

RECOGNIZING STRESS IN POSTGRADUATE MEDICAL TRAINEES

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Postgraduate trainee doctors are receiving increasing attention, as it is perceived that excessive levels of stress may cause dissatisfaction, low morale and poor work performance.¹ Doctors do suffer from high levels of psychological disturbance. The level of reported minor psychiatric morbidity ranges from approximately one-third for medical students and postgraduate trainee doctors entering their training programs, to over half for doctors who have become medical consultants and general practitioners.²⁻⁷

Unfortunately, there are some myths about the medical profession which ascribe to the notion that doctors are not at risk from stress, that they do not get sick, and that if they do, then help is readily available to them.⁸ Doctors at all levels are human, therefore, they are bound by the same limitations and frailties as their patients. As carriers of patients' anxieties, they expend an enormous amount of emotional energy dealing with the wishes of these patients, often neglecting their own needs.⁹

The attitude that postgraduate medical trainees should be "men of steel" still persists in many medical training centers.¹⁰ At all levels, the medical profession fails to discuss stress with colleagues, while peers prefer to ignore obvious symptoms of distress to their fellow medical practitioners.¹¹ Medical trainees are often not supported in times of professional stress, and if they express their emotions, they often find that they suffer intolerance and humiliation from senior medical colleagues.¹² It has been shown that distressed doctors and trainee doctors are associated with impairment in the areas of clinical judgement and technical skills that can lead to negligence.^{13,14} In a study of 171 senior house officers in 27 UK hospital emergency departments, trainees with high psychological distress scores demonstrated low confidence scores in 35 clinical and practical activities.¹⁴ Long-term outcomes of distress are many, and overseas medical

(SCHS) is of recent origin. While doctor stress has been widely reviewed overseas, there is little information published about Saudi Arabian postgraduate medical trainees' levels of minor psychiatric morbidity distress and the implications for educational, professional and personal success. Most studies into doctor minor psychiatric morbidity have been conducted in Western health institutions, therefore, it is unknown what influences Middle Eastern organization, culture and practice have on both prevalence of minor psychiatric morbidity and its long-term outcomes. One limited study conducted at a Riyadh teaching hospital suggests a prevalence of minor psychiatric morbidity of 25%, which is far lower than the 50% found in Western medical consultant counterparts. Unfortunately, the response rate of 52% may have led to a high non-response bias, and the study was not of postgraduate medical trainees.^{5,6,17}

This study describes the prevalence of minor psychiatric morbidity among postgraduate medical trainees in a Saudi Arabian teaching hospital, using the General Health Questionnaire 28 (GHQ 28) with the cut-off point of 5/6. If the prevalence of minor psychiatric morbidity is similar to overseas studies, the information should encourage the relevant health and education authorities to seek solutions to the potential unmet health needs of postgraduate medical trainees.

Methodology

A questionnaire survey was undertaken in August 1998, which requested all postgraduate medical trainees attached to the SCHS, King Fahad National Guard Hospital (KFNGH), Riyadh, to participate in a confidential survey. The trainees were informed that the survey aimed to measure the prevalence of minor psychiatric morbidity of medical trainees. One hundred and four medical trainees were identified, of which 13 were excluded from the study, as they were not present in the hospital for the one-month survey period due to work rotation or holidays.

The questionnaire was based on the GHQ 28, written in

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practitioner studies have demonstrated increased substance abuse, marriage breakup and suicide rates.^{15,16}

The postgraduate training specialty programs under the supervision of the Saudi Council for Health Specialties

TABLE 1. Demographic and training characteristics of doctors in training (KFNGH 1998).

Mean age (years)	28.9±2.0
Male	76.0
Married	73.3
Children ≥1	56.0
Graduation KSA	100.0

Training specialty	
Family Medicine	33.3
Pediatrics	20.0
Internal Medicine	17.3
Surgery	16.0
Obstetrics & Gynecology	13.3
Level of experience	
Resident 1	26.7
Resident 2	21.3
Resident 3	28.0
Resident 4	20.0
Resident 5	4.0
Board Part One completed	52.0
Other medical qualification	9.3

Values are percentages unless otherwise stated (N=75).

TABLE 2. Training specialties by prevalence of minor psychiatric illness of doctors in training (KFNGH 1998).

Pediatrics	47.0
Surgery	50.0
Family Medicine	52.0
Obstetrics & Gynecology	60.0
Internal Medicine	93.0

Values are percentages unless otherwise stated (N=75).

TABLE 3. Comparison of characteristics between distressed and non-distressed doctors in training (KFNGH 1998).

Characteristics	Non-distressed doctors (n=31)	Distressed doctors (n=44)	P-value
Mean age (years)	29.5±1.8	28.5±2.1	NS
Male	90.3	65.9	≤0.026
Married	77.4	70.5	NS
Children ≥1	54.8	56.8	NS
Graduation KSA	100.0	100.0	NS
Level of experience			
Resident 1 and 2	48.4	52.2	NS
Board Part One completed	58.0	47.7	NS
Other medical qualification	16.1	4.5	NS

Values are percentages unless otherwise stated (N=75).

both English and Arabic. It has been validated in different cultures, countries and classes of the community as a screening instrument that measures minor psychiatric illnesses with a sensitivity and specificity of 80%.^{18,19} The cut-off threshold of 5/6 was selected, as recommended by Goldberg, and to allow compatibility with similar medical practitioner studies.²⁻⁷

A pilot study was conducted on 10 service resident doctors to test ease of completion and face validity. These results were not included in the study. The questionnaire did not need modification. The questionnaire, with an invitation letter, was forwarded by hospital internal mail to the 91 eligible doctors. Ten days later the principal researcher contacted the non-responders by telephone and in person to assist with completion of the questionnaire.

The data, once collected, was verified by hand and entered by double entry into Epi Info 6.04 software for analysis.²⁰ The data was subject to univariant and bivariate analysis. Proportions were measured for significance,

using chi-squared test or Fisher's exact test, while the Student's *t*-test was applied to the mean values. Significance was measured at the level of $P=0.05$.

Results

Ninety-one questionnaires were sent out and 75 were returned following telephone reminders and personal interview. The response rate was 82.0%, and the respondents fully completed all questions in the questionnaire.

Characteristics

The mean age of the medical trainees at KFNGH was 28.9±2.0 years. The majority (76.0%) were male and married (73.3%), while over half (56.0%) had at least one child. All the participants were graduates from the Saudi Arabian universities.

The percentages of medical trainees from the training specialties of Family Medicine, Pediatrics, Internal Medicine, Surgery and Obstetrics and Gynecology were 33.3%, 20.0%, 17.3%, 16% and 13.3%, respectively. All medical trainees were participating in the SCHS four-year training program, while three doctors designated as Trainee V had completed the postgraduate program and were waiting to participate in the annual SCHS Part II examinations. Twenty doctors (26.7%) were in the first year of training while the number of 2nd-, 3rd-, 4th- and 5th-year medical trainees were 16 (21.3%), 21 (28.0%), 15 (20%) and three (4%), respectively. Fifty-two percent of participants had completed the SCHS Part 1, while 9.3% of the doctors in training held additional medical qualifications such as Diploma of Child Health, Diploma of Aviation Medicine and Fellow of the Royal College of Surgeons (FRCS) (Table 1).

Minor Psychiatric Morbidity

The prevalence of minor psychiatric illnesses among participants was 59%, using the GHQ 28 with the standard cut-off point of 5/6. Within each training specialty, the proportion of medical trainees with recorded minor psychiatric morbidity ranged from a low 47% for Pediatrics to a high 93% for Internal Medicine. The specialties grouped into three clusters with Pediatrics, Surgery and Family Medicine, with a prevalence 47%, 50% and 52%, respectively. The specialty of Obstetrics and Gynecology showed the next highest prevalence of 60%, while Internal Medicine had a prevalence of 93% (Table 2).

When a comparison was made between the medical trainees' recording of minor psychiatric morbidity GHQ 28 and the other medical trainees, there was no statistical difference for any of the characteristics except being female (Fisher's exact test, $P\leq 0.026$). Thirty-four percent of female medical trainees constituted the minor

psychiatric morbidity group compared to 9.7% female medical trainees in the non-distressed group (Table 3).

Discussion

The medical trainees scored an overall prevalence of 59% for minor psychiatric morbidity, considerably higher than that reported internationally for medical students, trainee doctors and the general medical working populations.^{2,7} In a study of UK medical consultants, general practitioners and senior health administrators during the recent stressful transformation of their National Health Service, Caplan found the level of minor psychiatric morbidity to be 48%, which was considered excessively high.⁶ This level is similar to that of the specialty training in Family Medicine, Pediatric and Surgery, the three lowest levels found in this study. Specialty training in Obstetrics and Gynecology is above this level, while Internal Medicine specialty training indicates that almost all the doctors in training were distressed. A high level of minor psychiatric morbidity in the specialty of Internal Medicine has been noted in senior residents elsewhere. It has been suggested that the probable cause is the high number of acute admissions and the increased number of call-outs leading to the fewest hours of uninterrupted sleep when compared to other specialties.²¹

The association of being a female and a higher level of minor psychiatric morbidity was demonstrated in our study. The higher prevalence of stress of Saudi female medical trainees is similar to studies overseas where it has been shown that female medical trainees experience more stress from conflict between career and home than male trainee doctors during postgraduate training years.²² Once graduated, however, the situation is reversed, as vocationally trained female medical practitioners have been shown to have higher levels of job satisfaction and signs of positive mental levels when compared to their male medical counterparts.²³

Failure to resolve medical trainees' distress in the long term can have serious professional and personal consequences. Distress has been shown to be correlated in a lack of confidence in performing clinical and practical procedures by medical trainees, which can lead to increased patient care error.¹⁴ While Middle Eastern culture and practices may modify long-term outcomes for distressed doctors, in Australia, it was found that 19% of doctors admitted to marital disharmony, 18% to emotional disorders, 3% to alcohol problems, and 1% to drug abuse related to long-term distress.²⁴ The final outcome of clinical depression and its associated consequences have been shown to be more prevalent among the medical profession compared to the general population where it has been studied.^{8,24}

The causes of distress in medical trainees are clearly complex. There are two potential areas for explanations,

which lead to possible interventions. Doctors are described to have the personality traits of obsession, self-doubt, guilt, excessive fear of failure, excessive fear of making mistakes, and an exaggerated sense of responsibility.²⁵ In a longitudinal study of medical students, subsequently reviewed as doctors 10 years later, Firth-Cozens showed that a strong correlation existed between highly self-critical students and subsequent high levels of stress in doctors.²⁶ Blatt and Zuroff supported this finding, showing that high self-criticism, striving for achievement, and a strong fear of criticism are associated with depression.^{27,28} Self-criticism, a cogitative way of thinking, is subject to counseling interventions. A counseling and educational prevention strategy aimed at preventing unnecessary stress may help highly self-critical medical trainees.²⁶ In addition, burnout has been found in doctors who felt they were insufficiently trained in communications and management skills.²⁸ Communication and management skills can be developed within undergraduate and postgraduate medical programs.

The second area of explanation is the relationship of medical trainees' stress to the clarity of goals and the level of standards of hospital management, medical team organization, consultant supervision, education and feedback. In the UK, the working hours of trainee doctors have been reduced, but recent studies have shown that the stress levels are still high. The number of hours worked has been found not to be the source of stress, but instead, the limited amount and quality of sleep.²⁹ Patient care provided by medical trainees, based on prolong periods of on-call schedule and broken sleep, seems to be one of the underlying causes of high stress. Good medical team and hospital management practice could lead to postgraduate medical trainees having adequate unbroken sleep, and thus decreasing levels of stress.

Consultant time dedicated to supervision and training, including feedback and appraisal, has been shown to improve satisfaction of trainee doctors with their training post.³⁰ The combination of membership with an organized medical team and clearly defined goals, tasks and the role of the medical trainees, has been shown to reduce stress in medical trainees and increase team performance.³¹

What proactive programs could health and education authorities establish to support doctors in their postgraduate training? The components of a program to be considered are as follows:³²

- Further develop postgraduate training programs which promote individual skills in stress management, collegiate problem solving, accepting constructive criticism, improved communication and management for both the consultant staff and trainees.
- Create training and work policies which encourage and develop supportive well-organized medical teams and work environments.
- Establish within each discipline an individual Mentoring Program for trainees and consultants aimed

at maximizing not only professional learning but also professional growth for the doctor.

- Promote help-seeking behavior by expecting all medical trainees to have their own personal doctor from whom they would seek confidential advice early when “in trouble” or ill.
- Establish a freely available Doctor Health Service based on confidentiality, which is supported by experienced medical practitioners who treat medical consultants and trainees as patients, not as colleagues.

The medical trainees attached to the Saudi Council for Specialty Postgraduate program are the long-term future of the medical profession and the health services throughout Saudi Arabia. Significant human and financial support is invested in their training, therefore, much will be expected of them in their contributions towards the improved health of the Saudi Arabian community in the near future. The high prevalence of minor psychiatric morbidity in a relatively well-resourced tertiary hospital should be of concern, especially if these findings are found to be reproducible in other postgraduate medical programs. Health and education authorities should encourage a national study of all trainees in all national medical training programs to define the extent of minor psychiatric morbidity, and identify the underlying causes and possible interventions that could alleviate the potential problems of the impaired doctor in the future.

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