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THE MENTAL HEALTH OF NEWLY GRADUATE DOCTORS IN MALTA

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SUMMARY

Background: *Several studies have shown high rates of psychiatric morbidity in young doctors at various stages of their training (Paice, et al. 2002, Levine et al. 2006). Migration is also known to have an impact on emotional wellbeing (Bhugra 2004). Foreign doctors in Malta now make up over 30% of the junior doctor cohort. This is a new situation for trainers here.This study was carried out in part fulfillment of the requirements for the completion of Specialist Training in Psychiatry in Malta. This article focuses on the first part of the study: the quantitative analysis aimed to answer the following questions: 1. What are the rates of mental health problems amongst recently qualified doctors? 2. What are the factors associated with the increased rates of mental distress?*

Subjects and methods: *A quantitative cross-sectional analysis was carried out by means of self-report questionnaire including demographic details and the General Health Questionnaire-28 (GHQ-28) (Goldberg 1972). This study was approved by the Health Ethics Committee (HEC23/12).*

Results: *117 (78.5%) of junior doctors participated in this study. 70.9% were Maltese. 49.4% were found to have GHQ-28 scores of more than 6, indicating significant psychological distress. Further analyses revealed that lack of leisure time ($p<0.001$), uncertainty ($p=0.009$), migration ($p=0.03$) and being female ($p=0.04$) were significantly related to caseness.*

Conclusion: *As trainers and supervisors in medical education, it is important to be aware of the difficulties that young doctors face. These may include psychological distress, significant enough to reach caseness. Lack of leisure time seems to be an important factor which is possibly an area that can be easily tackled.*

Key words: *stress – anxiety – depression - junior doctors - migration*

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INTRODUCTION

Several studies have shown high rates of psychiatric morbidity in young doctors at various stages of their training (Paice et al. 2002, Levine et al. 2006). Mental health problems (especially depression) were found to occur most commonly in the first post-graduate year (Tyssen & Vaglum 2002). Being overworked, talking to distressed relatives and serous treatment failures were factors found to be associated with stress (Firth 1986). The European Working Time Directive (EWTD) came into force in Europe in August 2009, affecting doctors in training by limiting the average working week to 48 hours. Despite this, surveys in the UK have showed that, because of the pressure to work overtime or fill rota gaps, doctors work more than 56 hours a week (Editorial, The Lancet 2010). The EWTD was implemented to improve health and safety of both doctors and patients, by decreasing risks posed by overworked medical staff. Despite these restrictions and changes, psychological morbidity among doctors in training remains high (Sen et al. 2010) and clinical symptoms have been known to be severe enough to cause worsening of quality of life (Hassed et al. 2009) and even trigger death wishes and suicidal thoughts (Alexandrino-Silva et al. 2009).

Migration is also known to have an impact on emotional wellbeing (Bhugra 2004). Its psychological and biological effects and implications depend on the nature, scale and reasons for migration. These effects are varied, occurring on the population of origin, on the inhabitants of the recipient area and on the migrant themselves. The relationship between migration and mental health is very complex (Bhugra 2005). The concept of cultural distance reflects the dissimilarities between cultures, including aspects such as language, religion, values, the status of women, individualism-collectivism, attitudes to authority, forms of government, the legal system etc. (Berry et al. 2002, Ward et al. 2001).

A qualitative study (Camilleri 2006) entitled: "Stress and Coping in Junior Doctors" found that: junior doctors experienced a high level of stress and found difficulties in coping, especially in the initial phase of their work. The stressors identified were mostly intrinsic to the nature of their work and to their working environment. Since then the Foundation Program was developed. This two-year program has brought with it a better structure and change. In 2009 only 4% of recruited house-officers were foreign. This increased to 14.8% in 2010. The group recruited in 2011 (to start work in July 2012), consisted of 31 foreign doctors making up 36.5% of the cohort (data obtained from the Foundation Programme Statistics).

This study was carried out in part fulfillment of the requirements for the completion of Specialist Training

in Psychiatry in Malta. This article focuses on the first part of the study: the quantitative analysis aimed to answer the following questions:

- What are the rates of mental health problems amongst recently qualified doctors?
- What are the factors associated with the increased rates of mental distress?

Thus,doctors' pre-registration years have been known to be a time of high stress, so identifying the rates of mental distress and understanding the factors that contribute to it is important. As a future trainer and supervisor, it is important to be aware of the difficulties these young doctors face.

SUBJECTS AND METHODS

Sample population

The population included all doctors in the Foundation Training Programme (years 1 and 2) – including those originally from Malta, and those who have migrated to Malta. Meetings with the relevant authorities were held, and permission was granted by the Health Ethics Committee (Ref: HEC23/12) and also by the Foundation Programme directors. Doctors have one lecture per week. Participants were recruited during this lecture. A short explanation was given on the research being conducted. Each doctor was given an information leaflet and consent form. There were no exclusion criteria.

Methods

For the quantitative analysis a self-report questionnaire was filled out by participants. Psychological symptoms were measured using the General Health Questionnaire (GHQ-28), which asks about current levels of stress-related psychological symptoms (Goldberg 1986). For identifying caseness the total of the subscales is used. A threshold level of 6 or more indicates significant psychological distress (Goldberg 1972). This cut-off point was used in this study, to be consistent with what is recommended by the author. The GHQ-28 has been extensively tested and used in various cultures and translated to various languages. It shows good validity results, with a sensitivity of 86% and a specificity of 80%. (Tamopolsky 1979).

Procedure and statistics

All data was imputed into the statistical programme SPSS®. Descriptive analysis was carried out. Following this, analysis was carried out to look at differences and relationships between groups. Analysis of two categorical variables simultaneously was analysed using Chi-Squared analysis. A logistic regression analysis was carried out. The dependent variable was "caseness" indicating significant psychological distress (derived from the GHQ-28 score).

RESULTS

Description of Main Sample

In February 2013 there were 149 doctors registered with the Foundation Training Programme in Malta. 117 (78.5%) participated in this study. Half the participants were in first year, and half were in second year. 53.4% (n=55) were male. The mean age for the group was 25 (ranging from 23 to 34). For the purpose of analysis the group was divided into less than 25 years (n=67, 57.3%) and more than 25 years (n=50; 42.7%).

70.9% (n=83) of participants were originally from Malta. A few doctors had attended university in Malta, and therefore had not migrated recently. In all, 30 doctors had migrated purposely for the Foundation Training Course (maximum 18 months before).

Of the first year doctors 13 out of 59 (22%) had recently migrated to Malta compared with 17 out of 58 (29.3%) of the second year doctors. This difference in the proportion of migrating doctors was not found to be significant ($\chi^2(1)=0.81$, p=0.37).

Rates of psychological distress

As described in the methods section, psychological distress was assessed using the GHQ-28. Of 117 participants, 49.4% (58) were found to have GHQ-28 scores greater than 6 which indicated significant distress. The mean GHQ-28 score was 7.13 (SD+/-6.12). See Figure 1 for the distribution of the GHQ scores.

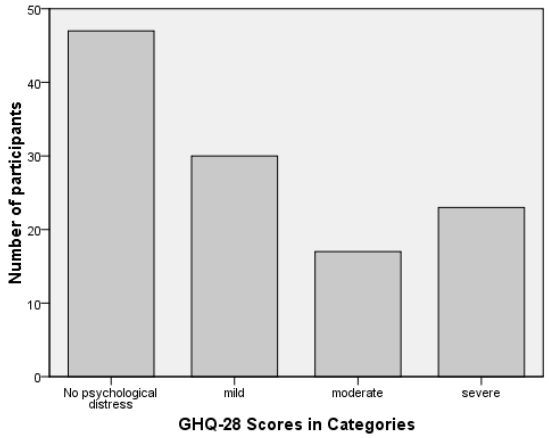

Figure 1. Graph displaying distribution of GHQ-28 scores. Scores are divided into categories: 0-4 indicating no psychological distress, 5-8 indicating mild psychological distress, 9-12 moderate and more than 12 severe psychological distress

Factors associated with the increased rates of mental distress

Categorical data was analysed to examine the association between various factors and "caseness" (those that had GHQ-28 scores indicating significant distress). Chi-Squared analysis was carried out.

Table 1. Crosstab displaying association between variable and "caseness"

			GHQ-Score		Total	$\chi^2(1)$	p-value
			No case	Caseness			
Foundation Year	1st Year	Count	33	26	59	1.44	0.23
		Percentage	55.9%	44.1%	100.0%		
	2nd Year	Count	26	32	58		
		Percentage	44.8%	55.2%	100.0%		
Migrated in last 2 years	Yes	Count	10	20	30	4.72	0.03*
		Percentage	33.3%	66.7%	100.0%		
	No	Count	49	38	87		
		Percentage	56.3%	43.7%	100.0%		
Gender	Male	Count	32	23	55	4.39	0.04*
		Percentage	58.2%	41.8%	100.0%		
	Female	Count	18	30	48		
		Percentage	37.5%	62.5%	100.0%		
Age Group	<25	Count	37	30	67	1.44	0.23
		Percentage	55.2%	44.8%	100%		
	≥25	Count	22	28	50		
		Percentage	44.0%	56.0%	100%		
Are you religious?	Yes	Count	53	49	102	0.41	0.52
		Percentage	52.0%	48.0%	100%		
	No	Count	6	8	14		
		Percentage	42.9%	57.1%	100%		
Stable relationship?	Yes	Count	24	27	51	0.41	0.52
		Percentage	47.1%	52.9%	100%		
	No	Count	35	31	66		
		Percentage	53.0%	47.0%	100%		
Do you know where you will be in one year?	No	Count	7	15	22	3.75	0.05*
		Percentage	31.8%	68.2%	100%		
	Yes	Count	52	43	95		
		Percentage	54.7%	45.3%	100%		
Do you feel you have enough leisure time?	No	Count	32	53	85	20.31	<0.001*
		Percentage	37.6%	62.4%	100%		
	Yes	Count	27	5	32		
		Percentage	84.4%	15.6%	100%		

*found to be significantly significant

More participants had psychological distress in second year of foundation training, but the difference between first and second year was not significant (p=0.23). Interestingly to note there are significantly more people who migrated in second year and migration was found to be significantly related to caseness (p=0.03). Females were significantly more likely to reach caseness than males (p=0.04). Doctors that migrated were significantly older than those who did not migrate, but age was not significantly related to caseness (p=0.23). Neither being religious nor being in a stable relationship was found to be significantly related to caseness (both with p-values of 0.52). Doctors were asked if they knew where they would be geographically in one, two, three or four years' time. This uncertainty was deemed to be a significant factor in contributing to stress, and was in fact found to be significantly related to caseness (p=0.05) with chi-squared analysis. Uncertainty was also analysed as a continuous variable. A non-parametric test (Indipendent T, Mann-Whitney-U Test) was carried out to examine the relationship between uncertainty (the continuous variable) and caseness. These were found to be strongly associated with a p-value of 0.009, reinforcing the rejection of the null hypothesis. Those with no psychological distress had a mean score for future geographical certainty of 2.10 (95%CI: 1.74-2.46); and those with psychological distress had a mean score of future geographical certainty of 1.45 (95%CI: 1.11-1.78). Similarly, not having enough leisure time was also found to be strongly associated with caseness (p<0.001).

Logistic Regression Analysis

A logistic regression analysis was carried out on the sample explaining caseness. The multi-level models are able to examine relative contribution of the variables towards outcome variation. The variables that were inputed were gender, uncertainty, leisure time and migration. These were the variables that were found to be significantly associated with caseness and thought to be hypothesised as predictors for stress and anxiety. The

forward step-wise Wald method was used, with n=103. This resulted that it was lack of leisure time ($p<0.001$; Wald =16.783; B=2.43) and uncertainty ($p=0.003$; Wald =8.901; B=0.52) that predicted caseness in the whole population.

DISCUSSION

The population in question has a number of unique characteristics. These are doctors, who have recently come out of a very stressful and long course lasting at least 5 years. They are in a transition phase, from student to doctor, but are both at the same time. As such, studies looking at this type of population are few.

A study also using the GHQ-28, involving Nigerian medical students, found that 29% reached caseness (Olifi et al. 2009). A number of studies by different groups were carried out in Iran with nurses showing 45.4% caseness and medical students in Tehran reaching 40.7% caseness (specifically females 45.7%, male 36.7%). When looking at three generations of medical students, interns and doctors rates were 44% with students and interns being worse off than GPs. (Assadi et al. 2007).

In Saudi Arabia, a research group (Al-Sughayr & Ferwana 2012) examined high school students using the GHQ-28, and showed rates of 48%- similar to the results found in this study. These graded the severity of the illness with further cut-off point scores for the GHQ-28, though these have not been validated to our knowledge. Those who performed well academically showed lower rates of mental disorder. An Australian prospective longitudinal study also used the GHQ-28, but used the cut-off of four (the lowest of the conventional case identification scores) to determine psychiatric morbidity. In this study; Willcock, Daly, Tennant and Allard (2004) report that, the incidence of psychiatric morbidity among medical graduates can be reliably estimated at 70%. They reported that the GHQ-28 score increased significantly over the time of their study.

The local study carried out by Camilleri (2006), aimed to understand the experience of stress, the sources of stress and the ways of coping in the same participant group. She found that junior doctors experienced a high level of stress, and at times found difficulties in coping, especially in the initial phase of their work. She reported that stressors that were intrinsic to the nature of their work and the working environment were the main contribution to their stress. These included factors such as responsibility, supervision and mentoring, uncooperative staff and working conditions.

Therefore this study adds to what Camilleri (2006) found: confirming the high levels of psychological distress among newly graduate doctors with a rate of 49.4% for a GHQ-28 score greater than 6.

This study also attempted to identify factors associated with mental distress during medical internship. From the quantitative part of the study, lack of leisure time, uncertainty, migration and gender were found to be significantly associated with psychological distress.

Small (1981) described factors that could contribute to the development of House Officer Stress Syndrome (described below) and these included: excess workload, sleep deprivation, patient-care responsibility, perpetually changing work conditions and competition.

Similarly, the Resident Service Committee of the Association of Program Directors in Internal Medicine (APDIM) (1988) divided the common stressors into three categories: situational, personal and professional. The situational stressors included long working hours, being deprived of sleep, being overworked and conditions for learning that were sub-optimal. Personal stressors included interpersonal conflicts (especially familial), financial issues and a lack of time to relax or develop new support systems. Relocation away from family and friends was also noted to be a stressor. Professional stressors included responsibility for patient care, having difficult patients or problems and career planning.

Overwork and lack of leisure time

Lack of leisure time was found to be the most significant factor associated with psychological distress. Being overworked, or not having enough leisure time is a reason that doctors have cited for leaving medicine altogether (Moss et al. 2004). How having a lack of leisure time can have a negative effect on ones' life is easy to see, however the effects specific to doctors may be somewhat more far-reaching.

Doctors are possibly more perfectionistic, and have excess concern for academic achievement. This may be what helps them succeed in the first place. Drive and ambition determine their activities, and this usually decreases leisure activities and time. The characteristic of maladaptive perfectionism has been found to be significantly correlated with baseline symptoms of neuroticism, and this has been found to be predictive of depression, with predominant feelings of hopelessness (Hays et al. 1996). Coping strategies include support from families, spending time with friends, exercise and recreational activities. There are all viewed as leisure activities. Therefore ensuring leisure time can be viewed as a way of coping, which would decrease distress.

A Swiss study (Biaggi et al. 2003) make clear recommendations for reduction in work intensity and workload, as factors that cause emotional exhaustion and aversion to patients in residents. They also posit that it is also the leadership and management style that needs to be amended by increasing social support from superiors as well as increasing a culture of openness and tolerance, as this has a direct effect on the strain the doctors feel. They report that it is not the work hours per se that put pressure on the doctors, but the lack of leisure time. Therefore the issue is about management of time off rather than of overtime.

Uncertainty

Doctors at this stage in their career have to take some important decisions – namely the area that they wish to specialize in. This of course, requires that they apply for a job in the chosen area. The doctors who are EU nationals undergo and application and selection process which can be quite competitive. The doctors who are not EU nationals are not eligible to apply for these jobs, and therefore have to move on, usually to another country. The results of this study showed that firstly, uncertainty was significantly related to caseness (p=0.009).

Migration and Minority Groups

Migration in itself was found to be related to psychological distress (p=0.03). Approximately 30% of young doctors in house-officer jobs in Malta are foreign, having to migrate to Malta to begin their two year job. This has increased over the years, and since the introduction of the Foundation Training Program. The administration has started to provide added support with introductory meetings at the beginning of the year. This situation is relatively new for Malta, but has been happening for much longer in other countries. In 2007 in the USA, 26% of all physicians were international medical graduates (IMGs). The American Medical Association (2010) published a paper on the facts and issues surrounding the IMGs. It was reported that IMGs are more likely to serve in medically underserved areas. These may be busier with even less resources. These individuals bring unique perspectives and experiences that enrich the educational process however IMGs tend to face a unique set of challenges in getting residency positions in the US, securing legal immigration status and finding the right job.

Migration in itself is a complex phenomenon. The effects of migration depend on the nature, scale and reasons for migration (Bhugra 2005). It is known that distress is increased when individuals migrate alone, leaving their loved ones at home. Lack of emotional support and the difficulties associated with long distance relationships exacerbate distress (Bhugra 2004).

Gender Differences

Women tend to report higher levels of stress while in their internship or house officer years than men. Problems and causes reported for women are: isolation and anxiety related to role stress, loneliness and depression, and the problems balancing a family and career (Nadelson & Notman 1983, Eliot & Girard 1986, Firth-Cozens 1990). Firth-Cozens also observes that women experience more prejudice emanating from both patients and staff (with nurses in particular). Elliot and Girard relate the elevated rates of depression and loneliness in female doctors to having to function in a male-dominated profession, having few role models, and being "out of synchrony" with peers outside the medical profession who are starting a family, while the female doctor pursues training and delays childbearing. Firth-Cozens also relates how in the first post-graduate year it becomes clear that medicine is not organized in a way that allows female physicians' part-time opportunities without affecting their final career plans. As a result, female young doctors face professional demands that may conflict with personal goals, demands that their male counterparts do not face.

In this study, being female was found to be related to psychological distress (p=0.04).

The limitations of the study

The data to be analyzed is based on self-report and therefore a bias may exist. The trainees may be tempted to over-report, or perhaps under-report.

CONCLUSION

In conclusion, we need to continue to be attentive to the well-being of young doctors particularly in the face of new jobs and transitions (especially those who migrate) and in busy placements. We as trainers should continue to strive to provide the coping skills to deal with stress throughout their career. Addressing and maintaining one's mental health and well-being should become a lifelong focus for all young doctors.

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