

# Suicide Mortality by Occupation in Canada, 1991–2001

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**Objective:** To describe the association between occupation and risk of suicide among working-age men and women in Canada.

**Method:** This study of suicide mortality over an 11-year period is based on a broadly representative 15% sample of the noninstitutionalized population of Canada aged 30 to 69 years at cohort inception. Age-standardized mortality rates (ASMRs) and rate ratios were calculated for men and women in 5 categories of skill level and 80 specific occupational groups, as well as for people not occupationally active.

**Results:** The suicide mortality rate was 20.1/100 000 person years for occupationally active men (during 9 600 000 person years of follow-up) and 5.3/100 000 person years for occupationally active women (during 8 100 000 person years of follow-up). Among occupationally active men, elevated rates of suicide mortality were observed for 9 occupational groups and protective effects were observed for 6 occupational groups. Among women, elevated rates of suicide were observed in 4 occupational groups and no protective effects were observed. For men and women, ASMRs for suicide were inversely related to skill level.

**Conclusions:** The limited number of associations between occupational groups and suicide risk observed in this study suggests that, with few exceptions, the characteristics of specific occupations do not substantially influence the risk for suicide. There was a moderate gradient in suicide mortality risk relative to occupational skill level. Suicide prevention strategies in occupational settings should continue to emphasize efforts to restrict and limit access to lethal means, one of the few suicide prevention policies with proven effectiveness.

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## Clinical Implications

- With few exceptions, the characteristics of specific occupations do not substantially influence the risk for suicide in Canada.
- Suicide prevention strategies in occupational settings should continue to emphasize efforts to restrict and limit access to lethal means.
- The gradient in suicide mortality risk by occupational skill level requires further research.

## Limitations

- Occupation and labour force participation was measured only at cohort inception.
- Census records do not contain information on behavioural risk factors or mental health function.
- Despite the large cohort, there are statistical power limitations in estimating occupation-specific suicide mortality risk.

**Key Words:** *suicide, epidemiology, occupation, Canada*

Suicide is among the 10 leading causes of death in developed countries, with rates of suicide mortality among men about 4 times greater than among women. Trends in suicide mortality rates in developed countries show a general profile of small reductions or no change over time.<sup>1,2</sup> Over the period of 1980 to 2000, suicide mortality in Canada was in the range of 14 to 18 deaths per 100 000 population (ASMR), about the median of all Organization for Economic Corporation and Development countries.<sup>1,3</sup>

About 70% of all population suicide deaths in Canada occur in people aged 30 to 64 years.<sup>3</sup> Table 1 reports age-specific rates of suicide for this age group in a 20-year period, from 1984 to 2004.<sup>4</sup> The rate of death due to suicide is generally similar across 5-year age groups, in the range of 12 to 22 deaths annually per 100 000 population. Suicide deaths as a proportion of all-cause mortality is highest at younger ages (representing 18% to 24% of all deaths for people aged 30 to 34 years), declining to about 1% of all deaths for people aged 60 to 64 years. Over the 20-year period reported in Table 1, the declines in age-specific all-cause mortality were in the range of 22% to 37%. Over this same period, there were less substantial reductions in age-specific suicide mortality, especially in the age group of 30 to 49 years.

Exposure to unemployment has consistently been documented to be associated with an elevated risk for suicide.<sup>5-8</sup> Among continuously employed adults, however, evidence for an elevated (or decreased) risk of death due to suicide for specific occupations is inconsistent, leading some to argue that occupational position is not a prominent causal risk factor for suicide among labour force participants. There are at least 3 hypotheses linking occupational characteristics to risk of suicide. First, there is longstanding concern in occupational hygiene that exposures to neurologically active chemical compounds may induce mood and behavioural impairments that increase the risk of suicide. Agricultural chemicals used to control pests or weeds are representative of this class of occupational exposure.<sup>9-11</sup> Second, workers in some occupations have more knowledge of, or access to, the means by which a suicide may be accomplished.<sup>12-14</sup> Health care workers having greater access to pharmaceuticals would be representative of this class of exposure. Finally, there has been a longstanding interest in determining if some occupations may be more prone to occupational demands that increase the likelihood of exposure to psychosocial risk factors such as isolation, burnout, or exposure to traumatic events.<sup>15</sup>

The surveillance and monitoring of population health trends in most countries includes the use of large, nationally representative population-based cohort studies of mortality, usually formed by linking records for national census respondents to vital statistics death registrations.<sup>16-20</sup> These studies have mainly investigated differences by education and occupation, which consistently show important associations with mortality, with lower levels of education and lower-status occupational categories (and the economically inactive) showing the highest mortality rates, and higher levels of education and higher-status occupational categories (managerial and professional) showing the lowest mortality rates.

Until recently, no nationally representative, census-based cohort had been established in Canada. There had been cohorts created from samples of (or from administrative data files about) the general population in Canada.<sup>21-33</sup> However, the generalizability of those cohorts was limited by the scope of the universe covered (geographic, age, sex, or occupational restrictions), small sample size, or lack of information about cause of death. To address these limitations, Statistics Canada, the Institute for Work & Health, and the Direction de la Santé publique de Montréal Centre collaborated in the creation of a database (the 1991 to 2001 Canadian Census Mortality Follow-up Study) linking a 15% sample of 1991 census respondents to the Canadian Mortality Database.<sup>34</sup>

The objective of our study was to examine differences in the incidence of suicide among occupationally active adults in Canada, aged 30 to 69 years, by occupation and skill level as well as for people who were not occupationally active.

## Methods

### Study Design

Our study is based on a cohort consisting of a 15% sample of the noninstitutionalized Canadian population who were aged 25 years and older at the time of cohort inception in 1991 and followed for mortality until the end of 2001.

### Study Population and Study Sample

The Canadian Census Mortality Follow-up Study was designed to be representative of the noninstitutional population of Canada in 1991.<sup>34</sup> Cohort members were selected from the 20% of residents who were randomly selected in 1991 to complete the long-form census questionnaire. Records for long-form census respondents were linked to mortality records to ascertain date and cause of death over the follow-up period from June 1991 to December 2001. For the specific purpose of our study, reporting on occupational differences in suicide mortality, the study sample was restricted to people aged 30 to 69 years at baseline, representing 1 704 100 people who were occupationally active (929 300 men and 774 800 women), and 397 500 who were not occupationally active (133 100 men and 264 300 women) in the year preceding the census.

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### Abbreviations used in this article

ASMR	age-standardized mortality rate
ICD	International Classification of Diseases
SOC	Standard Occupational Classification
SRR	standardized rate ratio

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**Table 1 Suicide mortality by 5-year age group among people aged 30 to 64 years in Canada from 1984 to 2004**

Age, years	1984			1989			1994			1999			2004		
	SD	SM	ACM	SD	SM	ACM	SD	SM	ACM	SD	SM	ACM	SD	SM	ACM
30–34	367	17.5	91.4	423	18.1	99.7	431	16.0	89.1	417	17.8	75.1	316	14.2	66.9
35–39	309	16.2	120.8	374	17.7	127.4	499	19.6	123.2	529	19.6	103.9	390	16.2	94.0
40–44	280	18.6	192.5	323	17.0	176.5	395	17.5	174.1	551	21.5	158.3	409	14.9	134.9
45–49	218	17.1	311.2	282	19.0	289.9	332	16.6	253.2	452	20.1	231.8	446	17.4	220.9
50–54	277	22.1	531.4	196	15.7	470.6	263	17.2	413.9	345	17.6	367.4	393	17.6	350.3
55–59	251	21.2	868.3	221	18.2	791.1	209	16.5	693.9	242	16.2	609.8	275	14.3	550.3
60–64	195	18.1	1396.0	178	15.6	1297.7	173	14.4	1121.3	155	12.6	989.6	174	12.0	902.4

Suicide deaths for 2004 exclude ICD-10 code Y87.0 (Sequelae of Intentional Self-Harm)  
Source: Statistics Canada. Mortality, summary list of causes. Ottawa (ON): Statistics Canada; various years.<sup>4</sup>  
ACM = all cause mortality per 100 000; SD = suicide deaths; SM = suicide mortality per 100 000

### Record Linkage

The primary identification of decedents in the Canadian Mortality Database is established by name and date of birth. Statistics Canada did not record respondents' names on the electronic microdata files for the 1991 census. To accomplish a linkage of individual census records to the mortality data, the Statistics Canada project team conducted an intermediate probabilistic linkage of census records to nonfinancial information on individual income tax returns from 1990 and 1991, based on the date of birth and postal code of census participants.<sup>34</sup> Overall, 80% ( $n = 2\,860\,244$ ) of the in-scope census records were matched to a tax filer record, providing name identification information required for linkage to the mortality data. Names were encrypted prior to matching. A total of 716 243 in-scope census records could not be linked to tax filer records. An additional 125 100 linked records were randomly excluded from the cohort to ensure the final sample represented no more than 15% of the Canadian population, as stipulated in the record linkage protocol. The study team performed a validation of the outcome of the intermediate probabilistic linkage. Based on a stratified random sample of about 650 linked records, a manual review of microfilmed census questionnaires estimated that 99% of all census records linked by probabilistic methods to tax filer records were accurate matches to the names recorded on the original census questionnaires. Demographic and socioeconomic characteristics were related to the probability of a successful match in the intermediate linkage. Women, people aged 65 years or older, people who were unmarried or not in a common-law union, rural residents, people who changed residence in the previous year, people with less than high school graduation, people not in the labour force, people in the poorest income adequacy quintile, and people with any Aboriginal ancestry were less likely to be matched in the intermediate

linkage.<sup>34</sup> Statistics Canada estimates that the ascertainment of deaths in the cohort was about 97%.

### Measures

For cohort members, the linked file contained data from the long-form census questionnaires and death data from Canadian vital statistics. Available content from the 1991 census long-form content included data on education, occupation, income, visible minority status, Aboriginal status (mainly based on ethnicity of ancestors), place of birth, language (mother tongue, home languages, and knowledge of official languages), place of residence, mobility, marital status, living arrangements, housing, place of work, plus activity limitations. Death data included underlying cause of death (previously coded) and date of death.

In this report, we estimate the relation between suicide mortality and occupation, where occupation was classified to 80 minor group categories of the 1980 SOC and 5 ordinal ranked occupational skill categories (professional; managerial; skilled, technical, supervisory; semi-skilled; and unskilled) based on the 1990 National Occupational Classification.<sup>35,36</sup> Both classifications group respondents' occupation according to type of work, most important duties, and skills required to complete their work effectively. At its most detailed level, the 1980 classification comprises 503 unit groups, which can be aggregated into 80 minor group categories that are intended to group people with occupationally similar jobs. This report also describes suicide mortality for people who were not occupationally active at the time of cohort inception.

For people dying during the study period, the underlying cause of death had been previously coded to the World Health Organization's ICD-9<sup>37</sup> for deaths occurring from 1991 to 1999, and to ICD-10<sup>38</sup> for deaths occurring from

**Table 2 Suicide mortality among noninstitutionalized people aged 30 to 69 years at cohort inception by occupational skill level in Canada from 1991 to 2001**

Occupational skill level	Deaths, <i>n</i>	Person years at risk	Crude mortality rate	ASMR	95% CI	SRR	95% CI
Men							
Professional	187	1 286 350	14.50	14.10	12.10–16.50	0.71	0.61–0.82
Managerial	191	1 483 000	12.90	13.00	11.10–15.20	0.65	0.56–0.76
Skilled, technical, or supervisory	672	3 377 130	19.90	19.90	18.40–21.60	1.00	0.94–1.07
Semi-skilled	613	2 517 960	24.30	23.70	21.70–25.80	1.19	1.10–1.28
Unskilled	269	937 920	28.70	28.70	25.40–32.40	1.44	1.28–1.61
All occupations (reference)	1932	9 602 360	20.10	20.00	19.00–20.90	1.00	
No occupation	424	1 235 860	34.30	50.20	44.10–57.20	2.52	2.19–2.89
Women							
Professional	64	1 395 200	4.60	4.20	3.20–5.50	0.87	0.67–1.12
Managerial	19	585 420	3.20	3.10	1.90–5.10	0.64	0.40–1.03
Skilled, technical, or supervisory	95	2 222 060	4.30	4.10	3.30–5.10	0.84	0.70–1.02
Semi-skilled	190	3 040 850	6.20	5.70	4.90–6.60	1.17	1.05–1.32
Unskilled	60	860 830	7.00	6.40	5.00–8.30	1.32	1.04–1.68
All occupations (reference)	428	8 104 380	5.30	4.90	4.40–5.40	1.00	
No occupation	227	2 679 240	8.50	10.20	8.90–11.70	2.10	1.77–2.49

2000 to 2001. Deaths due to suicide were defined as ICD-9 E950 to E959 and ICD-10 X60 to X84 and Y87.0.

### Statistical Analysis

For each member of the cohort, we calculated person-days of follow-up from the beginning of the study (Census day, June 4, 1991) to the date of death, emigration (ascertained from the name file and known for 1991 only), or end of the study (December 31, 2001). Person-days of follow-up were then divided by 365.25 to get person-years at risk.

ASMRs were calculated using the direct method, with the 1991 mid-year population estimates used as the standard population. SRRs were calculated from the ASMRs, and 95% confidence intervals for the SRRs were estimated. We incorporated a covariance adjustment in the calculation of confidence intervals that accounts for the comparison of subgroups nested within the reference population. No adjustment for multiple comparisons was performed in the estimates of confidence intervals.<sup>39</sup>

Results for occupational groups in which fewer than 3 deaths were observed over the follow-up period were suppressed as required by data release protocols. For those occupational

groups, we report only the direction of statistically significant associations where the SRR was greater or less than 1.00.

The Canadian Census Mortality Follow-up Study was approved by the Statistics Canada Policy Committee after consultations with the Statistics Canada Confidentiality and Legislation Committee, the Data Access and Control Services Division, and the Federal Privacy Commissioner. The protocol for this research was reviewed and approved by the Health Sciences I Research Ethics Board of the University of Toronto.

### Results

In the study cohort, 1932 suicide deaths occurred over the 11-year follow-up period among occupationally active men, and 424 suicide deaths among men who were not occupationally active (during 9 602 360 person-years and 1 235 860 person-years of follow-up, respectively, Table 2). The ASMRs for suicide was 20.0/100 000 person-years for occupationally active men and 50.2/100 000 person-years for men who were not occupationally active. A total of 428 suicide deaths occurred among occupationally active women, and 227 suicide deaths among women who were not occupationally active (during 8 104 380 person-years and

2 679 230 person-years of follow-up, respectively). The ASMRs for suicide was 4.9/100 000 person-years for occupationally active women, and 10.2/100 000 person-years among women who were not occupationally active. There was a monotonic gradient in the ASMR for men and women across the 5 ordinal ranked occupational skill levels. For both men and women, the ASMR for suicide in the unskilled occupations was over twice as high, and among those not occupationally active was over 3 times as high as the ASMR in the managerial occupations.

Detailed suicide mortality data for occupationally active men and women, classified by 1980 minor group occupation categories are available online as eTables 3 and 4. Statistically significant elevated rates of suicide mortality for occupationally active men were observed for 7 occupation groups: nursing, therapy, or assisting-related (ASMR 37.6, minor group 313); other service (ASMR 34.2, minor group 619); other farm, horticulture, or animal husbandry (ASMR 31.4, minor group 718 to 719); forestry or logging (ASMR 29.3, minor group 751), clay, glass, or stone processing or forming (ASMR 57.2, minor group 815); excavating, grading, paving, or related (ASMR 29.2, minor group 871); and motor transport operating (ASMR 27.5, minor group 917). Protective effects were observed for 5 occupational groups: other managers or administrators (ASMR 13.5, minor group 113 to 115); management or administration (ASMR 14.4, minor group 117); mathematics, systems analysis, or related (ASMR 11.3, minor group 218); personal service (ASMR 5.9, minor group 614); and electric power, lighting, or wire communication equipment (ASMR 13.1, minor group 873).

For occupationally active men, SRRs approached, but did not attain, statistical significance for 9 occupational groups. A potential excess risk was observed for 6 groups: occupationally active men in occupations engaged in material recording, scheduling, or distributing (415); apparel or furnishing service (616); farming (711); food, beverage, or related processing (821 to 822); metal shaping and forming (833); and other construction trades (878 to 879). A potential protective effect was observed for 3 groups: architects, engineers, or community planners (214 to 215); elementary school teaching (273); and sales in commodities (513 to 514).

For occupationally active men, estimates for 22 of the 80 occupational groups reported in this paper, representing 587 000 person-years of observation (6% of all person-years for men) were suppressed owing to data release protocols. Among these suppressed estimates, 2 statistically significant excess risk estimates were observed for library, museum, or archival sciences (235) and water transport operating (915), and 1 statistically significant protective effect was observed for university teaching (271).

Statistically significant elevated rates of suicide mortality for occupationally active women were observed for 2 occupation groups: office machine or related equipment operating (ASMR 11.0, minor group 414), and other service (ASMR 8.7, minor group 619). No protective effects were observed

for any occupational groups. Estimates for 57 occupational groups, representing 2 047 000 person-years of observation, (25% of all person-years for occupationally active women) were suppressed, owing to data release protocols. Among suppressed estimates, no statistically significant protective effects were observed, but statistically significant excess risk was observed for 2 occupational groups: physical sciences (211) and metal machining (831).

## Discussion

In this large Canadian cohort, 1932 suicide deaths occurred to occupationally active men (20.1/100 000 person-years) and 428 suicide deaths occurred to occupationally active women (5.3/100 000 person-years) in the 11-year follow-up period. Among occupationally active men, significantly elevated rates of suicide mortality were observed for 9 occupational groups and protective effects were observed for 6 occupational groups. Among women, significantly elevated rates of suicide were observed in 4 occupational groups and no protective effects were observed. Our study also observed a gradient in suicide mortality risk by occupational skill level for both men and women.

In a study of mortality among occupationally active US adults aged 20 to 64 years from 1984 to 1997, Steenland et al<sup>40</sup> reported a rate of suicide mortality (18.1/100 000), about 40% higher than observed in this Canadian cohort (13.3/100 000). Comparing the suicide mortality rate among the 25% of cohort members with the highest occupational rank to the 75% of cohort members in lower ranked occupations, the Steenland et al<sup>40</sup> study reported a population-attributable fraction of about 40%. The population-attributable fraction was estimated as the proportion of observed suicide deaths that would not occur if all labour force participants had experienced the ASMR for suicide of the lowest-exposure reference group.<sup>41</sup> Using the information reported in Table 2 and defining the 12% of person-years in management occupations as the reference group, the population-attributable fraction for suicide mortality among occupationally active Canadian adults was about 35% for both men and women combined. This socioeconomic gradient in suicide risk has been observed in other population cohorts.<sup>42</sup>

The elevated suicide risk for men in some transportation occupations, heavy equipment operating occupations, allied health care occupations, and agricultural occupations replicates findings in other studies, and provides support for the hypotheses that occupations with greater access to the means by which suicide may be accomplished, or occupations with greater potential exposure to neurologically active agents, may be at greater risk of suicide mortality. As an example of evidence suggestive of the second hypothesis, Pickett et al<sup>9</sup> reported results of an exploratory case-control study of 1400 suicide deaths among male farm operators in Canada from 1971 to 1987. In that study, the hypothesized etiologic risk associated with pesticide use was through acute impairment of neurological function resulting in an increased risk of

anxiety or depressive disorders. Information on exposure to pesticides was obtained from a cross-sectional survey of farm chemical use. The study found a suggestive increase in risk for suicide associated with herbicide and insecticide spraying among a subgroup of farm operators classified as most likely to be directly exposed to pesticides.

Meltzer et al,<sup>15</sup> reporting occupational suicide mortality risk in England and Wales from 2001 to 2005, found elevated suicide mortality risks for male and female health professionals and for agricultural workers. This study also reported evidence for a higher suicide mortality risk among transportation occupations. The Meltzer et al study<sup>15</sup> illustrates the important difference between inference based on proportionate mortality ratios and inference based on standardized mortality ratios.<sup>32</sup> A proportionate mortality ratio estimates the proportion of all deaths due to a specific cause in a population subgroup relative to the proportion of all deaths due to the specific cause in the complete population and in contrast to the standardized mortality ratio; it does not compare ratios of incidence rates based on person-years at risk. In the case of male workers in agricultural occupations, both the proportionate mortality ratio and the standardized mortality ratio estimated excess suicide mortality risk. However, the findings for males in health care occupations were inconsistent: the proportionate mortality ratio indicated an elevated risk of suicide mortality, while the more robust standardized mortality ratio indicated a protective effect. When examining risk factors for cause-specific mortality, we would argue that proportionate mortality ratio analyses are most relevant when they are concordant with the information provided by standardized mortality ratios.

A recent Canadian study<sup>32</sup> provides an important comparison to the evidence provided in our report. Without access to information on person-years at risk, investigators at the British Columbia Cancer Agency used age-standardized proportionate mortality ratios to examine mortality by cause of death for about 31 000 deaths registered in British Columbia from 1985 to 1994 for people aged 20 to 65 years. Occupational information recorded on death registrations was coded according to the 1980 SOC. A total of 2394 suicide deaths (7.7% of all deaths) were observed. There was limited consistency between the findings reported in the British Columbia study and the results reported here. A total of 21 statistically significant associations between occupation minor groups and suicide mortality risk were observed across the 2 studies. In only 2 occupational groups were the associations confirmed in both studies: an elevated risk of suicide in nursing occupations (minor group 313) and a protective effect in management occupations (117). In 2 occupations, statistically significant associations were in discordant direction: workers in electric power, lighting, and wire communication equipment (873) and those in mathematics, statistics, and systems analysis (218) were observed to have fewer deaths than expected in our study, but more deaths than expected in the British Columbia study. The 13 other statistically significant

associations were not replicated; they were observed uniquely in one sample but not in the other.

The limited replication of occupation-specific risk for suicide mortality across studies is also a function of the statistical power of individual studies. A post-hoc power simulation based on our study estimated that only 48 of the 80 occupational categories for men and 13 of the 80 occupational categories for women had sufficient person-years of observation to be able to detect an SRR of 2.0 or 0.5 (at 80% power and 95% confidence intervals). Women were at a lower risk of suicide, but more concentrated in a smaller number of occupations and less likely to be occupationally active than men. The occupation-specific analyses were therefore less likely to reveal statistically significant SRR for women, and when they did, the SRR estimate was more likely to be biased away from the null effect.

We acknowledge 2 limitations inherent in mortality follow-up studies based on census samples. First, information on labour force activity and occupation was obtained at the time of cohort inception. Information on subsequent changes in occupation or changes in labour force participation was not available. Second, the Canadian Census Mortality Follow-up Study did not have access to information on behavioural risk factors, such as alcohol abuse, or health status measures, such as mental health function, which are known to be associated with the risk of suicide. Two additional features of our study should be noted. Occupation-specific suicide mortality rates have not been adjusted for the proportion of foreign-born workers in each occupation. In addition, we acknowledge the potential value of examining suicide mortality risks across industry sectors to complement the analysis of occupational risks reported in our study.

The limited replication of statistically significant associations between occupational groups and suicide risk observed in our study with associations reported in other studies suggests that, with few exceptions, the characteristics of specific occupations in Canada probably do not substantially influence the risk for suicide. However, there is an important gradient in suicide mortality risk relative to occupational skill level for both men and women, suggesting a greater burden of personal and environmental psychosocial risk factors among lower-status occupations. Suicide prevention strategies in occupational settings should continue to emphasize efforts to restrict and limit access to lethal means, one of the few suicide prevention policies with proven effectiveness.<sup>12,13</sup> On the basis of evidence suggested in our study, continued vigilance is indicated in restricting access to pharmaceuticals among health care providers, in controlling use of pesticides and other toxic compounds in agricultural activities, and in prevention efforts among commercial operators of motor vehicles and excavating equipment.

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## **Résumé : La mortalité par suicide par emploi au Canada, 1991–2001**

**Objectif :** Décrire l'association entre emploi et risque de suicide chez les hommes et les femmes d'âge actif au Canada.

**Méthode :** Cette étude de la mortalité par suicide sur une période de 11 ans est fondée sur un échantillon de 15 % de la population non institutionnalisée du Canada âgée de 30 à 69 ans au début de la cohorte. Les taux de mortalité normalisés selon l'âge (TMNA) et les rapports des taux ont été calculés pour les hommes et les femmes dans 5 catégories de niveau de compétence et 80 groupes d'emplois spécifiques, ainsi que pour les personnes qui ne sont pas professionnellement actives.

**Résultats :** Le taux de mortalité par suicide était de 20,1/100 000 années-personnes pour les hommes actifs (durant 9 600 000 années-personnes de suivi) et de 5,3/100 000 années-personnes pour les femmes actives (durant 8 100 000 années-personnes de suivi). Parmi les hommes actifs, des taux élevés de mortalité par suicide ont été observés pour 9 groupes d'emplois, et des effets protecteurs ont été observés pour 6 groupes d'emplois. Chez les femmes, des taux élevés de suicide ont été observés pour 4 groupes d'emplois et aucun effet protecteur n'a été observé. Pour les hommes et les femmes, les TMNA pour le suicide étaient inversement reliés au niveau de compétence.

**Conclusions :** Le nombre limité d'associations entre les groupes d'emplois et le risque de suicide observé dans cette étude suggère qu'à quelques exceptions près, les caractéristiques des emplois spécifiques n'influencent pas substantiellement le risque de suicide. Il y avait un gradient modéré du risque de mortalité par suicide relatif au niveau de compétence professionnelle. Les stratégies de prévention du suicide en milieu de travail devraient continuer à mettre l'accent sur les efforts en vue de restreindre et de limiter l'accès aux moyens mortels, l'une des quelques politiques de prévention du suicide dont l'efficacité a été prouvée.