Health Status and Health Maintenance Practices among Doctors and Nurses at Two Hospitals in Jamaica

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ABSTRACT

The health of doctors and nurses is of paramount importance because they must be well to perform their jobs optimally under difficult conditions. However, the challenge of their working environment and the culture of their professions often lead to physical and mental illnesses. Despite this, there are several barriers to doctors and nurses seeking healthcare. In this study, the health status and health maintenance practices of doctors and nurses at two hospitals in Kingston, Jamaica, were assessed. This population was previously reported to have a 27% prevalence of probable mental distress based on the General Health Questionnaire 30 (GHQ30). Two hundred and twelve doctors and nurses were recruited into the study. The reported prevalence of chronic diseases was determined while mental health status was based on the GHQ30, reported signs and symptoms of stress and job satisfaction. Health maintenance practices studied included, health-seeking behaviour, willingness to seek counselling, reported source of emotional support and use of alcohol and tobacco as coping strategies.

Although, less than 50% of study participants reported that they were satisfied with their job, the mean number of days missed from work in the "last six months" was less than two and a half days. The mean time for "last doctor's visit" for nurses and doctors in the current study were 0.93 and 2.4 years, respectively. Females were more willing to seek medical attention than males. More than 50% reported signs and symptoms of stress and major sources of emotional support were friends (55.7%), followed by spouses (36.0%) and colleagues (12.3%). The prevalence of chronic diseases was less than1% and alcohol and tobacco did not appear to be major coping strategies. The population appeared to be physically healthy and despite the known prevalence of probable mental distress, doctors and nurses appeared unwilling to seek healthcare. Probable barriers to seeking healthcare included confidentiality issues and the need to appear healthy to colleagues, patients and the community.

El nivel de Salud y las Prácticas de Mantenimiento de la Salud entre los Doctores y Enfermeras en dos Hospitales de Jamaica

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RESUMEN

La salud de doctores y enfermeras es un asunto de importancia primordial porque ellos tienen que gozar de salud para poder realizar su trabajo de manera óptima bajo condiciones difíciles. Sin embargo, los retos de su ambiente de trabajo y la cultura de sus profesiones conducen a menudo a enfermedades físicas y mentales. A pesar de esto, existen varios obstáculos para los doctores y enfermeras que buscan el cuidado de la salud. En este estudio, se evaluaron el nivel de salud y las prácticas de mantenimiento de la salud de doctores y enfermeras en dos hospitales en Kingston, Jamaica. Previamente se reportó que esta población tenía una prevalencia de un 27% de probable distrés mental, sobre la base del Cuestionario General de Salud 30 (GHQ30). Se reclutaron doscientos doce doctores y enfermeras para el estudio. Se determinó la prevalencia de enfermedades crónicas a partir de reportes, mientras que el nivel de salud se basó en el GHQ30, y los signos y señales de estrés así como la satisfacción del trabajo reportados. Las prácticas de mantenimiento de la salud estudiadas incluyeron el comportamiento de búsqueda de la salud, la disposición a buscar aconsejamiento,

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reportes de fuentes de apoyo emocional y uso del alcohol y el tabaco como estrategias de enfrentamiento. Aunque menos de 50% de los participantes en el estudio reportaron que estaban satisfechos con su trabajo, el número promedio de días de trabajo perdidos en "los últimos seis meses" fue menos de dos días y medio. El tiempo promedio de "la última visita del médico" para enfermeras y doctores en el estudio presente fue 0.93 y 2.4 años, respectivamente. Las mujeres estuvieron más dispuestas a buscar asistencia médica que los hombres. Más del 50% reportaron signos y síntomas de estrés, y las fuentes principales de apoyo emocional fueron los amigos y amigas (55.7%), seguidos por cónyuges (36.0%) y colegas (12.3%). La prevalencia de las enfermedades crónicas fue menos del 1%, y el alcohol y el tabaco no parecieron ser las estrategias principales de estrategias de enfrentamiento. La población parecía estar físicamente saludable y a pesar de la prevalencia conocida del probable distrés mental, tanto doctores como enfermeras parecían poco dispuestos a buscar atención a la salud. Los obstáculos probables a la búsqueda de la salud incluyeron problemas de confidencialidad y la necesidad de parecer saludable ante sus colegas, sus pacientes y la comunidad.

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INTRODUCTION

Health-workers, particularly nurses and doctors, may have higher rates of psychiatric symptoms when compared to the general population and other professions because of the demanding nature of their jobs. When doctors become ill they often disregard the advice given to their patients and many lack adequate medical care (1, 2). In fact, while it is advisable that physicians have their own General Practitioners (GP), one study showed that only 55% of doctors do (1). In another study, although 43% of doctors had a GP, fewer than 25% had an independent doctor. Instead, 5% reported treating themselves and 13% consulted their professional partners (3). Physicians in general are at risk for the development of stress, drug and alcohol abuse and suicide (3, 4). This is related to the stressful conditions of their workplace including overwork, tight schedules, paperwork, intricate or malfunctioning equipment, complex hierarchies of authority and skills, dependent and demanding patients and patient deaths (5). Despite this focus on the mental health of doctors it appears that mortality among doctors is more related to physical health (6).

There are several barriers to treatment of the sick physician which has been classified into those which are doctor-patient related, provider related and system related (7). These include the awareness of the implications of a diagnosis of ill health such as getting future insurance and being a burden to colleagues and patients. Physicians are also concerned about confidentiality such as the fact that their doctor may discuss their illness with peers, staff may find out personal information and that this information may be available to their employers (7). System barriers include the culture of self –treatment and pressure from peers and the community to remain healthy (7).

In a study conducted in Barcelona, nearly half of the doctors (49%) admitted to not having a family doctor or a registered medical chart. In addition, 82% of the doctors studied admitted to self-prescribing, a practice which is likely to lead to inadequate diagnostic work-up and treatment (8). Similarly, in a study of doctors in New South Wales, Australia, only 42% of respondents had a General Practitioner and most had self-prescribed medication. Nineteen per cent of this group reported marital disturbances, 18% emotional disorders, 3% alcohol problems and 1% drug abuse, but not many had discussed these problems with a doctor. Furthermore, 25% had a condition warranting medical consultation but felt inhibited about seeking such attention (2). In Israel, two-thirds of the physicians studied did not have a regular family doctor and those who suffered from chronic diseases were even less likely to be treated than those who did not. Additionally, 28% of the physicians studied did not use any kind of medical consultation (4).

Doctors appear to have difficulty acknowledging that they are vulnerable to psychological distress and would benefit from the psychotherapy they prescribe for others (9). Furthermore, it remains shameful to be depressed, anxious or not coping with pressures in the medical profession (9). General practitioners' preference for self-treatment may be associated with their perception that doctors are embarrassed to attend a colleague and that it is difficult to find a good treating doctor (1). At least two studies have shown that doctors, who do seek external care, received a lesser quality of care than persons who are not medically trained (1, 2)

Although there have been a few studies on the health-seeking and health-maintenance practices of doctors, there are no apparent parallel studies on nurses who share the same working environment. Furthermore, little is known about the health status and health maintenance practices of health-workers in the Caribbean. In a study conducted by Lindo *et al* (10), a 27% prevalence of probable mental ill health was found among doctors and nurses in Kingston, Jamaica, using the General Health Questionnaire 30 (11). Elucidation of the health status and health maintenance practices of doctors and nurses may offer insights into possible interventions to improve the welfare of these workers.

The aim of this study was to describe the health status and health maintenance practices among doctors and nurses in two hospitals in Kingston, Jamaica

The specific objectives were to

* Describe the health status of nurses and doctors at two hospitals in Kingston, Jamaica
* Assess the level of job satisfaction among these health-workers
* Determine sources of emotional support used by the health-workers
* Determine stress reduction practices used by health-workers in the hospitals studied

SUBJECTS AND METHODS

Study sites

The Kingston Public Hospital

The Kingston Public Hospital (KPH) is a tertiary care 500-bed institution established in 1776. It is the major trauma centre for Jamaica and its location in downtown Kingston makes it accessible to a wide cross-section of the general population. The hospital treated 258 328 patients in 2000 and runs a range of diagnostic and rehabilitative services including radiology, intensive care unit, physical therapy and substance/drug abuse intervention. The KPH is located in close proximity to communities with high levels of violence and gang warfare. Violence accounts for 11% of the hospital's major trauma budget (12).

The University Hospital of the West Indies

The University Hospital of the West Indies was established in 1952 to serve as the main medical teaching institution in the English-speaking Caribbean. Its current bed capacity is 534. The hospital admitted 20 449 patients in 2001 (13).

Sample

The sampling frame consisted of all nurses and doctors employed to the KPH and UHWI and assigned to the following specialities:

1. Accident and Emergency
2. Anaesthetics and Intensive Care
3. Medicine
4. Orthopaedics and General Surgery

Doctors and nurses who were on vacation or study leave and surgeons who were not assigned to the general or orthopaedic wards were excluded from the study.

The names of nurses and doctors employed in the above departments of each institution were assigned a number and 50% chosen using a table of random numbers. This yielded 130 nurses and 125 doctors.

Participation rate

Two hundred and twelve participants including 113 nurses and 99 doctors were enrolled in the study, yielding an overall participation rate of 83.1%.

Data collection

Quantitative data such as, social, demographic and bio-medical variables were collected using a 33-item structured, self-administered questionnaire. The study was conducted between February and March 2003. Health status and health maintenance factors studied included marital union status (indication of spousal support), job satisfaction, reported signs and symptoms of stress, mental well-being as measured by the GHQ30, health-seeking behaviour, absenteeism due to illnesses, willingness to seek counselling and reported source of emotional support. In addition, data were collected on alcohol and tobacco use as coping strategies.

Definition of caseness using the GHQ 30

The General Health Questionnaire is a self-administered screening instrument used to identify potential cases of mental ill health (11). The questionnaire covers four areas of psychiatric distress including depression, anxiety, social impairment and hypochondriasis and is scored using a Likert type scale. Scores equal to, or greater than 5, were considered probable cases and were defined as caseness in this study (14). However, actual psychiatric disorders must be diagnosed by a psychiatrist. The instrument was previously validated in Jamaica and found to have a sensitivity and specificity of 85% using 5 as the cut-off for "caseness" (15).

Data management

Data were analysed using SPSS 11.5 for Windows. The chi-square test was used to determine differences between groups of categorical variables and the t-test to determine differences between means of normally distributed data.

Ethical Considerations

The study was approved by the Ethics Committees of the Kingston Public Hospital and the University of the West Indies/University Hospital of the West Indies. Informed consent was obtained from each participant.

RESULTS

Detailed description of the demographic characteristics of the study population is given in Lindo *et al* (10). Briefly, the mean age of the participants was 32.5 ± 8.53 years and was similar at both hospitals. Nurses were similar in age and gender distribution between hospitals but differed in their distribution among professional levels. Registered nurses were the most common category at both hospitals; however, KPH had fewer nurses with post-basic training than UHWI (29.8% and 41.8%, respectively) and more Enrolled Assistant Nurses (22.8% and 5.5%, respectively; (p = 0.032). Table 1 shows the distribution by employment category of all nurses in the study.

Marital/Union status

Of the study participants, 43.9% (93) were either married or in common law unions while 48.6% (103) were single with

the remaining 7.5% being divorced, separated or in visiting relationships. More than half (54.8%) of the male participants in the study were either married or in common law relationships, whereas only 36.8% of the females were in similar unions ($p = 0.011$) [Table 1].

Table 1: Demographic and occupational characteristics of the sample

	Total (n = 212)
Age (years)	
Mean ± SD	32.5 ± 8.53
Range	20–64
Sex Male%	35.4
Female%	64.6
Occupation	
Doctors	
Intern	20.2
Resident	59.6
Consultant	20.2
Nurses	
Registered nurse	49.6
Enrolled assistant nurse	14.2
Post basic RN*	36.3
Union Status	
Married	37.3
Common law	7.10
Divorced/widow/separated	4.2
Single	47.2
Visiting	3.8

*$p < 0.05$, ** $p < 0.01$, ***$p < 0.001$

No significant differences in union status were observed between the professions or hospital of employment. There was also no difference between union status and the frequency of probable mental ill health as measured by the GHQ 30.

Job satisfaction and mental well-being

Forty-two (n = 89) per cent of the doctors and nurses reported that they were satisfied with their job assignments. While 28% (58) reported being indifferent, 30% or 65 persons reported that they were dissatisfied. Significantly more males 58.1% (43) than females 34.3% (46) were satisfied with their current job assignments. Greater percentages of females were both indifferent (29.1%) and dissatisfied (36.6%) with their job assignments than their male colleagues (20.3% and 21.6%, respectively).

The highest prevalence of probable mental ill health was among respondents who were "Indifferent" towards their job (46.6%), followed by those who were "Satisfied" (29.8%) and then those who were "Dissatisfied" (24.6%), (χ^2 =15.89; $p = 0.0001$) [Table 2]. The frequencies of probable mental ill health between persons who were satisfied with their jobs and those who were dissatisfied were not significantly different ($\chi^2 = 0.139$; $p = 0.709$).

Table 2: Satisfaction with current job assignment and mental health as measured by GHQ 30.

	Mental health % (n)	Mental unhealthy % (n)
Satisfied	47.7 (72)	29.8 (17)
Indifferent	18.5 (28)	45.6 (26)
Dissatisfied	33. (51)	24.6 (14)
Total % (n)	72.6 (151)	27.4 (57)

Significance $\chi^2 = 15.89$; $p < 0.0001$

Health status of doctors and nurses

Fifty-five per cent (122) of the study participants reported having experienced signs and symptoms of stress. These included gastrointestinal disturbances (20%), insomnia (23%) and heart palpitations (54%). No differences were noted at the level of profession, hospital or gender. Among persons who reported signs and symptoms of stress, there was a 37.7% prevalence of mental ill health as measured by the GHQ 30, compared to only 13.3% among those who had no such sign or symptom ($\chi^2 = 14.71$; $p < 0.0001$) [Table 3].

Table 3: Association between signs and symptoms of stress and mental well-being as measured by GHQ 30.

Stress symptoms	Mental wellness n (%)	Mental ill health n (%)	Total n (%)
Present	76 (62.3)	46 (37.7)	122 (100)
Absent	71 (86.7)	11 (13.3)	83 (100)
Total	148 (72.2)	57 (27.8)	205 (100)

Significance $\chi^2 = 14.71$; $p < 0.0001$

Migraine headache was the most commonly reported illness, occurring among 18.2% (39) of respondents. Asthma and hypertension occurred in a similar proportion of the population 5.7% (n = 12) and were ranked second. Diabetes, heart disease and thyroid dysfunction all occurred in less than 1% of the population when taken individually. Furthermore, the combined prevalence of chronic diseases were 5.7%. None of these diseases was associated with mental ill health as measured by the GHQ 30.

Medical attention-seeking behaviour of health-workers

On average, the last time nurses visited a doctor for medical attention was 0.93 ± 0.26 years while for doctors the mean time was 2.4 ± 0.36 years (t = -3.3; $p = 0.001$). Females also visited their doctors significantly more frequently than males (1.09 ± 0.25 years and 2.70 ± 0.41 years, respectively, (t = 3.34; $p = 0.001$). Among females, there was no difference in the mean time of "last doctor's visit" for nurses and doctors.

Absenteeism from work due to illness

The average number of days missed from work due to illness was 2.24 ± 3.12 days. There was no difference in the average number of days missed from work due to illness in the last six

months between persons employed at the KPH and the UHWI, nor were there any differences between professions. There was no difference in the mean number of days absent from work among probable cases and non-cases as measured by the GHQ 30.

Willingness to seek counselling

The overall rate at which doctors and nurses in the study sought counselling was very low (7.14%). There was no difference in this variable between doctors and nurses or between personnel at the hospitals studied. Despite the low rate of seeking counselling in the population, most participants (77.6%) responded that they were willing to seek counselling. The willingness to seek counselling was not different between the professions (46.5% and 53.4% for doctors and nurses, respectively), nor hospitals (49.7% and 50.3% for KPH and UHWI, respectively). However, the willingness to seek counselling was significantly higher among females (67.3%) than males (32.7%) [$\chi^2 = 4.60$; $p = 0.032$].

Reported source of emotional support

Of the nurses and doctors studied, most (55.7%) sought emotional support from friends while 36.0% reported turning to their spouses. Of the remainder, 14.7% reported using colleagues as their source of support, 12.3% relied on the church and 8.1% depended on their siblings. Some respondents identified more than one source of emotional support.

Alcohol and tobacco use among health-workers

A notable proportion of the population reported consumption of alcohol (41.5%) and generally, doctors tended to drink more than nurses. This pattern was gender related since 62.7% (n = 47) of males consumed alcohol compared to 29.9% (n = 41) of females ($\chi^2 = 21.40$; $p < 0.0001$). Among male nurses, 81 % (n = 9) reported alcohol consumption compared to 25.5% (n = 26) of female nurses (Fishers' exact test; $p < 0.0001$). In contrast, alcohol consumption was not different between female (42.0%) and male doctors (59.4%) [$\chi^2 = 2.48$; $p = 0.115$].

Among health-workers who consumed alcohol (n = 88) most drank on special occasions only (16.5%) followed by those who drank rarely (14.6%) or on the weekend only (7.5%). Few persons consumed 1–3 drinks weekly (2.8%) and only a single respondent drank daily (0.5%). The low frequency at which alcohol was consumed in this population suggests that alcohol was not a significant coping strategy for the stressful conditions of hospital work.

The prevalence of smoking was very low in the study population. In fact, only one nurse and two doctors at the KPH reported smoking. Similarly, three doctors and three nurses at the UHWI were smokers. The low prevalence of smoking did not allow any further analysis of this potential coping mechanism.

DISCUSSION

This study which assessed the health status and health maintenance practices of doctors and nurses in two hospitals in Kingston, Jamaica, found that less than half of each profession was satisfied with their current job assignments. Furthermore, significantly more male (58.1%) than female employees were satisfied with their job assignments. This was in contrast to General Practitioners in the United Kingdom where females were more likely to be satisfied with their job assignments than their male colleagues (16). In addition, persons who expressed indifference to their job assignments were more likely to have higher scores by the GHQ30. This indifference or lack of enthusiasm regarding work may in fact be a marker for other factors such as fear of coming to work which was a significant predictor of probable mental well-being in this population (10).

In spite of the fact that less than half the health professionals in the current study reported that they were satisfied with their job, the mean number of days missed from work in the "last six months" was less than two and a half days. Absenteeism from work was not different between health professionals who were considered probable cases and those who were not. Doctors who are unwell may adopt some maladaptive practices instead of being absent from work. These included reporting to work when unfit, self-prescribing and consulting friends and colleagues instead of going through the formal system (17). It is likely that nurses may also use this strategy although it has not been reported from the group. This phenomenon has been more thoroughly studied among doctors and the need to appear well is an important barrier to seeking care among doctors.

The reported mean length of time for "last doctor's visit" for nurses and doctors in the current study were 0.93 and 2.4 years, respectively. Of note, 19% of the medical personnel studied could not remember their last doctor's visit or questioned the relevance of their seeking medical attention. Female doctors and nurses were seen to visit their doctor with equal frequency. This similarity and higher rate of doctor's visit among females may be reflective of the fact that the great majority of these study participants were of reproductive age. Several studies have confirmed that female medical professionals are more likely to seek medical attention than their male counterparts (18–21). This has also been attributed to a willingness to access informal care as female doctors were reportedly more likely to consult colleagues and this was especially true if they had medical spouses (7). There are also systems issue such as pressure from peers to be healthy, pressure from the community to remain healthy, partners and peers tend not to intervene and lack of normal cues for health-seeking (7). The knowledge of medicine has also been identified as a significant barrier to seeking healthcare since it enhances their understanding of potential symptoms including their ability to continue in practice and to obtain medical protection insurance. For these reasons,

symptoms are often rationalized as "insignificant" or trivial (7).

Physicians are often very opposed to sharing personal information with colleagues (17). This barrier to seeking healthcare and the unwillingness to share personal information may have been reflected in the low proportion of the study population which had sought counselling in the past. Studies have shown that this barrier to health-seeking is linked to confidentiality issues including worry that their medical history might be discussed with peers and that staff and the workplace might have access to their information (7). The willingness to seek counselling had a strong gender bias with females more willing to seek counselling. Although many of the participants (43%) were married (or in common-law marriages) the majority turned to their colleagues for emotional support. This may be reflective of a culture of "corridor" consultations among the professionals. Young doctors in Edinburgh, Scotland, were also generally unwilling to consult their colleagues (17). Similarly, two-thirds of family physicians in Israel did not have a doctor themselves and 28% did not use any kind of medical consultations. Despite this, 88% of these physicians reported experiencing stress related to work and 20% said their work had a negative effect on their marital life (4). Generally, the healthcare of doctors is poor especially in terms of their willingness to consult other doctors (17). The low rate of health-seeking behaviour among Jamaican medical personnel (especially visiting the doctor) was in keeping with international trends. Unfortunately, comparable data are not available for nurses who work under similar stressful conditions.

A qualitative study of General Practitioners in Northern Ireland cited the following reasons for the doctor's reluctance to seek help (22):

* The perceived need to portray an unrealistically healthy image is stressful and a barrier to appropriate self-care
* The emotional response to personal illness can produce an oscillation between panic and denial
* The working arrangements of general practitioners reinforce a culture in which their own and colleagues' distress is overlooked.

A notable proportion of the study population reported use of alcohol (41.5%). However, this was very infrequent since only 2.8% of study participants consumed 1–3 drinks per week and only a single participant reported daily consumption. Most of the doctors and nurses studied reported drinking alcohol on special occasions only (16.5 %) followed by those who drank rarely (less than once per week) [14.6%] or on weekends only (7.5%). The rate of alcohol consumption was much lower than that estimated from a random sample of 454 males and 504 females in Jamaica (23). In that sample, 79% of men and 41% of women reported alcohol use with 30% of men and 9% of women reporting heavy drinking. In the current study, 62.7% of men and 29.9% of women reported alcohol use. The lower level of alcohol use among the doctors and nurses in the present study was reflective of the finding that alcohol use in the Jamaican population decreased inversely with educational and economic status (23, 24). The use and abuse of alcohol among physicians remain equivocal with some studies reporting excessive use as a group and others finding no association with the medical profession or medical speciality (25). Specific studies on alcohol use in nurses as a group appear to be lacking.

The pattern of tobacco use mirrored that of alcohol consumption. Very few of the medical personnel smoked (4.2%) and this was not related to probable mental ill-health as measured by the GHQ 30. There were also no sex differences in the habit of smoking among study participants. In contrast, 36% of men and 11% of women reported smoking in a survey of the Jamaica population (23). The trend seen in this study may also be reflective of a decrease in smoking with increased educational and socio-economic status. Similarly, the rate of smoking declined more rapidly among physicians compared to registered nurses and licensed practical nurses in the United States of America over the period 1974 to 1991 (26). The study has shown that alcohol and tobacco use were not an important part of the coping mechanism of medical personnel at the KPH or UHWI. The low rate of both smoking and alcohol consumption in Jamaican doctors and nurses adds credibility to any health promotion efforts which these professionals may undertake.

In the current study, few doctors and nurses appeared to have self-reported rates of chronic diseases as only 5.7% (n = 12) reported hypertension and diabetes, heart disease and thyroid dysfunction. The prevalence of any single disease was less than 1% prevalence. On the other hand, migraine occurred among 39 persons or 18.2% and more than half of the study participants reported having experienced signs and symptoms of stress. The low prevalence of chronic diseases may be due to the general young age of the study population. Similarly, a population based survey of 958 persons (454 males and 504 females) aged 15 to 49 years in Jamaica in 1993 showed that based on self-reporting, 18% of the women and 8% of the men were hypertensive and 4.8% of the women and 3.3% of the men were diabetic (23).

This study of the health status and health maintenance practices of doctors and nurses in Jamaica showed that most of these professionals reported being dissatisfied or indifferent to their job assignments. Furthermore, this indifference was associated with probable mental ill-health using the GHQ 30. More than half the study population reported experiencing signs and symptoms of stress in the six months prior to enrolment in the study. Both doctors and nurses sought medical attention and counselling infrequently although this was significantly more often among nurses and females. The results suggest that there may be a high level of self-medication and "corridor" consultation with colleagues.

The findings of the study suggest that appropriate interventions to improve the health of doctors and nurses in Jamaica include:

* Implementation of annual medical examination for all doctors and nurses.
* Reduce the stigma associated with consultating of colleagues for medical attention and counselling.
* Emphasize the dangers of self-medication and "corridor" consultations in the curriculum of medical and nursing schools.
* Reduce the stressful nature of job by teaching stress management techniques and implementing human resource policies aimed at increasing job satisfaction.

Finally, the low rate of use of both alcohol and tobacco among the professionals studied places them in a good position to promote health among colleagues, patients and the public. The study did not examine the use of sexual intercourse and exercise in health maintenance and this should be investigated.

REFERENCES

1. Davidson, SK and Schattner PL. Doctors' health-seeking behaviour; a questionnaire survey; MJA 2003; **179:** 302–5.
2. Pullen D, Lonie CE, Lyle DM, Cam DE, Doughty MV. Doctors' Health Advisory Service (NSW), Sydney. Med J Aust 1995; **17:** 112.
3. McCall L, Maher T, Piterman L. Preventive health behaviour among general practitioners in Victoria. Aust Fam Physician 1999; **28:** 854–7.
4. Rennert M, Hagoel L, Epstein L, Shifroni G. The care of family physicians and their families: a study of health and help-seeking behaviour. Fam Pract 1990; **7:** 96–9.
5. National Institute of Occupational Safety and Health. Guidelines for Protecting the Health and Safety of Health Care Workers September, 1988 DHHS (NIOSH) Publication No 88–119. http://www.cdc.gov/niosh/88-119.html .
6. Samkoff JS, Hockenberry S, Simon LJ, Jones RL. Mortality of young physicians in the United States, 1980–1988. Acad Med 1995; **70:** 242–4.
7. Kay M, Mitchell G, Clavarino A, Doust J. Doctors as patients: a systematic review of doctors' health access and the barriers they experience. Br J Gen Pract 2008; **58:** 501–8.
8. Bruguera M, Guri J, Arteman A, Grau Valldosera J, Carbonell J. Doctors taking care of their own health. Results of a postal survey. Med Clin (Barc) 2001; **117:** 492–4.
9. Bolsover, GN BMJ. Doctors are unsympathetic to colleagues who are psychologically vulnerable. BMJ 2000; **321:** 635–6.
10. Lindo JL, McCaw-Binns A, LaGrenade J, Jackson M, Eldemire-Shearer D.Mental well-being of doctors and nurses in two hospitals in Kingston, Jamaica. West Indian Med J 2006; **55:** 153–9.
11. Goldberg DP. The detection of psychiatric illness by questionnaire. Maudsley Monograph No 21, Oxford: University Press 1972.
12. Planning Institute of Jamaica (PIOJ) (2004). Economic and Social Survey of Jamaica, April 2003. *http://www.pioj.gov.jm/piojdocs/reports.asp?catid=3&scatid=2.*
13. University Hospital of the West Indies Monthly Report March 2008. Patients Affairs Office, Medical Records and Statistics Department.
14. Goldberg DP, Williams P. In: A Users Guide to the General Questionnaire, Windsor: NFER-Nelson; 1998.
15. Harding TW. Validating a method of psychiatric case identification in Jamaica. Bull World Health Organ 1976, **54:** 225–31.
16. Sutherland VJ, Cooper CL. Identifying distress among general practitioners: predictors of psychological ill-health and job dissatisfaction. Soc Sci Med 1993; **37:** 575–81.
17. Baldwin PJ, Dodd M, Wrate RM. Young doctors' health–II. Health and health behaviour. Soc Sci Med 1997; **45:** 41–4.
18. Kahn KL, Goldberg RJ, DeCosimo D, Dalen JE. Health maintenance activities of physicians and nonphysicians. Arch Intern Med 1988; **148:** 2433–6.
19. Rosvold EO, Bjertness E. Illness behaviour among Norwegian physicians. Scand J Public Health 2002; **30:** 125–32.
20. Clarke J, O'Sullivan Y, Maguire N. A study of self-care among Irish doctors. Ir Med J 1998; **91:** 175–6.
21. Uallachain GN. Attitudes towards self-health care: a survey of GP trainees. Ir Med J 2007; **100:** 489–91.
22. Thompson WT, Cupples ME, Sibbett CH, Scan DI Bradley T. Challenge of culture, conscience, and contract to the general practitioners' care of their own health: qualitative study. BMJ 2001; **323:** 728–31.
23. Figueroa JP, Fox K, Minor K. A behaviour risk factor survey in Jamaica. West Indian Med J 1999; **48:** 9–15.
24. Figueroa JP, Ward E, Walters C, Ashley DE, Wilks RJ. High-risk health behaviour among adult Jamaicans. West Indian Med J 2003; **52:** (**Suppl 3**): 37.
25. McAuliffe WE, Rohman M, Breer P, Wyshak G, Santangelo S, Magnuson E. Alcohol use and abuse in random samples of physicians and medical students. Am J Public Health 1991; **81:** 177–82.
26. Nelson DE, Giovino GA, Emont SL, Brackbill R, Cameron LL, Peddicord J et al. Trends in cigarette smoking among US physicians and nurses. JAMA 1994; **271:** 1273–5.