

Short Report

Job Stress and Suicidal Ideation in Irish Female General PractitionersJohn Connolly¹, Anne Cullen², David Lester^{3,✉}¹ Irish Association of Suicidology, Ireland² St. Mary's Hospital Castlebar, Ireland³ The Richard Stockton College of New Jersey, USASubmitted to SOL: 3rd December 2012; accepted: 24th August 2013; published: 22nd September 2013

Abstract: A survey of 379 Irish female GPs identified several sources of stress for these GPs. Their suicidality was predicted by having had psychiatric problems in the prior year and by scores on the General Health Questionnaire. Although suicidality was associated with the level of job stress, this association was weak.

Keywords: Suicide, General Practitioners, Job Stress

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It has been documented that physicians have a higher suicide rate than the general population. For example, Lindeman, et al. (1996) reviewed research on this and reported that, overall, male doctors have a suicide rate 1.1 to 3.4 times higher than men in the general population and female doctors a suicide rate 2.5 to 5.7 times higher than women in the general population. The same increased suicide rate for all doctors and the relatively higher rate in female doctors was found when doctors were compared to men and women in other professions.

Lindeman, et al. (1997) in Finland and Schlicht, et al. (1990) in Australia found that male physicians had an average suicide rate, whereas female physicians in both countries had a higher suicide rate than other women. Overall for male physicians, some specialities (such as psychiatry) are characterized by a higher suicide rate, but this is counterbalanced by other specialties having a lower suicide rate than expected. For female physicians,

however, specialty does not play a major role and, in fact, professional women in many occupations (such as psychology [Mausner & Steppacher, 1973]) are found to have a suicide rate comparable to men in the same professions.

In one of better studies on completed suicide in physicians, Stack (2004) examined 143,885 deaths in the United States in 1990 using a multiple regression analysis, controlling for marital status, age, sex, race and urban-rural location, and found that physicians were 2.45 times more likely to die by suicide than other members of the general population. However, Stack did not examine the risk for male and female physicians separately.

Studies on the mental health of female and male doctors conflict. Wall, et al. (1997) found a higher prevalence of minor psychiatric disorders in English female doctors, while Rout (1999) found higher levels of mental well-being in English female doctors. A survey of psychiatrists in Wessex, England found that female doctors reported higher levels of stress than male doctors (Rathod, et al., 2000), and Kirkcaldy, et al. (2002) found that female doctors in Germany reported higher levels of job stress than male doctors.

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Table 1: Sources of stress for Irish female GPs according to the question "Have you experienced any of the following work-related problems in the past year?"

	% yes
Difficulty in finding a suitable post	9.1%
Lack of peer support in isolated single-handed practices	14.2%
Excessive work load	63.6%
Shortage of time to see patients	62.2%
Conflict with colleague	18.7%
Difficulty with other services	50.1%
Litigation	8.6%
The threat of litigation	24.2%
Problems arising from media coverage of health issues	26.8%
Problems arising from increased public expectation of health care	58.1%
Difficulty in attending CME courses or meetings	55.3%
Problems with locum cover	45.6%

Heim (1991) claimed that the specific role strain of female doctors leads to an alarming lower life expectancy as compared to women in the general population of roughly ten years. Sonneck and Wagner (1996) documented the existence of role-strain between job demands and family and child-care responsibilities, while Schernhammer (2005) focused on the sexual harassment that female doctors experience. The tendency of physicians to self-medicate and the availability of lethal medications (Lindeman, et al., 1998) increase the risk of suicide in this profession.

Since few female physicians complete or attempt suicide, and since completed suicides are, obviously no longer available for questioning, the present study focused on the impact of work stress on suicidal ideation in female general practitioners.

Method

All female General Practitioners listed on the Irish Medical Register were mailed a questionnaire (described below), and respondents returned the questionnaires in an unmarked envelope, permitting anonymity. The final sample consisted of 379 female general practitioners from the 1,000 who were contacted, giving a response rate of about 38%. Follow-up of those not responding was not attempted since there was no way of distinguishing those who responded from those who did not respond.

Those responding to the questionnaire had a mean age was 42.4 years (SD = 9.6; range 26-74). The average year of qualification was 1980 (SD = 9) and they had a mean of 13.6 years in practice (SD = 9.8). Seventy-four percent were married, 20% single and

6% divorced or widowed. Seventy-one percent had children, and those who did have children had a mean of 3.1 children (SD = 1.5). Sixty-three percent were in a group practice (and 37% in a single practice). Seventy-two percent were full-time, 21% part-time, 4% job-sharing and 4% locums.

The questions about work-related problems experienced in the past year included: (i) difficulty in finding a suitable post; (ii) lack of peer support in isolated single-handed practices; (iii) excessive work load; (iv) shortage of time to see patients; (v) conflict with colleagues, (vi) difficulty with other services; (vii) litigation; (viii) the threat of litigation; (ix) problems arising from media coverage of health issues; (x) problems arising from increased public expectation of health care; (xi) difficulty in attending CME courses or meetings; and (xii) problems with locum cover. "Yes" responses to these questions were summed to give a total STRESS score, with a possible range of scores of 0-12. The mean score was 4.11 (SD = 2.34). The proportion of female GPs checking each source of stress is shown in Table 1.

Five items were related to suicidality: (i) in the last year have you at any time felt that life is not worth living; (ii) in the last year have you had a positive death wish; (iii) in the last year have you had suicidal thoughts; (iv) in the last year have you thought of a method of ending your life; and (v) in the last year have you made any plans to end your life. They were also asked if they had attempted suicide in the past year, and none had done so. "Yes" answers to these questions were summed to give a total SUICIDALITY scores, with a possible range of scores of 0-5. The mean score was 0.26 (SD = 0.77).

The questionnaire included the 12-item General Health Questionnaire (GHQ-12: Goldberg, Gater, Sartorius, Ustin, Piccinelli, Gureje & Rutter, 1997). This is a self-administered screening instrument to detect the presence of a psychiatric disorder, developed from the original 60-item scale. Although the GHQ-12 has an adequate internal consistency, it does appear to be multidimensional (Gao, Luo, Thumboo, Fones, Li & Cheung, 2004). The range of possible scores is 0-36, and the mean score of the sample was 11.41 (SD = 4.80).

The GPs were also asked additional questions, including whether there was a family history of psychiatric illness, whether they had suffered from a significant physical illness in the past year, whether they considered themselves to have mental health problems at present or at any time in the last year, and whether they considered themselves to have substance and alcohol abuse at present or at any time in the last year, all questions answered using a "yes" versus "no" format.

Results

Frequency of Suicidal Ideation

In the last year 14.1% of the sample felt that life was not worth living, 4.4% had a positive death wish, 5.3% had suicidal thoughts, 2.9% thought of a method for ending their lives, and 0.3% made plans to end their lives. None had attempted suicide.

Correlates of Suicidal Ideation

SUICIDALITY scores were positively associated with the GHQ score (Pearson $r = 0.48$, two-tailed $p < .001$) and the STRESS score ($r = 0.12$, $p = .04$). In a multiple regression, SUICIDALITY was predicted by the GHQ scores, and STRESS did not play a significant role. STRESS and GHQ scores were positively associated ($r = -0.36$, $p < .001$), suggesting that the role played by stress in suicidality is via its impact on general mental health.

SUICIDALITY scores were not associated with age, year in which they qualified, number of years in practice, having children, the number of children, the age of the youngest child, the age of the oldest child, or the age range of the children. SUICIDALITY scores were associated with having physical and mental problems in the previous year and a family history of psychiatric illness ($r = 0.18$, 0.37 and 0.11 , respectively), but not with substance abuse in the previous year. In a multiple regression, only GHQ scores ($\beta = -0.38$, $p < .001$) and mental problems in the last year ($\beta = 0.22$, $p < .001$) contributed significantly to the prediction of SUICIDALITY scores. The multiple R was 0.51.

Discussion

The results of the present study have shown that suicidal ideation in this sample of female GPs was most strongly predicted by psychological and psychiatric problems in the previous year. Once these variables were taken into account, job stress added no significant amounts to the prediction of suicidality. This result suggests the next steps in a research program on this issue. Although psychological and psychiatric problems predicted suicidality, these problems could have been pre-existing and caused the job stress experienced by these GPs or they could have resulted from the job stress. What is required is a longitudinal study, assessing and following-up GPs, beginning during training or residency with a long-term follow-up. It would also be of interest to distinguish more clearly the roles played by the stress created for women from often having dual roles (career and family, especially child-rearing duties), stress from being a career women (sexual harassment and discrimination), and stress specific to the work of being a GP. To accomplish this, it would be useful to devise scales to measure each of these sources of stress quantitatively, thereby permitting regression analyses.

The present study had several limitations, in particular the relatively low response rate, but low response rates are common for questionnaires mailed by post. The study also focused on non-lethal suicidal behavior rather than completed suicide because, of course, completed suicide is rare (making sample sizes very small) and because those engaging in lethal suicidal behavior are not available to answer questionnaires. It would be interesting in future research to include a sample of male GPs for comparison purposes, and it would be of interest to investigate whether work-related stress predicts future completed suicide in female (and male) physicians.

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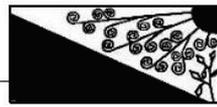
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ISSN 2078-5488

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