

# Prevalence and risk factors for psychiatric morbidity among tertiary hospital consultants in Nigeria

**A D Yussuf**, MB BS, FMCPsych

Department of Behavioural Sciences, College of Medicine, University of Ilorin, Nigeria

**O R Balogun**, MB BS, FWCOG

Department of Obstetrics and Gynaecology, College of Medicine, University of Ilorin, Nigeria

**S A Kuranga**, MB BS, FWACS, FICS

Department of Surgery, College of Medicine, University of Ilorin, Nigeria

*Objective.* To determine the prevalence of psychiatric morbidity among consultants in a tertiary health care institution in Ilorin, Nigeria, and the sociodemographic and work characteristics that may be associated with poor mental health.

*Method.* This was a cross-sectional study involving use of the 30-item general health questionnaire (GHQ-30) and a questionnaire on sociodemographic/work-related factors.

*Data source.* Consultants in the employ of the University of Ilorin Teaching Hospital.

*Data analysis.* Data were analysed using the Statistical Package for Social Sciences version 11.0 (SPSS 11.0). Frequency distribution, cross tabulation, and chi-square analysis were obtained, with level of significance set at 5%.

*Result.* Fifty-four consultants responded satisfactorily to the questionnaires (response rate 69.2%); 10 (18.5%) scored 4 and above on the GHQ-30 (i.e GHQ-positive) and were therefore considered to have psychiatric morbidity. No socio demographic or work-related factors had any significant association with morbidity.

*Conclusion.* Teaching hospital consultants are as likely as any other occupational group to develop psychological morbidity, possibly owing to the role of inherently dominant

factors. Regular organisation of stress management workshops/seminars and hospital management-consultant interactive forums is advocated.

The Nigerian health sector has recently been fraught with incessant crises occasioned by shortage of funds, poor remuneration, lack of job satisfaction, lack of state-of-the-art equipment, and dearth of personnel.<sup>1-3</sup> Therefore the working life of doctors in the country seems characterised by frustration, anxiety and anger, coupled with increasing patient load which inevitably translates to increased work demands. All these factors could impact on the psychological wellbeing of doctors.

## Prevalence of psychiatric morbidity among non-health care occupational groups

Stress and stress-related problems that may be consequent upon one's job appear to be on the increase in many occupational groups. A psychiatric morbidity rate of about 18% was reported among bank employees in Ilorin,<sup>4</sup> with reported psychiatric syndromes of anxiety, depression and neurasthenia found to be associated with number of children, work experience, and number of extra hours worked.<sup>4,5</sup>

Other studies among industrial employees have also reported syndromes of depression, anxiety, neurasthenia, agoraphobia, drinking-related problems, violence and social dysfunction,<sup>6,7</sup> and various factors have been implicated including number of children, social activities, work experience, workload, and number of extra work hours.<sup>4,5,8-10</sup>

## Prevalence of psychiatric morbidity among health care personnel

For obvious reasons there should be general concern about the physical and mental health of health care personnel.

Doctors especially have been reported to be susceptible to work-related distress and the accompanying psychological morbidity.<sup>11</sup> Psychiatric morbidity among hospital workers and especially medical consultants calls for careful consideration as this may reflect personal suffering among doctors, and eventual threat to the quality of patient care and life expectancy of the doctors.

Previous studies have generally reported varying degrees of morbidity among medical personnel. In a study of New Zealand health professionals Downwell *et al.*<sup>12</sup> reported a morbidity level of 10%; in a study of teaching hospital consultants in Benin, Nigeria, Ofili *et al.*<sup>1</sup> reported a morbidity rate of 14%, while Grassi and Magnani<sup>13</sup> found morbidity levels of 20.3% and 24.6% among Italian general practitioners and hospital physicians respectively. In separate studies of different consultants Ramirez *et al.*<sup>14</sup> reported morbidity rates of 27% and 28%, while Catalan *et al.*<sup>15</sup> found a morbidity level of 33% among staff caring for people with HIV infection and cancer. A morbidity level as high as 47% among hospital consultants has also been documented.<sup>11,16,17</sup>

Most studies on doctors have focused on junior doctors, with few studies focusing on senior doctors and specific subgroups of hospital consultants.<sup>16,17</sup> Studies have identified that sources of stress among physicians include uncertainty of diagnosis, work overload and its effect on home life, feeling poorly managed and resourced, dealing with patient suffering, and long work hours. Reported emotional problems have included anxiety, depression, drug dependence, excessive drinking and suicide, with suicide found to be higher among general practitioners than other physician groups.<sup>13,17-19</sup>

However none or very few of these earlier studies investigated all the diverse groups of consultants at teaching hospital level to ascertain possible psychiatric morbidity among them, possible risk factors, and possible differential contribution, if any, of their areas of specialisation. Therefore, the need to know the prevalence of morbidity, and the possible socio-demographic and work-related risk factors in a group of tertiary hospital staff in the north-central zone of Nigeria prompted the present study in the hope of supplementing existing knowledge and assisting our health managers and health policy formulators to prevent increasing mental health problems in the health sector particularly, and by extension, in the other occupational sectors and the general population.

## Materials and methods

### Subjects

The University of Ilorin Teaching Hospital is located in the north-central zone of Nigeria and serves as a referral centre for Kwara, Niger and Kogi states. It is a 450-bed hospital with 11 clinical departments comprising anaesthesia, behavioural sciences (psychiatry), epidemiology (public health), medicine (cardiology, endocrinology, dermatology, gastroenterology, nephrology and pulmonology), laboratory sciences (chemical pathology, haematology, histopathology and microbiology), obstetrics and gynaecology, ophthalmology, otorhinolaryngology, paediatrics, radiology, surgery (general surgery, orthopaedic surgery, neurosurgery, plastic surgery and urology). The ancillary departments include administration, medical records, nursing, pharmacy, security, and engineering (works).

At the time of the study the hospital had 82 consultants, 78 of whom were asked to respond to two questionnaires, one on sociodemographic and work-related factors, and the other the 30-item General Health Questionnaire (GHQ-30).<sup>20</sup>

To prevent biased responses to the screening instrument (the GHQ-30) by psychiatrists, being a psychiatrist was made an exclusion criterion for participation, and 4 consultants were therefore excluded.

All the consultants were initially approached and told about the study. They were informed that similar studies were being conducted among the nursing staff, resident doctors and hospital administrators to ascertain how work conditions impacted on their psychological wellbeing. They were also informed that these studies constituted part of the hospital's strategic health plan which aimed to achieve quality service delivery, enhance staff-management co-operation, improve job satisfaction among all staff, and extend the ongoing national health reform. To ensure honest responses and to allay undue fear, they were further informed that the chief executive of the hospital was involved in the studies. Despite these assurances, however, the general negative attitude towards mental illness and the problem of stigmatisation still hindered the enthusiasm of some consultants with regard to participation. The majority expressed the fear of being labelled mentally ill.

Each consultant was provided with the questionnaires and an accompanying envelope in which to seal them once

completed, and was assured of absolute confidentiality. Consultants were reminded telephonically and by personal contact at the end of the first, second, third, and fourth weeks about the need to return the completed questionnaires.

## Questionnaires

Each consultant was sent a questionnaire booklet that assessed: (i) sociodemographic and work-related characteristics; and (ii) psychiatric morbidity using the 30-item GHQ-30.<sup>20</sup>

The GHQ-30 is a self-administered screening instrument meant to detect current, diagnosable psychiatric disorders in general practice and in a community setting.<sup>4,5,20</sup> Using the GHQ scoring method, a cut-off point of 4 was used in this study in accordance with previous validation studies.<sup>4,6,21,22</sup> Therefore, any respondent with a GHQ-30 score of 4 or more was regarded as GHQ-positive, and therefore as having psychiatric morbidity.

All data were analysed using SPSS for Windows version 11.0.<sup>23</sup> Frequency distributions and cross-tabulations were done, chi-square values were derived using Yates's correction where applicable, and the level of statistical significance was set at 5%.

## Results

### Response rate

Fifty-four of the 78 consultants returned their questionnaires satisfactorily completed, giving a 69.2% response rate.

Of these respondents, 10 (18.5%) were surgeons (comprising general surgeons, paediatric surgeon, neurosurgeon, orthopaedic surgeons, and plastic surgeon), 9 (16.7%) were physicians (comprising pulmonologists, endocrinologist, cardiologists, nephrologist, and gastroenterologist), 8 (14.8%) were laboratory scientists (comprising chemical pathologists, microbiologists, haematologists and histopathologists), 6 (11.1%) were gynaecologists, and there were 5 paediatricians, radiologists and ophthalmologists respectively, each constituting 9.3%. There were 4 epidemiologists (7.4%), and 2 general practitioners (3.7%).

Fifty-two of the consultants (96.3%) had no degrees besides MB BS plus fellowship, and the majority (40, 74.1%) had practised for more than 10 years.

## Sociodemographic characteristics (Table I)

Table I shows the sociodemographic characteristics of the respondents. Most respondents (34/54, 63%) were in the 35 - 44-year age group, 36/53 (67.9%) had 3 - 5 children, and 34/50 (68%) had a preference for reading/watching films as leisure. Most (51/54, 94.4%) reported that they never used substances such as alcohol to cope with their social or work schedules.

## Work-related characteristics (Table II)

Table II illustrates the work-related factors among the respondents. Most (34/54, 63%) reported moderately heavy workloads. The majority of the consultants (41/53, 77.4%) felt that their work did not adversely affect their family

**Table I. Sociodemographic characteristics of UITH consultants**

	N	%
Age (yrs)		
35 - 44 years	34	63
45 - 54 years	16	29.6
> 54 years	4	7.4
Sex		
Male	51	94.4
Female	3	5.6
Marital status		
Single	1	1.9
Married	51	94.4
Divorced/separated	2	3.7
Number of children (N = 53)		
< 2	15	28.3
3 - 5	36	67.9
> 5	2	3.8
Leisure activities (N = 50)		
Reading/watching films	34	68
Outdoor games	5	10
Visiting friends/family	11	22
Social activities		
Active	19	35.2
Passive	35	64.8
Religious activities		
Active	45	83.3
Passive	9	16.7
Past treatment		
Yes	2	3.7
No	52	96.3
Treatment of relatives		
Yes	12	22.2
No	42	77.8
Use of substances		
Very often (daily)	1	1.9
Occasionally (monthly)	2	3.7
Not at all	51	94.4



life, and over half of them (32/54 or 59.3%) perceived their jobs to be satisfying.

Nineteen of 48 consultants (39.6%) had been promoted 3 - 5 years previously, and 25/53 (47.2%) felt that their remuneration was not commensurate with their work.

**Table II. Work-related factors among UIITH consultants (N = 54)**

	N	%
Job experience (yrs)		
< 5	4	7.4
5 - 10	10	18.5
> 10	40	74.1
Work effect on family (N = 53)		
Yes	12	22.6
No	41	77.4
Workload		
Too heavy	8	14.8
Moderately heavy	34	63.0
Light	5	9.3
Too light	2	3.7
Appropriate	5	9.3
Desirability of call duty (N = 46)		
Very desirable (increases pay)	44	95.6
Not desirable (it stretches one physically)	2	4.4
Perception of work		
Very satisfying	17	31.5
Satisfying	32	59.3
Not satisfying	5	9.3
Job satisfaction		
Extremely satisfying	8	14.8
Very satisfying	17	31.5
Satisfying	25	46.3
Not satisfying	4	7.4
Spouse perception of job (N = 51)		
Very satisfying	12	23.5
Satisfying	35	68.6
Not satisfying	4	7.8
Last promotion (N = 48)		
No promotion	7	14.6
< 3 years ago	7	14.6
3 - 5 years ago	19	39.6
> 5 years ago	15	31.2
Assessment of remuneration (N = 53)		
Very commensurate	4	7.5
Commensurate	24	45.3
Not commensurate	25	47.2

### Prevalence of psychiatric morbidity

Ten consultants (18.5%) scored 4 or more on the GHQ-30 and were therefore regarded as having morbidity. Forty-four scored less than 4 on the GHQ and were regarded as having no morbidity.

### Risk factors for psychiatric morbidity

#### Sociodemographic factors (Table III)

As shown in Table III, 8 consultants (80%) in the 35 - 44-year age group had morbidity, and 1 consultant (10%) in each of the 45 - 54-year and above-50-year age groups respectively had morbidity (corrected  $\chi^2 = 1.19$ ,  $p = 0.28$ ).

Table III also indicates that 8 consultants (80%) who reported having 3 - 5 children had morbidity, and 2 consultants (20%) who had less than 2 children had morbidity (corrected  $\chi^2 = 0.12$ ,  $p = 0.73$ ).

With regard to the social activities of the consultants, it appeared that 7 consultants (70%) who were not engaged in social activities had morbidity, while 3 consultants (30%) who engaged in social activities had morbidity (corrected  $\chi^2 = 0.00$ ,  $p = 0.99$ ).

Eight consultants (80%) who were actively engaged in religious activities had psychiatric morbidity, and 2 (20%) with possible morbidity were passively involved in religious activities (corrected  $\chi^2 = 0.02$ ,  $p = 0.88$ ).

Table III also shows that 6 consultants (66.7%) who preferred reading/watching films as leisure had morbidity, 2 (22.2%) who preferred visiting friends/families had morbidity, while 1 (11.1%) who preferred outdoor games had morbidity (corrected  $\chi^2 = 0.17$ ,  $p = 0.68$ ).

#### Work-related factors (Table IV)

Table IV shows the work characteristics of the respondents. Of consultants with morbidity, 7 (70%) reported moderately heavy workload, 1 (10%) reported that the workload was too heavy, 1 (10%) reported that it was light, and 1 (10%) reported that it was appropriate. Two consultants (4.5%) without morbidity reported that the workload was too light (corrected  $\chi^2 = 0.00$ ,  $p = 0.98$ ).

Eight consultants (80%) who reported having additional administrative responsibilities had morbidity, while 2 (20%) who reported having no administrative responsibilities had morbidity (corrected  $\chi^2 = 0.24$ ,  $p = 0.62$ ).

Table IV also shows the work experience of the consultants. It indicates that 6 consultants (60%) who had morbidity had more than 10 years' expertise, 4 (40%) with morbidity had between 5 and 10 years' expertise, while 4 (9.1%) without morbidity had less than 5 years' expertise (corrected  $\chi^2 = 1.76$ ,  $p = 0.18$ ).

**Table III. Sociodemographic factors of GHQ-positive and GHQ-negative respondents (N = 54)**

N (%)	GHQ-positive (N = 10) N (%)	GHQ-negative (N = 44) N (%)	$\chi^2$	p-value
Age (yrs)				
35 - 44	8 (80)	26 (59.1)	1.19	0.28*
45 - 54	1 (10)	15 (34.1)		
> 54	1 (10)	3 (6.8)		
Gender				
Male	9 (90)	42 (95.5)†		
Female	1 (10)	2 (4.5)		
Number of children				
≤ 2	2 (20)	13 (30.2)	0.12	0.73*
3 - 5	8 (80)	28 (65.1)		
> 5	-	2 (4.7)		
Social activities				
Active	3 (30)	16 (36.4)	0.00	0.99*
Passive	7 (70)	28 (63.6)		
Religious activities				
Active	8 (80)	37 (84.1)	0.02	0.88*
Passive	2 (20)	7 (15.9)		
Leisure activities (N=50)				
Reading/watching films	6 (66.7)	28 (68.3)	0.17	0.68*
Outdoor games	1 (11.1)	4 (9.8)		
Visiting friends/family	2 (22.2)	9 (21.9)		
Relatives with emotional problems				
Yes	3 (30)	9 (20.5)	0.05	0.81*
No	7 (70)	35 (79.5)		
Relationship with senior colleagues				
Cordial	8 (80)	36 (81.8)	0.02	0.89*
Warm	2 (20)	5 (11.4)		
Indifferent	-	3 (6.8)		
Relationship with junior colleagues				
Cordial	8 (80)	35 (79.5)	0.16	0.69*
Warm	2 (20)	9 (20.5)		
Relationship with residents				
Cordial	8 (80)	35 (79.5)	0.16	0.69*
Warm	2 (20)	9 (20.5)		
Relationship with nurses				
Cordial	6 (60)	29 (65.9)	0.03	0.86*
Warm	4 (40)	13 (29.5)		
Indifferent	-	2 (4.5)		
Relationship with patients				
Cordial	7 (70)	39 (88.6)	2.2	0.14*
Warm	3 (30)	5 (11.4)		
Relationship with patients' relatives				
Cordial	6 (60)	33 (75)	0.47	0.49*
Warm	4 (40)	10 (22.7)		
Indifferent	-	1 (2.3)		

\* Yates corrected.  
†  $\chi^2$  not computable.

The effect of the consultants' work on their family is also shown in Table IV. Six consultants (60%) who had morbidity reported that their work had no adverse effects on their family, while 4 (40%) who had morbidity reported that their work had adverse effects on their family (corrected  $\chi^2 = 1.07$ ,  $p = 0.30$ ).

Of those with morbidity, 3 (37.5%) reported having had their promotion less than 3 years previously, 3 (37.5%) had been promoted 3 - 5 years previously, 1 (12.5%) reported having had no promotion, and 1 (12.5%) had been promoted more than 5 years previously ( $\chi^2 = 4.58$ ,  $df = 3$ ,  $p = 0.21$ ).

Table IV also shows that of those with morbidity, 3 (30%) were gynaecologists, 3 (30%) were surgeons, and there was 1 (10%) epidemiologist, laboratory consultant, ophthalmologist, and paediatrician respectively. Two consultants (4.5%) with no morbidity were general medical practitioners, and 5 (11.4%) were radiologists ( $\chi^2 = 6.22$ ,  $df = 3$ ,  $p = 0.10$ ).

## Discussion

### Morbidity prevalence

The finding of 18.5% morbidity is consistent with previous studies that reported morbidity of 17 - 18% among bank employees in this locality<sup>4,5</sup> and factory workers in the more urban city of Lagos.<sup>6</sup> Our finding is slightly higher than the 14% reported among hospital consultants in Eastern Nigeria,<sup>1</sup> but

Table IV. Work-related factors among GHQ-positive and GHQ-negative respondents

	GHQ- positive (N = 10) N (%)	GHQ- negative (N = 44) N (%)	$\chi^2$	p-value
<b>Workload</b>				
Too heavy	1 (10)	7 (15.9)	0.00	0.98*
Moderately heavy	7 (70)	27 (61.4)		
Light	1 (10)	4 (9.1)		
Too light	-	2 (4.5)		
Appropriate	1 (10)	4 (9.1)		
<b>Additional administrative responsibility</b>				
Yes	8 (80)	29 (65.9)	0.24	0.62*
No	2 (20)	15 (34.1)		
<b>Spouse perception of work (N = 51):</b>				
Very satisfying	2 (22.2)	10 (23.8)	0.03	0.86*
Satisfying	7 (77.8)	28 (66.7)		
Not satisfying	-	4 (9.5)		
<b>Work effect on family (N = 53):</b>				
Yes	4 (40)	8 (18.6)	1.07	0.30*
No	6 (60)	35 (81.4)		
<b>Job experience</b>				
< 5 years	-	4 (9.1)	1.76	0.18*
5 - 10 years	4 (40)	6 (13.6)		
> 10 years	6 (60)	34 (72.3)		
<b>Job satisfaction</b>				
Very satisfying	6 (60)	19 (43.2)	0.54	0.46*
Satisfying	3 (30)	22 (50)		
Not satisfying	1 (10)	3 (6.8)		
<b>Assessment of remuneration (N = 53):</b>				
Very commensurate	1 (10)	3 (6.9)	0.65	0.42*
Commensurate	6 (60)	18 (41.9)		
Not commensurate	3 (30)	22 (51.2)		
<b>Last promotion (N = 48):</b>				
None	1 (12.5)	6 (15)	4.58	0.21
< 3 years ago	3 (37.5)	4 (10)		
3 - 5 years ago	3 (37.5)	16 (40)		
> 5 years ago	1 (12.5)	14 (35)		
<b>Area of specialisation</b>				
Epidemiology	1 (10)	3 (6.8)	6.22	0.10
Gynaecology	3 (30)	3 (6.8)		
General medical practice	-	2 (4.5)		
Laboratory sciences	1 (10)	7 (15.9)		
Medicine	-	9 (20.4)		
Ophthalmology	1 (10)	4 (9.1)		
Paediatrics	1 (10)	4 (9.1)		
Radiology	-	5 (11.4)		
Surgery	3 (30)	7 (15.9)		

\* Yates corrected.

inconsistent with previous reports of between 27% and 40% morbidity among hospital consultants in other countries.<sup>13-17,24</sup> However, one study<sup>12</sup> also reported a morbidity as low as 10% among health professionals. The similarity of morbidity between bank workers and hospital consultants could possibly be due to certain inherent factors common to both

occupational groups, perhaps the stressful nature of the two occupations. While one takes charge of human economy, the other takes charge of human lives, both of which cannot condone negligence and require precision and constant alertness.

The wide variation in reports on similar occupational groups could possibly be due to the comparatively different socio-economic pressures on these communities and the attendant psychological stress.<sup>4, 7,25,26</sup> The present study location was less urbanised, with fewer attendant socioeconomic stressors such as traffic jams and transportation and accommodation problems, than the locations of studies recording higher morbidities. It was more urbanised than the eastern part of the country where a lower morbidity was reported, possibly because of proximity to both Abuja (the federal capital) and Lagos (the former federal capital).

### Sociodemographic characteristics and morbidity

The absence of significant association between sociodemographic factors and morbidity among the consultants contrasted with

previous studies reporting such association. For instance, increased morbidity has been reported among younger consultants because it was believed that there was decreased level of distress with increasing medical seniority.<sup>16,24</sup> Similarly, in studies<sup>4,5</sup> of bankers in Ilorin, increased morbidity was reported in the younger age group (34 - 44 years).





Other studies<sup>25,28</sup> also reported increased morbidity in the younger age group. However certain studies<sup>28</sup> have reported increased morbidity with increased age among workers, attributed to the increased responsibilities of the individual.

Despite the impression that the younger age group may be more energetic and anxious for professional recognition, younger age did not appear to make them significantly more prone to developing morbidity. This may have been because consultants, irrespective of age or seniority, were fully mobilised in patient care as a result of current personnel shortages, resulting in team effort and total staff involvement. This might also account for the absence of significant association between years of experience and psychiatric morbidity.

Some studies have reported increased psychological distress among female executives because of role conflict and role overload,<sup>28</sup> and among female doctors;<sup>19,29,30</sup> this has been reported to increase as women occupy a combination of roles. Other studies<sup>4,5,31</sup> have reported comparatively more morbidity among male than female workers as a result of increased competitiveness. The present study showed no significant association between gender and morbidity, perhaps because of lack of differential exposure to environmental, professional and academic stress in the medical profession. However, the disproportionate gender distribution in this study prevented any definitive appraisal of this observation.

The observed lack of significant association between morbidity and the number of respondents' children differed from previous reports which noted significant association between morbidity and the increased demands of a large family and home-work conflict.<sup>11,19,29,30,32</sup> The majority (51/54, 94.4%) of the respondents were male — in African culture men are expected to hold multiple roles outside the home-keeping and child-rearing prescribed for women. This may have strengthened the resolve of the male doctors to be less constrained by or concerned with childrearing and home-keeping, avoiding any conflict that could possibly arise therefrom.

The previous finding of Kask *et al.*<sup>33</sup> among consultant oncologists with regard to the mitigating influence of religion on morbidity was also not supported by this study. The finding was, however, similar to that previously reported among bank workers.<sup>4,5</sup> This may further support the proposition that other intrinsic factors may be responsible for psychiatric morbidity

among these consultants. There may be need for further research in this area.

### Work characteristics and morbidity

The association between the doctors' workload and morbidity was not significant, and was therefore contrary to previous studies reporting such association among doctors and certain other occupational groups.<sup>4,5,11,16,32,34,35</sup> One would have expected a significant association in view of the present increased work demands on these consultants consequent upon the shortage of resident doctors in the teaching hospital because of federal government embargo on employment. This had necessitated mobilisation of all consultants regardless of seniority in order to ensure ongoing clinical services. Perhaps because all doctors were invariably equally involved in patient care, years of experience was also not significantly associated with morbidity, in contrast to previous studies<sup>16,24</sup> that have reported reduced distress with increasing medical seniority.

Call duty that could translate to heavy workload on the doctors was also not significantly associated with morbidity, and was therefore inconsistent with previous findings of increased morbidity with both qualitative and quantitative work overloads.<sup>28,31,36</sup> The accruable financial benefits (i.e. call duty allowances) might have mitigated the possible adverse psychological effects on the consultants. The participation of all consultants in patient care might also have lightened the workload of individual doctors and therefore lessened their potential physical or psychological distress.

The professional work demands of consultants fall into three fundamental categories in teaching hospitals, viz. clinical, academic (teaching), and administrative.<sup>37</sup> It is thought that in the case of some consultants a combination of these demands may result in role conflict, possibly leading to psychological distress. This view was not supported by this study. It is possible that adjustment and development of adaptive coping strategies over time in this group of consultants may offset any perceived stressful conditions.

Contrary to the findings of some previous studies concerning morbidity and area of specialisation,<sup>30,34,35</sup> the present study did not show any significant association between morbidity and area of specialisation. This perhaps could be due to the multidisciplinary and collaborative approach being practised in the hospital which invariably still functions as both secondary and tertiary health institution. Therefore, all the consultants still interacted by way of consultation-liaison,

assisting each other in proffering solutions to difficult clinical situations, and sharing one another's burdens and problems.

Poor interpersonal relations has been identified as a risk factor for poor psychological health.<sup>6,28</sup> However absence of significant association between interpersonal relations and morbidity among the consultants in this study does not support these earlier reports. This may be because of the friendship and partnership form of relationship found here, different from the supposedly traditional sour, envious relationships characterising health teams in most health institutions. The consultants may have developed coping strategies or the maturity to deal with these other members of health teams in order to forestall crisis. Possible attitudinal change of the consultants may have extended to patients and their relations, with consultants being more tolerant of any untoward behaviour of patients and their relations and adjusting healthily to clinical outcomes of medical or surgical interventions without undue emotional attachment. It has been reported that individual anxieties and conflicts are forgotten when people work together towards a common goal, and people involved in co-operative efforts may be in a better position to combat stressful situations.<sup>38</sup>

Remuneration and promotion were not significantly associated with morbidity. This was in accord with the findings of Shankar and Famuyiwa,<sup>6</sup> but contrasted with some other research reports among other occupational groups.<sup>11,18</sup> Perhaps because doctors see their service as being humanitarian and therefore attach less importance to the issue of personal convenience, they might have been less concerned about their personal comfort and therefore ready to sacrifice individual satisfaction for patient care and wellbeing.

Similarly, job satisfaction was not significantly associated with morbidity, contrary to previous reports<sup>11,32</sup> in which job satisfaction was identified as having a protective effect against the negative consequences of work stress. This is difficult to explain. However, the possibility of other inherent factors associated with morbidity among the consultants (outside the sociodemographic and work-related factors), which are beyond the scope of the present study, need to be investigated in future studies.

### Limitation of the study

The fact that the study used information given by the consultants themselves was a limitation. Sole reliance on their reports may have influenced the results.

## Conclusion

These consultants were as likely as any other occupational group to develop psychiatric morbidity, but it seems that the risk factors are more likely to be due to other inherent causal factors, such as personality characteristics and coping strategies.<sup>11,28</sup>

We advocate that the hospital management, in collaboration with the Department of Behavioural Sciences, organise regular stress management workshops and seminars for the consultants, as well as regular consultant-management interactive forums to deliberate jointly on issues concerning staff welfare and hospital policy. These are likely to eliminate resentment on the part of the consultants and to enhance their psychological wellbeing.

## References

- Ofilo AN, Asuzu MC, Isah EC, Ogbuide O. Job satisfaction and psychological health of doctors at the University of Benin Teaching Hospital. *Occup Med* 2004; **54**: 400-403.
- Olley BO. A comparative study of burnout syndrome among health professionals in a Nigerian teaching hospital. *Afr J Med Med Sci* 2003; **32**: 297-302.
- Akande TM. Health services management in sub-Saharan Africa. *Tropical Journal of Health Sciences* 1999; **6**: 10-12.
- Yussuf AD. Risk factors for psychiatric morbidity among bank workers in a northern city of Nigeria. *South African Journal of Psychiatry* 2005; **11**: 63-68.
- Yussuf AD. A survey of psychiatric morbidity among bank workers in Ilorin, Nigeria. *Tropical Journal of Health Sciences* 2005; **12**(1): 14-20.
- Shankar J, Famuyiwa OO. Stress among factory workers in a developing country. *J Psychosom Res* 1991; **35**: 163-166.
- Haruna AY, Ohaeri JU, Lawal RA, et al. Comparative study of psychiatric morbidity among workers at a paint factory in Nigeria. *East Afr Med J* 1998; **75**(1): 4-8.
- Brown GW, Harris T, Copeland JR. Depression and loss. *Br J Psychiatry*, 1977; **130**: 1-18.
- Ezoe S, Morimoto K. Behavioural lifestyle and mental health status of Japanese factory workers. *Prev Med* 1994; **23**(1): 98-105.
- Maruyama S, Morimoto K. Effects of long working hours on life-style, stress and quality of life among intermediate Japanese managers. *Scand J Work Environ Health* 1996; **22**: 353-359.
- Ramirez AJ, Graham J, Richards MA, Gregory WM. Mental health of hospital consultants; the effects of stress and job satisfaction at work. *Lancet* 1996; **347**: 724-726.
- Downwell AL, Westcott T, Mcleod DK, Hamilton S. A survey of job satisfaction, sources of stress and psychological symptoms among New Zealand health professionals — physicians, surgeons, and pharmacists. *N Z Med J* 2001; **114**: 540-543.
- Grassi I, Magnani K. Psychiatric morbidity and burnout in the medical profession: An Italian study of general practitioners and hospital physicians. *Psychother Psychosom* 2000; **69**: 329-334.
- Ramirez AJ, Graham J, Richards MA, et al. Burnout and psychological disorders among cancer physicians (oncologists). *Br J Cancer* 1995; **71**: 1263-1269.
- Catalan J, Borgess A, Pergami A, et al. Psychological impact on staff of caring for people with various diseases: the case of HIV infection and oncology. *J Psychosom Res* 1996; **40**: 425-435.
- Kapur N, Borrill C, Stride C. Psychiatric morbidity and job satisfaction in hospital consultants and junior house officers: multicentre, cross-sectional survey. *BMJ* 1998; **317**: 511 - 512.
- Caplan RP. Stress, anxiety, and depression in hospital consultants, general practitioners, and senior health service managers. *BMJ* 1994; **309**: 1261-1269.
- Sulaiman AA, Tawfik AK, Abdullah SA. Job satisfaction and occupational stress among primary health care center doctors. *International Journal of Mental Health* 1995; **24**: 85-95.
- Welner A, Marten S, Wocknick E, et al. Psychiatric disorders among professional women. *Arch Gen Psychiatry* 1979; **36**: 169-173.
- Goldberg DP, Rickels K, Downing R, Hesbacher P. A comparison of two psychiatric screening tests. *Br J Psychiatry* 1976; **129**: 61-65.

21. Oduwale O, Ogunyemi AO. Psychiatric morbidity in a general medical clinic in Nigeria. *East Afr Med J* 1984; **61**: 748-752.
22. Abiodun OA. A validity study of the Hospital Anxiety and Depression Scale in general hospital units and a community sample in Nigeria. *Br J Psychiatry* 1994; **165**: 669-673.
23. Statistical Package for Social Sciences (SPSS) for Windows. SPSS Technical Support. 2001. <http://www.spss.com/tech/>
24. Molina SA, Garcia PMA, Alonso GM, et al. Prevalence of burnout and psychological illness in primary care physicians in a health care area in Madrid. *Aten Primaria* 2003; **31**: 564-571.
25. Levi I. Stress in industry: Causes, effects and prevention. In: *Occupational Safety and Health Series*, 1984; **51**: 1-10.
26. International Labour Organisation/World Health Organization Report, Psychosocial factors at work: Recognition and control. In: *Occupational Safety and Health Series* 1986; **56**: 5-7.
27. Reddy VS, Ramanmurti PV. On the job stress of middle aged and elderly executives. *Managerial Psychology* 1990; **1-2**: 16-25.
28. Beena C, Poduaval PR. Gender differences in work stress of executives. *Psychological Studies* 1992; **37**: 109-113.
29. Haw MA. Women, work and stress: A review and agenda for the future. *J Health Soc Behav* 1982; **23**: 132.
30. Kluger MT, Townend K, Laidlaw T. Job satisfaction, stress and burnout in Australian specialist anaesthetists. *Anaesthesia* 2003; **58**: 339-345.
31. Shigemi J, Mino Y, Tsuda T, et al. The relationship between job stress and mental health at work. *Ind Health* 1997; **35**(1): 29-32.
32. Visser MRM, Smets EMA, Oort FJ, De Haes HEM. Stress, satisfaction and burnout among Dutch medical specialists. *CMAJ* 2003; **168**: 271-275.
33. Kask KM, Holland JC, Breitbart W, et al. Stress and burnout in oncology. *Oncology* 2000; **14**: 1621-1638.
34. Graham J, Ramirez AJ, Cull A, et al. Job stress and satisfaction among palliative physicians. *Palliat Med* 1996; **10**: 185-194.
35. Graham J, Ramirez AJ, Fields S, et al. Job stress and satisfaction among clinical radiologists. *Clin Radiol* 2000; **55**: 182-186.
36. Houston BK, Coles DS, Kelly KE. Job stress, psychosocial strain, and physical health problems in women employed full-time outside the home and homemakers. *Womens Health* 1992; **19**(1): 1-5.
37. Agius RM, Blenkin H, Deary IJ, et al. Survey of perceived stress and work demands of consultant doctors. *Occup Environ Med* 1996; **53**: 217-224.
38. Srivastava S, Hagvet K, Sen AK. A study of role stress and job anxiety among three groups of employees in a private sector organization. *Social Science International* 1994; **10**: 25-30.

# Anatomy

# GRAY'S

### FEATURES

- Unparalleled description of human structure serving as the ultimate resource on human anatomy.
- A new, multimedia package **Gdition** enables users to consult the printed book... access a dynamic, continuously updated web site... or explore CD-ROMs containing all of the book's images plus 9 fully rotatable, strippable anatomical models.
- A new organization – by body region, rather than by organ system – parallels the way physicians approach patients.
- A new clinical emphasis ensures relevance to everyday practice.
- Spectacular artwork programme permitting the reader to learn and memorise 3-D relationships of anatomical structures and apply this knowledge to their surgical, dental or physiotherapy practice.

November 2004 Hardback 1,600 pages /2,260 illus Elsevier Churchill Livingstone

### ...And now introducing a new and wholly original textbook of anatomy for medical and health professional students!

Richard Drake, PhD  
Wayne Vogl PhD, Professor  
Adam Mitchell MBBS, FRCS, FRCR

Designed to be suitable for any type of curriculum, Gray's Anatomy for Students presents the essentials of clinical anatomy in a way that furthers complete understanding and firmly relates the study of anatomy to the clinical practice of medicine.

**STOP PRESS!** Also features a companion website - Includes Super Image Bank; Interactive Surface Anatomy tool; Testbank with hundreds of exam questions; A complete Anatomy Course in online Learning Modules.

October 2004 Hardback 1088 pages Churchill Livingstone

## Grays Anatomy 39th Edition



**PRICE: R1025.00**  
**SAMA PRICE: R922.50**

## Grays Anatomy Student Edition

**PRICE: R430.00**

To order contact Carmen or Avril:  
Tel: (021) 530-6520  
Fax: (021) 531-4126  
email: carmena@hmpg.co.za or  
avrilm@hmpg.co.za

- The South African Medical Association, Health & Medical Publishing Group  
1-2 Lonsdale Building, Gardener Way, Pinelands, 7405.

Health & Medical Books