodiazepines and 0.9% (0.5% to 1.3%)[E] were taking zopiclone; some were using both. Interestingly, 2.1% of those with no lifetime mental disorder had taken a sedative-hypnotic over 2 days.

Table 3 presents more detailed results for people aged over 45 years. Benzodiazepines made up most of the sedative-

hypnotic use in all analyzed demographic and diagnostic groups. In the group aged over 65 years, 7.4% used benzodiazepines, whereas 8.3% used combined sedative-hypnotics. Use of both benzodiazepines and zopiclone increased with age to a maximum in the group aged over 75 years, and use was higher among women than among men (where analysis was possible) in each age stratum. The prevalence of 2-day sedative-hypnotic use among those aged over 65 years with no lifetime disorder was 7.1%.

Table 3 Percentage distribution of 2-day sedative-hypnotic and anxiolytic use among those aged 45 years and older

	Frequency of use (%) [a] (95%CI) [b]	
	BZD (*n* = 1145)	BZD and (or) ZOP (*n* = 1288)
Total (*n* = 18 498)	4.9 4.5 –5.4	5.6 5.1–6.0
Age (years)		
45 to 54 (*n* = 5706)	2.8 2.2–3.4	3.3 2.7–3.9
55 to 64 (*n* = 5056)	5.0 4.1–6.0	5.5 4.6–6.5
65 to 74 (*n* = 4113)	5.8 5.0–6.6	6.3 5.4–7.2
75 and over (*n* = 3623)	9.8 8.4–11.2	11.1 9.6–12.5
Age and sex		
45 to 64 (*n* = 10 762)	3.7 3.2–4.2	4.2 3.7–4.8
Men (*n* = 5081)	2.7 2.0–3.3	2.9 2.2–3.6
Women (*n* = 5681)	4.8 4.0–5.5	5.5 7.3–6.3
65 and over (*n* = 7736)	7.4 6.7–8.2	8.3 7.4–9.1
Men (*n* = 2939)	5.9 4.6–7.1	6.6 5.3–7.9
Women (*n* = 4797)	8.7 7.7–9.7	9.6 8.5–10.7

Discussion

According to these results, only a minority of Canadians with mental disorders (other than schizophrenia) receive drug treatment. Although this is consistent with other Canadian surveys, the CCHS 1.2 provided the first opportunity to examine drug use nationally in a wide range of mental disorders and demographic groups (1). The finding of increased psychotropic medication use among women and with increasing age is well-known in pharmacoepidemiology (1,2,28). The lower rate of antidepressant treatment for depression in the group aged 15 to 19 years has also been previously reported (29). In view of recent developments regarding the use of antidepressants in adolescents, this frequency may decline in the future (21).

Patterns of antidepressant use have been changing over the last 2 decades, with both an overall increase in use and a shift of use between antidepressant classes (10,30). Although SSRIs have been the most-used class for some time, this study demonstrates that SNRIs (represented by venlafaxine) now comprise the second leading class.

Comparisons with results from other countries are limited not only by different survey years but also by varying time frames of evaluation and divergent data collection methods. For example, the ESEMeD study evaluated medication use over 12 months, not 2 days, and asked subjects to identify medications from photographs rather than by producing medication containers (1). These concerns aside, the results suggest that the antidepressant treatment rate for depression in Canada is probably at least as high as in Europe, since the prevalence rate for 2-day utilization among Canadians with past-year MDE is 28.6%, compared with a 12-month utilization rate of 21.2% in the ESEMeD for those with past-year MDE without comorbidity (1). The CCHS 1.2 result is also comparable with the 30% rate found in the Canadian NPHS 2000 (10).

This analysis confirms previous reports that, paradoxically, the prevalence of sedative-hypnotic use increases with age (31,32). It is of some concern that individuals aged over 75 years have the highest frequency of use. The Canadian sedative-hypnotic utilization rate (3.1%) was similar to the US utilization rate in the NHANES-III (3.2%) (2). It was also lower than rates in Canadian surveys of 48-hour medication use in 1968 (4.9%) and 1985 (6.1%), as reported by Rawson, although there were several methodological differences (31). Further study with consistent sampling and ascertainment methods over time would be required to verify a true change in utilization. For example, longitudinal study allowed Hogan to demonstrate no change in benzodiazepine use in those aged over 65 years between 1991 and 1996 for combined community and institutional residents but a decline for institutional residents alone (5). Utilization in Hogan's study was higher (22.2%) for community residents than in the CCHS 1.2 group aged over 65 years, but again the methods differed. The overall greater use of antidepressants (15.5%), compared with sedative-hypnotics (7.2%), that we found for lifetime anxiety disorders is consistent with clinical treatment guidelines (33,34). However, this result must be interpreted in view of the substantial comorbidity of anxiety and

Table 3 continued

	Frequency of use (%)[a] (95%CI)[b]	
	BZD (*n* = 1145)	BZD and (or) ZOP (*n* = 1288)
Age (years) and DSM-IV diagnosis		
Anxiety disorder, lifetime (*n* = 1744)	11.6 9.5–13.8	12.4 10.2–14.6
45 to 64 (*n* = 1422)	10.4 8.1–12.7	11.1 8.7–13.5
65 and over (*n* = 322)	18.9[E] 13.2–24.6	20.0[E] 14.2–25.7
Anxiety disorder, 12 month (*n* = 594)	19.5 14.8–24.1	20.8 16.0–25.6
45 to 64 (*n* = 487)	19.9 14.6–25.3	21.4 15.9–26.9
65 and over (*n* = 107)	16.8[E] 8.7–24.9	17.5[E] 9.4–25.7
MDE, lifetime (*n* = 2165)	11.1 9.1–13.1	13.0 10.9–15.1
45 to 64 (*n* = 1696)	9.9 7.7–12.0	11.5 9.2–13.7
65 and over (*n* = 469)	16.6 12.3–20.9	19.8 15.0–24.5
MDE, 12-month (*n* = 713)	17.0 13.1–20.8	20.3 16.1–24.4
45 to 64 (*n* = 571)	14.9 10.9–18.9	18.3 14.0–22.7
65 and over (*n* = 142)	27.0[E] 17.5–36.4	29.6 20.1–39.0
At least one lifetime disorder (*n* = 3333)	9.9 8.4–11.4	11.2 9.6–12.8
45 to 64 (*n* = 2608)	8.7 7.0–10.3	9.8 8.0–11.5
65+ years (*n* = 725)	15.6 12.2–19.1	18.2 14.6–21.9
No disorder lifetime (*n* = 14 536)	3.7 3.3–4.2	4.2 3.8–4.6
45 to 64 (*n* = 7878)	2.2 1.8–2.7	2.5 2.1–3.0
65 and over (*n* = 6658)	6.5 5.7–7.3	7.1 6.3–8.0

[a]Weighted percent

[b]95% bootstrap CI

BZD includes clonazepam, diazepam, chlordiazepoxide, oxazepam, lorazepam, alprazolam, flurazepam, nitrazepam, triazolam, and temazepam

[E]low estimate precision; interpret with caution

depression (35,36). In the CCHS 1.2, 34.8% of those with lifetime anxiety disorders had experienced a lifetime MDE, and 17.3% had a past-year MDE.

The fact that only 8.2% of those with CIDI-diagnosed bipolar disorder were taking a mood stabilizer, whereas 20.1% took an antidepressant, could indicate that bipolar disorder is not adequately detected and (or) treated in Canada. Another interpretation is that this version of the CIDI is nonspecific for mania. Consistent with this possibility, the CCHS 1.2 prevalence of bipolar disorder (2.4%) is higher than the conventionally accepted prevalence (that is, 0.8% in the ECA study and 1.6% in the NCS) (37–40).

Results regarding self-reported schizophrenia were interesting. The prevalence was somewhat lower than that found in most reports, but one can speculate that the positive and (or) negative symptoms of schizophrenia might decrease response to both the survey and the schizophrenia question (41). This group had a higher overall frequency of psychotropic use than any of the groups with CIDI diagnoses, and almost 50% used antipsychotics.

To our knowledge, these are the first national-level survey data on psychostimulant utilization among adults. This utilization (0.1%)[E] might be lower than anticipated, given potential roles for stimulants as augmentation for refractory depression, in adult attention deficit disorder, and in depression with comorbid physical disease (42,43). The higher psychostimulant use among adolescents is not unexpected.

Mood stabilizer use (0.6%) was higher than in either ESEMeD (0.1%) or the NHANES-III (0.1%) in spite of the shorter evaluation time (2 days), but this comparison could be influenced by divergent practices in treatment of other disorders, such as epilepsy. Antipsychotic use was lower in the CCHS 1.2 (0.5%) than in the ESEMeD (1.2%) but was more similar to the NHANES-III (0.7%). Once again, lower use might be explained by the shorter evaluation time, but varying license indications or practice patterns could also lead to such differences (44,45).

Although this survey has enhanced our knowledge regarding psychotropic drug utilization in Canada, there are limitations associated with the survey itself and with our analyses. For example, the CCHS 1.2 only assessed a limited number of mental disorders. Thus the prevalence of "any" lifetime mental disorder may be underestimated, while that of "no" lifetime disorder maybe be overestimated; drug utilization estimates in these groups may also be affected. In addition, psychotropic use in children (who were not interviewed) could not be assessed. Finally, several recent publications have emphasized that receipt of services does not translate into receipt of adequate services; the survey would have been improved by data collection on treatment quality, including dosage and

duration of pharmacotherapy and indication for use (46,47). If future surveys can include such data, our understanding of psychotropic drug utilization will be further enriched.

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Résumé : L'utilisation des médicaments psychotropes au Canada

Contexte : L'utilisation des médicaments psychotropes peut servir d'indicateur du traitement approprié aux troubles mentaux. Le volet Santé mentale et bien-être de l'Enquête sur la santé dans les collectivités canadiennes (ESCC, Cycle 1.2) offre une première occasion de caractériser l'utilisation canadienne des psychotropes à l'échelle nationale, au sein de groupes diagnostiques évalués par une version complète de l'entrevue diagnostique composite internationale (CIDI).

Méthode : La prévalence de l'utilisation d'antidépresseurs, de sédatifs hypnotiques, de régulateurs de l'humeur, de psychostimulants et d'antipsychotiques sur 2 jours a été évaluée globalement et dans des sous-groupes définis par des troubles diagnostiqués par la CIDI et des données démographiques. Le poids d'échantillonnage et la méthode bootstrap ont été employés.

Résultats : L'utilisation globale de psychotropes était de 7,2 %. L'utilisation était plus élevée chez les femmes et s'accroissait avec l'âge. Dans le cas de tout trouble de durée de vie diagnostiqué par la CIDI évalué dans le Cycle 1.2 de l'ESCC, l'utilisation était de 19,3 %, alors qu'en l'absence de ces troubles, elle était de 4,1 %. Les ISRS étaient les antidépresseurs les plus utilisés par ceux ayant eu un épisode de dépression majeure dans l'année écoulée (17,8 %), suivis par la venlafaxine (7,4 %). Chez les personnes de 15 à 19 ans, l'utilisation des antidépresseurs était de 1,8 % globalement, et de 11,7 % dans le cas de dépression dans l'année écoulée; les ISRS constituaient la majorité de l'utilisation. Les sédatifs hypnotiques étaient utilisés par 3,1 % globalement, s'accroissant avec l'âge à 11,1 %, pour les plus de 75 ans.

Conclusions : La comparaison internationale est difficile à établir en raison des différentes méthodes d'évaluation, mais l'utilisation des antidépresseurs peut être plus élevée et celle des antipsychotiques, plus faible au Canada que dans les récentes études européennes et américaines. À la lumière des données probantes contemporaines qui suggèrent un manque d'efficacité des antidépresseurs chez les adolescents, il est probable que l'utilisation des antidépresseurs chez les 15 à 19 ans continuera de diminuer. L'utilisation accrue de sédatifs hypnotiques avec l'âge est une préoccupation, étant donné le risque associé d'effets indésirables chez les personnes âgées.