Suicide among Social Workers in Rhode Island

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Cause-specific mortality patterns, by occupation, were examined among Rhode Island residents who died during the period 1968–1978, using the age-standardized proportionate mortality ratio (PMR) method. Occupation was determined from the usual occupation statement on the death certificate. A noteworthy finding was an elevated PMR for suicide among both male (PMR = 470, observed deaths = 5, $P < .01$) and female (PMR = 510, observed deaths = 4, $P < .05$) social workers. This is the first report of a high risk of suicide among social workers. Stress, which is associated with social work, may be a risk factor. Due to the relatively small numbers upon which this report is based and the limitations of death certificate data and the PMR method, this should be viewed as an exploratory investigation requiring further follow-up.

Researchers from the National Institute for Occupational Safety and Health (NIOSH) have been engaged in cooperative activities with selected state health agencies to develop their occupational disease surveillance capabilities (Surveillance Cooperative Agreement Between NIOSH and States [SCANS] program). As part of the SCANS program, the Rhode Island Department of Health (RIDH) has been coding the usual occupation and industry entries from death certificates of all adult Rhode Island residents. To generate leads for more definitive investigations, cause-specific mortality patterns by occupation and industry have been examined for the years 1968–1978, using the proportionate mortality ratio (PMR) method. One such lead was an excess of suicide among social workers.

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Previous analyses using these data have been published.[1–4]

Methods

A computer file of 1968–1978 Rhode Island death certificate records was provided to NIOSH by the RIDH through the SCANS program. Included in the file was information on the decedent's sex, race, age at death, underlying cause of death, usual occupation ("kind of work done during most of working life, even if retired"), and usual industry ("kind of business or industry"). Underlying cause of death was coded by state nosologists according to the Eighth Revision, International Classification of Diseases, Adapted for Use in the United States (ICDA).[5] Usual occupation and industry were coded by state coders according to the 1970 US Bureau of the Census classification system.[6] Occupation and industry coding procedures have been described.[1–3] Occupation and industry coding was completed for all deaths among Rhode Island residents, 16 years of age or greater, with the exception of residents who died out-of-state in1968. The certificates for these latter decedents, which accounted for 5% of the deaths in 1968, could not be located when the occupation and industry coding was performed.

Age-standardized PMRs were calculated by sex and race for an array of specific causes of death by specific occupations and industries. In addition, age- and sex-standardized PMRs were calculated for social workers. The standard proportions were derived from the total age-, sex-, and race-specific mortality experience in Rhode Island for the combined years 1968–1978. Age stratification was done by 5-year age groups. PMRs are expressed as a percentage to two significant figures.

For results based on fewer than five expected deaths (as was the case in this report), 95%, and 99% significance factors for the ratio of an observed value of a Poisson variable to its expectation were applied to test for statistical significance.[7]

Results

There were 50,493 white male decedents and 45,207 white female decedents in the study population. Of these, 41 men and 66 women had a usual occupation of social worker (Bureau of the Census code 100). Five of the male social worker deaths were from suicide (ICDA E950-E959) (PMR = 470, $P < .01$), as were four of the female social worker deaths (PMR = 510, $P < .05$). The age- and sex-standardized PMR was 480 (nine observed deaths, $P < .01$). The age at death of the social workers who committed suicide ranged from 24 to 65, indicating that all of them were in the age range of active workers at the time of death.

Six of the nine suicide deaths were coded as "suicide and self-inflicted poisoning by solid or liquid substances" (ICDA E950). Examination of the individual death certificates revealed that all of these six deaths were due to drugs and/or alcohol.

The individual death certificates of the social workers who died from suicide also were examined to obtain more detailed occupation information. Six decedents were listed as being social workers. In addition, there were two probation officers and one truant officer. Probation officers and truant officers come under the social worker code in the Bureau of the Census coding system.

Suicide deaths may be coded as "injury undetermined whether accidentally or purposely inflicted" (ICDA E980-E989; hereafter referred to as "undetermined"). No social worker deaths were so coded. A possible bias to consider is that suicides among social workers were more likely than suicides in the general population to be reported on the death certificate as "suicide" as compared with undetermined. To consider the possible effect of this potential bias, PMRs were calculated for suicide and undetermined combined into a single category. The PMR was 390 ($P < .05$) for male social workers and 430 ($P < .05$) for female social workers. The age- and sex-standardized PMR was 410 ($P < .01$).

There were only three black decedents with a usual occupation of social worker, none of whom died from suicide. There were no decedents of other or unknown races with a usual occupation of social worker.

Discussion

This is the first report of a high risk of suicide among social workers. Excess suicide was not observed in an occupational mortality study of US veterans[8] or in occupational mortality studies from England and Wales[9,10] and from British Columbia.[11] However, excess suicide among white women in the occupational category "social, recreation, and religious workers" was observed in a PMR study based upon 1983 death certificates from Pennsylvania (PMR = 270, observed deaths = 4).[12] It could not be determined how many of these deaths were specifically among social workers. To the author's knowledge, no other studies have reported on the risk of suicide among social workers.

Suicides are believed to be underreported.[13] If underreporting were greater in the general population than among social workers, this would create a bias. This was partially checked by combining the suicide and undetermined categories into a single category.

In this adjustment, the PMR elevations remained statistically significant. However, this adjustment would not take into account an underreporting bias in which suicide deaths in the general population were misreported as being due to causes other than undetermined more often than were suicide deaths among social workers.

The relatively small number of suicide deaths among social workers upon which this report is based is a distinct limitation. In addition, the limitations of death certificate data and of the PMR method are well known.[14,15] However, biases due to the PMR method are unlikely to produce PMRs of the magnitude observed for suicide among social workers in this study. Since the excess suicide was observed among both male and female social workers, this association is unlikely to be a chance occurrence stemming from the multiple comparisons made in this study.

Thus social workers, at least in some settings, may represent a high risk group for suicide. Social work can involve considerable stress. One response to stress that has been noted among social workers is the syndrome of burnout—emotional exhaustion, development of a detached and callous attitude toward people, and feelings of reduced personal accomplishment.[16] Burnout can be associated with depression, which can be related to suicide. An elevated risk for suicide among social workers may be due to the high stress of social work, possibly in combination with a tendency for individuals with dysfunctional patterns of response to stress to go into social work.

Studies are needed to evaluate further the risk of suicide among social workers. If the present results are validated, studies aimed at identifying specific risk factors for suicide among social workers should be performed.

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Slips of the Doctor's Tongue

The left leg became numb at times and she walked it off.

Patient has chest pain if she lies on her left side for over a year.

Father died in his 90s of female trouble in his prostate and kidneys.

Skin: somewhat pale but present.

On the second day the knee was better, and on the third day it had completely disappeared.

The pelvic examination will be done later on the floor.

By the time she was admitted to the hospital her rapid heart had stopped and she was feeling much better.

Patient had unilateral varicosities below the legs.

—Selected from dictated hospital discharge summaries
and submitted by F. M. Buckingham, MD,
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