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Sources of stress in women junior house officers

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Abstract

***Objective*—To determine the causes of stress in women doctors and relate these to levels of depression.**

***Design*—Questionnaire study.**

***Subjects*—Of 92 women doctors who had graduated from the universities of Leeds, Manchester, and Sheffield in 1986 and had been working as junior house officers for eight months 70 (76%) returned completed questionnaires.**

***Main results*—Mean score on the general health questionnaire was 13·79 (SD 5·20) and on the symptom checklist for depression was 1·43 (0·83). The scores of 32 subjects (46%) were above the criterion for clinical depression. Overwork was perceived as creating the most strain, followed by effects on personal life, serious failures of treatment, and talking to distressed relatives. Both stress and depression were related to effects on personal life, overwork, relations with consultants, and making decisions. Sex related sources of stress were conflicts between career and personal life, sexual harassment at work, a lack of female role models, and prejudice from patients. In addition to these, discrimination by senior doctors was related to depression.**

***Conclusion*—Changes are needed in the career paths of women doctors, and could be implemented.**

Introduction

Symptoms of stress and depression have been found to be high in junior doctors, both in Britain[1] and in North America,[2-4] and these findings are true for both men and women. Several studies have shown, however, that the stress and depression levels of women doctors are considerably higher than those of other professional women[5] and of male doctors[1 2]; for example, in a study of junior house officers, Hsu and Marshal found that women were one and a half times more likely to be classified as depressed and eight times more likely to be severely depressed.[2]

In addition, women doctors in general have been reported to have suicide rates of up to four times those of their age mates.[7] Though it is always difficult to compare relatively small groups with the general population, a recent Swedish study used a 10 year sample and comparisons with academics to find that women doctors had higher suicide rates when compared with both the general population and women academics, while men doctors had rates equal to the general population and higher than those of academics.[8]

Although higher levels of occupational stress have been reported in women generally,[9] a recent meta-analysis of comparisons of male and female workers showed no differences.[10] Notman *et al* found no sex differences at intake to medical school,[11] and a British longitudinal study showed that there were no sex differences in stress or depression when the subjects were students but that higher rates of depression existed when they were junior house officers.[1 12] Despite any difficulties in interpretation, it seems clear that women doctors are an occupational group at risk for depression and suicide and it is particularly important to attend to possible reasons for these differences.

Studies comparing men and women junior doctors on work factors have found similar scores for satisfaction with career choice, perceived competence, and reported levels of fatigue,[6] and no differences have been reported on job perceptions or sources of stress.[1 13] Studies looking specifically at women doctors, however, have reported stress arising from career and family conflict,[14-16] prejudice,[5 17] and a lack of role models.[14] A recent British study that categorised accounts of stressful events of male and female junior house officers found not one account of such problems, but this may have been because this method reports acute rather than chronic stressors.[13] I therefore considered the perceived causes of stress in women doctors in more detail and related these to levels of depression.

Method

A list of hospital addresses of preregistration doctors who had graduated from the universities of Leeds, Manchester, and Sheffield in 1986 was provided by the postgraduate offices of those universities as part of the junior doctors project.[1] The 92 women doctors who had not been contacted previously under that project were sent postal questionnaires and stamped addressed envelopes along with a letter explaining that this was a

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cross sectional study of the sources of stress in women doctors.

The questionnaire contained within it:
(*a*) the 12 item general health questionnaire,[18] a useful measure of minor psychiatric morbidity in community and occupational settings,[19] which was used with a Likert scaling of 0-3, giving a maximum score of 36;
(*b*) the symptom checklist 90 depression scale,[20] which has been used widely in North America and increasingly in clinical[21] and non-clinical[1] studies in Britain;
(*c*) the sources of stress questionnaire, used in the junior doctors project,[1] which listed stressors applicable to doctors generally taken from previous studies, which was used with a scale of 0-4 ("not at all stressful" to "extremely stressful"); and
(*d*) the sources of stress (women) questionnaire, which listed several items reported as creating stress for women doctors in particular, followed by a frequency scale of 1-3 ("never" to "frequently") and a level scale of 0-4 ("not at all stressful" to "extremely stressful"). At the end of this questionnaire respondents were given space to write other stressors applicable to them as women doctors and any comments they wished to make. These are used as illustrations in the discussion.

Mean scores were calculated for the levels of stress (general health questionnaires) and depression (symptom checklist), for the levels of stressors in the two sources of stress questionnaires, and for the frequency of each stressor in the questionnaire designed for women. Pearson's product moment correlation coefficients were used to find relations between symptoms and stressor levels and frequencies. All items for which the means and standard deviations indicated non-normal distributions had non-parametric tests (Spearman's rho) applied.

Results

Of the 92 questionnaires sent out, 70 were returned completed, making a response rate of 76%. The mean score on the general health questionnaire, used as an indicator of emotional distress, was 13·79 (SD 5·20), and the symptom checklist depression item score was 1·43 (0·83). In the junior doctors project a criterion for clinical depression of 1·50 had been determined by taking one standard deviation below the mean score of a group of male and female British professional workers with clinical depression (2·17; 0·69).[21] In the present project 32 (47%) subjects scored above this criterion.

Table I sets out the general stressors, their means, standard deviations, and the relation of each mean score to the general health questionnaire scores and the symptom check list depression scores. Overwork was perceived as creating the most strain, followed by effects on personal life, serious failures of treatment, and talking to distressed relatives. The highest correlations with both stress and depression concerned effects on personal life, overwork, relations with consultants, and making decisions.

Table II sets out the levels and frequencies of sex related sources of stress (from the sources of stress (women) component of the questionnaire) alongside the relation of each to the symptom checklist depression score. The item that was seen as causing the most strain, both in terms of level and frequency, was conflicts between career and personal life. The second highest level of strain was caused by sexual harassment at work, though this was seen as occurring least frequently. A lack of senior female role models was seen as the most frequent, not surprisingly, but this caused almost no strain. The third highest level was caused by prejudice from patients, which was also seen as quite frequent. Prejudice from patients was highly related to depression, both in its levels and frequency, and levels of depression were also highly related to those of perceived stress from career conflict and from sexual discrimination by senior doctors.

TABLE I—*Levels of stress perceived by 70 women junior house officers to arise from job factors*

	Mean (SD)	Correlations with: General health questionnaire	Correlations with: Symptom checklist
Relations with consultants	1·65 (0·72)	0·49***	0·40**
Relations with registrar	1·38 (0·70)	0·19	0·25
Relations with senior house officers	1·19 (0·53)	0·37**	0·25
Relations with nursing staff	1·31 (0·51)	0·17	0·20
Dealing with death	1·91 (0·81)	0·07	0·20
Talking to distressed relatives	2·28 (0·88)	0·04	0·14
Making decisions	1·93 (0·78)	0·26*	0·38**
Effects on personal life	2·40 (0·10)	0·48***	0·62***
Overwork	2·77 (0·95)	0·53***	0·49***
Being underutilised	1·53 (0·72)	0·14	0·05
Having too few skills	1·84 (0·83)	0·24	0·26
inflicting pain	1·81 (0·79)	−0·04	0·12
Financial problems	1·42 (0·66)	0·13	0·27*
Serious treatment failures	2·40 (0·94)	0·09	0·18

*p<0·05; **p<0·01; ***p<0·001.

TABLE II—*Mean (SD) frequencies and levels of sex related sources of stress in women junior house officers*

	Frequency (score 1-3)	Correlation with depression	Level (scored 0-4)	Correlation with depression
Lack of senior female role models	2·44 (0·74)	0·10†	0·66 (0·84)	0·20
Sexual discrimination by senior doctors	1·94 (0·61)	0·37**†	1·36 (1·19)	0·31**
Conflicts between career and personal life	2·56 (0·58)	0·33*	2·45 (1·04)	0·50***†
Sexual stereotyping	2·03 (0·64)	0·33**†	1·22 (1·16)	0·22
Prejudice from patients	2·11 (0·71)	0·46***†	1·77 (0·99)	0·38**
Sexual harassment at work	1·30 (0·46)	0·10	1·92 (1·00)	0·25*

*p<0·05; **p<0·01; ***p<0·001. †Spearman's rho.

Discussion

This group of women junior house officers was considerably (though not significantly) more stressed than those who were reported in the junior doctors project (mean general health questionnaire score 13·79 (5·20) *v* 11·71 (5·57) for women in the junior doctors project) and also showed higher levels of stress than other groups of workers—for example, using the same instrument Banks *et al* reported a mean score of 8·98.[19] Nevertheless, stress levels are similar to those of other health workers, such as health visitors: West *et al*, for example, reported a mean score of 13·30.[22] More seriously, almost half of these women junior house officers reported symptom levels suggesting clinical depression, which is a considerably greater proportion than in community samples—for example, 14·9% of women in south London.[23]

There were no differences between the levels of responses to stressors shown in table I and those in the junior doctors project: overwork was rated as the most stressful item, followed by effects on personal life, serious treatment failures, and talking to distressed relatives. This confirms that these particular sources of medical strain, well recognised in previous studies, are universal for junior doctors rather than sex specific.

It can be seen from table II that more traditional forms of sexism, such as the sexual discrimination and stereotyping reported in North American studies,[17] are present but do not occur very often and are not seen as being particularly stressful. Nevertheless, those women who find that discrimination by senior doctors causes them distress are also more depressed. When sexual harassment takes place (and it is seen as rare) it causes the second highest level of stress; this is not highly related to whether the woman is depressed or not. A lack of senior female role models is often perceived, but is not seen as causing stress.

One problem that is both frequent and stressful is prejudice from patients. This was noted as high by

Engleman in 1974,[25] but a more recent study found a very positive attitude to women doctors from female patients in particular,[26] and one respondent in the present study wrote that "Many female patients prefer a female doctor so it can be a great help." Nevertheless, most comments made showed how prejudice remains, not simply from patients but also from staff in other departments and in particular from nurses. For example: "Patients find it hard to understand you are a doctor (and not a nurse), [and you are] more questioned re ability than male doctors by nurses"; "Female doctors also have to make a greater effort to nursing staff, as doctors are 'expected' to be male"; "Various departments, for example, ECG, *x* ray, tend not to be so respectful to female doctors and . . . more frequently, rude and uncooperative"; "Being treated as a nurse by nurses, therefore expected to be both doctor and nurse. Difficulty getting help doing some procedures as a female." It clearly would have been useful to have included "prejudice from nurses" and "prejudice from other departments" as items on the questionnaire.

By far the largest and most frequent stressor for women junior doctors is the conflict they feel between their careers and their personal life, and this item is most strongly linked to depression—table I shows a relation between effects on personal life and depression of 0·62. Other studies have also emphasised the importance of this conflict in causing both career and personal problems,[16 27 28] and the comments added to many of the questionnaires primarily concerned this area. For example: "Being married—running a household with so little time at home"; "I feel the greatest stress arises from the problems related to personal life. The possibility of pursuing a hospital career and having a family is almost zero"; "The immediate disruption of my career . . . by unplanned pregnancy—no compromises arrangements made, etc"; "Stress of having to decide between a family and career at some point"; "Children—having them and looking after them, and the way they ruin your career."

These comments and others like them suggested two important aspects for women doctors. First, almost none of these women attributes the cause of her problems to the career structure itself so much as to marriage or families. The higher divorce rate for women doctors than for men and the lower numbers of children[29] may indicate that it seems easier to change one's marital state or limit one's family than to succeed in challenging the accepted career path. It seems from the comments that the route to a successful career, in particular in hospital medicine, is carved in tablets of stone. On the other hand, there is considerable evidence that women doctors reduce their career aspirations for marital and family reasons.[30 31]

The second point suggested by the quotations and the results is the way this conflict seems to have occurred suddenly to the respondents, and this may help to explain why women doctors become significantly more depressed than men after graduation despite there being no difference as students.[1] These young women seem to have travelled through medical school with their career aspirations intact, and the first postgraduate year abruptly makes them realise that medicine is organised so as to make combining a family life and a hospital career extremely difficult. It may be argued by some that better and earlier career counselling is the answer—and this would be quite likely to result in fewer women entering medicine—but this argument is on a par with removing a healthy limb in case it should later suffer trauma, rather than doing anything to prevent the trauma.

Many medical schools now have equal intakes of men and women, and yet career paths remain unchanged or become increasingly rigid.[27] This creates problems for men as well as women.[32] It is clear that the overwhelming requirement for women doctors is to alter the career structure in ways that allow interruptions and periods of part time working without an inevitable cost to the final career. New educational methods provide several ways for home study when necessary. In addition, the medical curriculum has often been criticised as too full of indigestible bulk,[33 34] and it is the very substance of what makes good doctors that lends itself to challenge.

The levels of depression shown by women doctors in this study and in others (which also show that the seriousness is particular to medicine) make it imperative that we study the causes. Having located one that is unusually possible to remedy, we need next to question why so little is being done to change a situation that is wasteful both for the profession and for the lives of the women concerned.

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