Burnout Syndrome among Resident Physician in Suez Canal University Hospital

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Abstract

Background: Burnout is a syndrome of emotional exhaustion, depersonalization and a sense of low personal accomplishment. Little is known about burnout or its demographic perspectives in Egyptian residents. Objective: To determine the prevalence of burnout among residents and explore its demographic perspectives. Design: Cross-sectional study using an anonymous handled survey. Setting: University-based residency program in Suez Canal University Hospital. Participants: 84 residents. Measurements: Burnout was measured by the Maslach Burnout Inventory and was defined as scores in the high range for medical professionals on 2 or more of the subscales. An inventory developed for this study assessed self-reported sources of stress in job setting and involvement with people. Results: Of 84 (72.4%) responding residents, 53 (63.1%) met the criteria for burnout. None of the burnout dimensions was significantly associated with sex. Only lack of personal accomplishment was significantly associated with marital status and number of work-hours per week (p value < 0.05). Burnout domains were significantly associated with sources of stress. Conclusion: Burnout was common among resident physicians and mainly related job setting and involvement with people.

Introduction

The word "burnout" means to be depleted. It is associated with the worker's physical and psychological exhaustion when he wears his resources out trying to cope with the difficulties of his everyday working activity. The word burnout refers to the "bad mood, the daily irritation, the prostration, the feeling of emptiness, the disillusion, and the powerlessness many workers feel, particularly those in the helping professions (Unknown, 2002). Within the job stress-illness literature, the study of burnout has started since 1964 (Snibbe et al, 1989). Since Freudenberger (1974) used the term burnout, it has mainly been used to describe a state of physical and emotional exhaustion whose characteristics have been mostly applied to human services professionals, within which health staff is included. Burnout can be described as a specific type of job stress, which influences job-related affective well being (Schaufeli & Buunk, 1999). Burnout, a widely studied syndrome, has been defined by Barnett et al (1999) as comprising three factorially distinct symptoms: emotional exhaustion, decreased sense of professional efficacy, and cynicism. According to Maslach et al (2001), burnout is a syndrome defined by the 3 principal components of emotional exhaustion, depersonalization, and diminished feelings of personal accomplishment. Earlier studies on physicians have reported a burnout rate of 30% to 40% (Henderson, 1984). Some particular subgroups, such as infectious disease physicians, have been subsequently found to have burnout rates as high as 43.5% (Deckard et al, 1992). A study by Fields et al (1995) reported that 36% of physicians in pediatric critical care were classified as at risk for burnout, and 14%

were burned out. The evidence, albeit from small and generally localized samples, suggests that the components of burnout may be common among practicing physicians, with 46% to 80% reporting moderate to high levels of emotional exhaustion, 22% to 93% reporting moderate to high levels of depersonalization, and 16% to 79% reporting low to moderate levels of personal achievement (Lloyd et al, 1994). Studies of medical residents have yielded similar results (McCue and Sachs, 1991). In a survey of 119 academic obstetrics and gynecology department chairs in the United States and Puerto Rico (response rate, 91%), Gabbe et al (2002) found that 56% of respondents demonstrated high levels of emotional exhaustion, 36% had high levels of depersonalization, and 21% reported low levels of personal accomplishment. Mirvis et al (1999) reported an increase in the prevalence of high levels of burnout (from 25.3% in 1989 to 38.1% in 1997) in a cohort of 83 administrators of the Department of Veterans Affairs medical centers. The specific consequences of physician burnout are less well known. Mirvis et al (1999) identified loss of job satisfaction as both a primary consequence of burnout and a contributor to its further progression. Similarly, Grunfeld et al (2000) reported that emotionally exhausted Canadian oncologists were more likely to consider changing jobs or reducing work hours. Burned-out residents were also significantly more likely to indicate that they had been responsible for 1 suboptimal patient care practice at least weekly or monthly compared with non–burned-out residents (Shanafelt et al, 2002). Research over the last three decades has shown that the consequences of burnout are not just limited to the individual's subjective experience, but also to various organisational outcomes. Burnout has been associated with reduced organisational efficiency and work related problems such as employee turnover, low morale, poor quality of care, lowered productivity, absenteeism and interpersonal problems (Rosse et al, 1991; Levert et al, 2000).

The study of burnout, therefore, becomes crucial for identifying the dimensions of the problem among Egyptian residents, to improve their quality of life and optimising the care they aught to give to their patients.

Aim of the work This study aim to identify the burnout syndrome among the resident physicians in Suez Canal University Hospital. Specifically, the study will determine; the prevalence of burnout syndrome among the residents, sources of stress and the Effects of gender susceptibility among them

Subjects and Methods

A descriptive cross sectional study was held targeting resident physicians at Suez Canal university hospital in Ismailia.

Sampling and sample size:

** Sample type: simple random sample.

** Sample size: The sample size was determined using the following equation:

$S = [Z^{\alpha 2} / \Delta]^2 * P (1-P)$ (Dobson, 1984)

Where: -

$Z^{\alpha 2}$ (confidence level) = 1.96

Δ (width of confidence interval) = 0.05

P (prevalence) = 30% (Henderson, 1984)

S (sample size) = 323

As the population is known and is small (there are 180 resident physicians in

University Hospital of Suez Canal University according to the hospital files), finite population correction was calculated as follows:

$N = S / [1 + (S - 1) / N]$ (Israel, 1992)

Where: -

N (finite population size) = 180

N (adjusted sample size) = 116

The following inclusion criteria were applied:

Physicians who have not got their Master Degree yet.

Residents who have been working for one year or more.

Residents who have regular attendance and shifting schedules.

Measurement instruments:

To achieve the objectives of this study, a questionnaire was used; formed of three parts:

1- Socio-demographic data: age; sex; marital status and average number of working-hours per week.
2- Part adopting the Arabic Translation (Appendix B) of Maslach Burnout Inventory (MBI) (1996) specially tailored to apply to physician. (Appendix C),
3- Part including an inventory of the sources of stress for the resident physicians. (Appendix D)

Procedure:

Questionnaire was tested for applicability and practicability in a pilot study, and any inconsistencies were removed.

Each physician was handled a 3-part questionnaire and given a one-week period to complete it. The order of presentation of the SOURCES OF STRESS and the MBI was counterbalanced to minimize any potential order effect.

After the end of the one-week period; the physician was considered as "non – respondent" if the questionnaire was not returned.

Scoring and interpretation of results:

1- Maslach Burnout Inventory (MBI): (1996)

The MBI is designed to assess the three aspects of burnout syndrome: emotional exhaustion (EE) (statements No. 1, 2, 3, 6, 8, 13, 14, 16, and 20), depersonalization (DP) (statements No. 5, 10, 11, 15, and 22), and lack of personal accomplishment (PA) (statements No. 4, 7, 9, 12, 17, 18, 19, and 21). A separate subscale measures each aspect.

Burnout is conceptualized as a continuous variable, ranging from low to average to high degrees of experienced feeling.

A high degree of burnout is reflected in high scores on EE and DP subscales and in low scores on PA subscale.

An average degree of burnout is reflected in average scores on the three subscales.

A low degree of burnout is reflected in low scores on EE and DP subscales and in high scores on PA subscale.

At present, scores are considered high if they are in the upper third of the normative distribution, average if they are in the middle third, and low if the are in the lower third. The numerical cut-off points are shown in the following table: (MBI Manual, 1996)

Range of Experienced Burnout

MBI Subscales	Low (Lower third)	Average (Middle third)	High (Upper third)
EE	≤ 16	17-26	≥ 27
DP	≤ 6	7-12	≥ 13
PA	≥ 39	38-32	≤ 31

(N.B. PA is measured in the opposite direction to EE and DP)

The MBI scores for a group of respondents may be treated as aggregate data. Means (M) and standard deviations (SD) for each subscale are computed for the entire group and can be compared to the normative data in the following table:

MBI Subscales

	EE	DP	PA
M	20.99	8.73	34.58
SD	10.75	5.89	7.11

(MBI Manual, 1996)

A participant was considered to meet the study criteria for burnout if he or she got a "high" score on at least 2 of the three dimensions of MBI.

2- Sources of Stress (SS):

The Sources of Stress questionnaire is designed to assess the two main sources of stress: job setting (JS) (statements No. 1, 7, 8, 9, 11, 12, 15, 16, 17, 19, 20, 21, 22, 23 and 24) and involvement with people (IP) (statements No. 2, 3, 4, 5, 6, 10, 13, 14, and 18). A separate subscale measures each aspect.

Sources of Stress are conceptualized as a continuous variable, ranging from low to moderate to high degrees of experienced feeling.

- A high-degree source of stress is reflected in high scores on JS and IP subscales.
- An average-degree source of stress is reflected in averages scores on the two subscales.
- A low-degree source of stress is reflected in low scores on JS and IP subscales.

At the present study, scores were considered high, average, and low according to the following empiric numerical cut-off points as shown in the following table:

Range of Experienced Stress

SS Subscales	Low	Average	High
JS	≤ 25	26-50	≥ 51
IP	≤ 15	16-30	≥ 31

The SS scores for a group of respondents may be treated as aggregate data. Means (M) and standard deviations (SD) for each subscale are computed for the entire group.

Statistical analysis:

Responses from physicians will be statistically analyzed by use of latest version of SPSS available. Significance tests (Chi square) will be applied and significance will be determined when $p<0.05$. For presentation purpose, only the significant or the more prevalent options of the findings will be presented.

Results:

Out of the 116 residents handled the questionnaire; 84 returned it within the time limit of one week, giving a response rate of 72.4%.

Respondents:

The socio-demographic characteristics of the respondents (Table 1) were such that most were males (76.2%) and single (63.1%). The mean of working hours per week of the group was 83.6 work-hours/week (SD 35.5).

Burnout

Presently, normative data of the MBI burnout dimensions of emotional exhaustion, depersonalization and personal accomplishment exist for medical practitioners. Table 2 provides the mean and standard deviation of all of the three dimensions of burnout for this population of resident physicians along with those previously reported by Maslach, Jackson and Leiter (1996) from normative data of medical practitioners. As shown in Table 2, the mean burnout sub-scale scores of emotional exhaustion (32.74) and depersonalization (14) are much higher than the normative data from other medical practitioner populations.

However, the mean sub-scale score on the dimension of personal accomplishment (35.03) is almost equal to those of the other populations, indicating that, on average, the resident physicians in the present sample are still experiencing the sense of accomplishment to a more or less similar degree as the comparison groups.

Mean score for emotional exhaustion is in the "high" range (≥ 27), and the same for depersonalization (≥ 13). For personal accomplishment, the mean score is in the "average" burnout range (38-32) (Table 3).

In terms of the personal impact of work-related stress, work-induced "high" emotional exhaustion was identified in 75% of resident physicians, depersonalization in 60.7%, and lack of personal accomplishment in 27.4% (Table 3).

More than 25% of the respondents scored "high" on only one dimension of Maslach Burnout Inventory (MBI), 50% scored

"high" on any two of the dimensions of MBI, and 13.1% scored "high" on the 3 dimensions altogether. So, 63.1% of participants met study criteria for burnout (a "high" score on at least 2 of the three dimensions of MBI).

Table 4 provides the mean and standard deviation for each of the 2 dimensions of sources of stress (SS) studied for this sample of residents. Unfortunately, no normative data are currently available; therefore, it is not possible to make direct comparisons of scores obtained from the population in this study with a representative norm group.

However, the mean scores for job setting (48.85) and involvement with people (26.73) as sources of stress are in the "average" range for both dimensions (table 5).

Table 5 also shows that all the responding physicians are either averagely or highly stressed by their job settings.

Gender perspectives:

Work-induced emotional exhaustion (EE), depersonalization (DP), and lack of personal accomplishment (PA) are independent of sex (Tables 6).

The table shows that 75 % of the males and 75% of the females participating in this study score "high" on emotional exhaustion, so they are equally expressed in the "high" range of this dimension of MBI. Lack of personal accomplishment, as well, seems to be almost evenly distributed among male and female resident physicians.

However, it is shown that male residents are relatively more depersonalized by the effect of work (62.5%) than their female counterparts (55%). However, the difference is statistically insignificant.

Meanwhile, experiencing work-related stress associated with job setting and involvement with people is also independent of sex.

Table (6) shows that female residents are relatively more at the "high" range of job setting- induced stress (55 %) than their male colleagues (39.1 %). Also, female residents are relatively more at the "high" range of involvement with people - induced stress (45 %) than their male colleagues (29.7 %). But in either case, the difference between both sexes is statistically insignificant.

Other socio-demographic perspectives:

Work-induced emotional exhaustion and depersonalization are independent of marital status (Table 7). However, lack of personal accomplishment proved to be significantly associated with marital status.

This table shows that married residents are more at the "high" range of emotional exhaustion (83.9%) than their single colleagues (69.8%). Also, shows that married residents are more at the "high" range of depersonalization (67.8%) than their single counterparts (56.6%). But the difference between the two groups was statistically insignificant.

However, a significant relationship between marital status and lack of personal accomplishment is shown in this table. Single participants are more at the "high" range (28.3%) than their married colleagues (25.8%). However, while 43.4% of the single residents in the study sample being in the "low" range for lack of personal accomplishment, only 19.4% of the married are in the "low" range.

At the same time, experiencing work-related stress associated with job setting and

involvement with people is independent of marital status.

Table (7) shows that single (43.4%) and married (41.9%) participants experience "high" job setting-induced stress almost equally. Also, shows that single (33.9%) and married (32.3%) participants are in the "high" range of involvement with people-induced stress almost equally.

Work-induced emotional exhaustion and depersonalization are independent of the number of work-hours per week (Table 8). However, lack of personal accomplishment proved to be significantly associated with this socio-demographic factor.

This table shows that residents with more than 100 work-hours per week are more at the "high" range of emotional exhaustion (90%) than those with 50-100 work-hours per week (76.2%), who are; in turn, more at the "high" range than residents working less than 50 hours a week (59.1%). The difference between the three groups is statistically insignificant.

The table also shows that residents with 50-100 work-hours per week are more at the "high" range of depersonalization (73.8%) than residents with more than 100 work-hours per week (50%), who are; in turn, more at the "high" range than those working less than 50 hours a week (45.4%). The difference between the three groups is statistically insignificant also.

A significant relationship between lack of personal accomplishment and the number of working-hours per week is proven in this table. Residents working less than 50 hours a week are more at the "high" range of lack of personal accomplishment (36.4%) than those with 50-100 work-hours per week (26.2%) who are; in turn, more at the "high" range than residents with more than 100 work-hours per week (20%).

At the same time, residents with more than 100 work-hours per week are more at the "low" range of lack of personal accomplishment (50%) than those with 50-100 work-hours per week (30.9%), who are; in turn, more at the "low" range than residents working less than 50 hours a week (27.3%).

Meanwhile, experiencing work-related stress associated with job setting and involvement with people is independent of work-hours per week.

Table (8) shows that residents with more than 100 work-hours per week are more at the "high" range of job setting-induced stress (60%) than those with 50-100 work-hours per week (42.9%), who are; in turn, more at the "high" range than residents working less than 50 hours a week (27.3%).

As regard to involvement with people, the residents with 50-100 work-hours per week are more at the "high" range of involvement with people-induced stress (38.1%) than those with more than 100 work-hours per week (30%), who are; in turn, more at the "high" range than residents working less than 50 hours a week (27.3%).

Sources of stress and burnout:

The different aspects of job setting have an upper hand over involvement with people as a source of stress among the resident physicians (Tables 9-10).

Low income and the imbalance between the effort and reward, together with the perception of the administration as being "poor" are the leading job setting stress-inducers of stress among the participants (Table 9).

A sense of helplessness toward the terminal patient and the mismatch of expectations between the patient (and his relatives) and physician are the major aspects of involvement with people that induce stress among the participants (Table 10).

The relationship between dimensions of burnout and sources of stress was strong and proven to be statistically significant (Table 11).

Work-induced emotional exhaustion (EE) proved to be significantly associated with job setting-induced stress experienced by participants (JS). However, depersonalization (DP) and lack of personal accomplishment (PA) are independent of this job setting-induced stress.

Table (11) shows a significant relationship between job setting-induced stress and emotional exhaustion, with all participants "highly" stressed by their job setting being at the "high" range of emotional exhaustion (100%).

However, this table shows that not only 75% of the study sample scoring "high" on the job setting-induced stress is being in the "high" range for depersonalization, but also 50% of those scoring "average" on the same dimension of sources of stress are in the "high" range for depersonalization. However, no statistical significant relationship has been found.

Also shown, about 22.2% of the study sample scoring "high" on the job setting-induced stress is being in the "high" range for lack of personal accomplishment. However, 31.2 % scoring "average" on the job setting-induced stress are in the "high" range for lack of personal accomplishment. This difference, however, has shown to be insignificant.

Work-induced emotional exhaustion, depersonalization, and lack of personal accomplishment prove to be dependent on involvement with people-induced stress (Tables 11).

The table proves a significant relationship between involvement with people-induced stress (IP) and emotional exhaustion (EE). Most of the participants scoring "high" on IP are in the "high" range for EE (89.3%). On the other hand, one-half of the participants in the "low" range for IP are in the "low" range for EE (50%).

This table proves a significant relationship between involvement with people-induced stress (IP) and work-induced depersonalization (DP). Most of the participants scoring "high" on IP are in the "high" range for DP (82.1%). As well, most of the participants in the "low" range for IP are in the "low" range for DP (60%).

Also, a significant relationship between involvement with people-induced stress (IP) and lack of personal accomplishment (PA) appears in this table. However, while 53.6% of the study sample in the "high" range of IP being in the "average" range of PA, only 39.3 % are in the "high" range for PA. On the other hand, most of the participants in the "low" range for IP are in the "low" range for PA (90%).

Table (1)

Item	Category	Number (Percentage) N=84
Gender	Male	64 (76.2)
	Female	20 (23.8)
Marital Status	Single	53 (63.1)
	Married	31 (36.9)
Work-Hour/Week	< 50	22 (26.2)
	50-100	42 (50)
	> 100	20 (23.8)

Table 2- Maslach Burnout Inventory subscale scores [mean ± SD] for the Participating residents:

Subscales	Participating Physicians	Normative Data Of Medical Practitioners
Emotional exhaustion (EE)	32.74 ± 10.49	22.19 ± 9.53
Depersonalization (DP)	14 ± 6.99	7.12 ± 5.22
Personal Accomplishment (PA)	35.03 ± 7.38	36.53 ± 7.34

Table 3- Number (Percentage) of Resident Physicians Scoring Low, Average and High on the MBI Subscales:

Subscale	Low	Average	High
Emotional exhaustion (EE)	≤16	17-26	≥27
Residents	6 (7.1)	15 (17.9)	63 (75)
Depersonalization (DP)	≤6	7-12	≥13
Residents	15 (17.9)	18 (21.4)	51 (60.7)
Personal Accomplishment (PA•)	≥39	38-32	≤31
Residents	29 (34.5)	32 (38.1)	23 (27.4)

•: PA is scored in opposite direction from EE and DP. Subjects scoring in the low category have high feelings of PA while those scoring in the high category have low feelings of PA

Table 4- Sources of Stress subscale scores [mean ± SD] for the participating residents:

Subscale	Participants
Job Setting (JS)	48.85 ± 10.51
Involvement with People (IP)	26.73 ± 8.39

Table 5- Number (Percentage) of Resident Physicians Scoring Low, Average and High on the SS Subscales:

Subscale	Low	Average	High
Job Setting (JS)	≤25	26-50	≥51
Residents	0 (0)	48 (57.1)	36 (42.9)
Involvement with People (IP)	≤15	16-30	≥31
Residents	10 (11.9)	46 (54.8)	28 (33.3)

Table (6) Gender perspectives associated with burnout and sources of stress:

	MaleN = 64		FemaleN = 20		P value
	No.	%	No.	%	
Relation between gender and EE					
LOW	5	7.8	1	5	P > 0.05
AVERAGE	11	17.2	4	20	
HIGH	48	75	15	75	
Relation between gender and DP					
LOW	11	17.2	4	20	P > 0.05
AVERAGE	13	20.3	5	25	
HIGH	40	62.5	11	55	
Relation between gender and PA					
LOW	23	35.9	6	30	P > 0.05
AVERAGE	23	35.9	9	45	
HIGH	18	28.2	5	25	
Relation between gender and JS					
LOW	0	0	0	0	P > 0.05
AVERAGE	39	60.9	9	45	
HIGH	25	39.1	11	55	
Relation between gender and IP					
LOW	10	15.6	0	0	P > 0.05
AVERAGE	35	54.7	11	55	
HIGH	19	29.7	9	45	

Table (7) Relationship between marital status and dimensions of burnout and sources of stress:

	Single N = 53		Married N = 31		P value
	No.	%	No.	%	
Relation between marital status and EE					
LOW	5	9.4	1	3.2	P > 0.05
AVERAGE	11	20.8	4	12.9	
HIGH	37	69.8	26	83.9	
Relation between marital status and DP					
LOW	10	18.8	5	16.1	P > 0.05
AVERAGE	13	24.5	5	16.1	
HIGH	30	56.6	21	67.8	
Relation between marital status and PA					
LOW	23	43.4	6	19.4	P < 0.05
AVERAGE	15	28.3	17	54.8	
HIGH	15	28.3	8	25.8	
Relation between marital status and JS					
LOW	0	0	0	0	P > 0.05
AVERAGE	30	56.6	18	58.1	
HIGH	23	43.4	13	41.9	
Relation between marital status and IP					
LOW	8	15.2	2	6.4	P > 0.05
AVERAGE	27	50.9	19	61.3	
HIGH	18	33.9	10	32.3	

Table (8) Relationship between work-hours/week and the dimensions of burnout and sources of stress:

	< 50 N = 22		50 – 100 N = 42		> 50 N = 20		P value
	No.	%	No.	%	No.	%	
Relation between work-hours/week and EE							
LOW	4	18.2	1	2.4	1	5	P > 0.05
AVERAGE	5	22.7	9	21.4	1	5	
HIGH	13	59.1	32	76.2	18	90	
Relation between work-hours/week and DP							
LOW	6	27.3	6	14.3	3	15	P > 0.05
AVERAGE	6	27.3	5	11.9	7	35	
HIGH	10	45.4	31	73.8	10	50	

Table (8): **continue**:

	< 50 N = 22		50 – 100 N = 42		> 50 N = 20		P value
	No.	%	No.	%	No.	%	
Relation between work-hours/week and PA							
LOW	6	27.3	13	30.9	10	50	P < 0.05
AVERAGE	8	36.4	18	42.9	6	30	
HIGH	8	36.4	11	26.2	4	20	
Relation between work-hours/week and JS							
LOW	0	0	0	0	0	0	P > 0.05
AVERAGE	16	72.7	24	57.1	8	40	
HIGH	6	27.3	18	42.9	12	60	
Relation between work-hours/week and IP							
LOW	4	18.2	5	11.9	1	5	P > 0.05
AVERAGE	12	54.5	21	50	13	65	
HIGH	6	27.3	16	38.1	6	30	

Table 9- Aspects of Job setting experienced by Participants causing extreme stress:

Aspect	No.	%
Gaining less money for doing more	66	78.6
A sense of poor organization and loss of contact with administration	64	76.2
Negative feedback predominates, while positive feedback is minimal	57	67.9
No time to follow up-to-date medical literature	56	66.7
Long working hours with no enough breaks for rest	48	57.1

Table 10- Aspects of Involvement with People experienced by Participants causing extreme stress:

Aspect	No.	%
Inability to induce a change or improvement with terminal cases	48	57.1
Mismatch of expectations between patient and physician	42	50
Inability to empathize with certain patients (esp. the recommended ones)	41	48.8
Lack of positive feedback about patient's improvement after discharge	38	45.2
Lack of appreciation and a lot of blame from patients and their families	36	42.9

Table (11) Relationship between burnout and sources of stress:

JS / EE	Low N=0		Average N=48		High N=36	
	No.	%	No.	%	No.	%
Low	0	0	6	12.5	0	0
Average	0	0	15	31.3	0	0
High	0	0	27	56.2	36	100
P value < 0.05						
JS / DP	Low N=0		Average N=48		High N=36	
	No.	%	No.	%	No.	%
Low	0	0	10	20.8	5	13.9
Average	0	0	14	29.2	4	11.1
High	0	0	24	50	27	75
P value > 0.05						
JS / PA	Low N=0		Average N=48		High N=36	
	No.	%	No.	%	No.	%
Low	0	0	19	39.5	10	27.8
Average	0	0	14	29.2	18	50
High	0	0	15	31.3	8	22.2
P value > 0.05						
IP / EE	Low N=10		Average N=46		High N=28	
	No.	%	No.	%	No.	%
Low	5	50	1	2.2	0	0
Average	2	20	10	21.7	3	10.7
High	3	30	35	76.1	25	89.3
P value < 0.05						
IP / DP	Low N=10		Average N=46		High N=28	
	No.	%	No.	%	No.	%
Low	6	60	8	17.4	1	3.6
Average	4	40	10	21.7	4	14.3
High	0	0	28	60.9	23	82.1
P value < 0.05						
IP / PA	Low N=10		Average N=46		High N=28	
	No.	%	No.	%	No.	%
Low	9	90	18	39.2	2	7.1
Average	0	0	17	36.9	15	53.6
High	1	10	11	23.9	11	39.3
P value < 0.05						

Discussion:

Burnout seems to be prevalent and severe among residents of the study sample. The reasons for such high levels of burnout among new medical graduates are likely to be complex, and to reflect both the environment in which young doctors work and personal characteristics of the doctors themselves (Firth-Cozens, 1987), and cannot be attributed to single issues such as working hours (Firth-Cozens & Moss, 1998).

More than 63% of the study sample suffers from burnout using the criteria of scoring ”high” in at least two of the three dimensions of burnout; with considerably high mean scores for emotional exhaustion, depersonalization and lack of personal accomplishment. This is especially dangerous as the presence of any combination of the features of burnout leads to decreased effectiveness at work (Maslach et al, 1996). Not only that, but also resident burnout could contribute to the dehumanizing effects of medical education—especially for medical students, and for other residents as well.

Socialization of medical students has been described as a “hidden curriculum” in which students acquire attitudes and habits from other physicians, (Hafferty & Franks, 1994). The high rate of burnout among residents, who spend far more time with medical students (Barnett et al, 1999) and each other than with faculty physicians, raises the possibility that resident burnout influences what medical students and junior residents interpret as appropriate professional behavior. Burnout could contribute to increases in cynicism and decreases in compassion that have been observed over the course of postgraduate training (Colford & McPhee, 1989).

Rates of emotional exhaustion and depersonalization rise significantly during the residency years (Willcock et al, 2004). If the non-respondents in this study were taken into consideration (32 physicians), the prevalence may have ranged from 46% (if all were not burnt out) to 73.6% (if all were). Shanafelt et al (2002) found that burnout was very common among residents in all 3 years of residency training: More than 75% of respondents in his study met the criteria for burnout. If it means anything, it is the burden of residency on the young physicians.

In terms of personal impact of work-related stress, work-induced emotional exhaustion was identified in 75% 0f participant residents, depersonalization in 60.7%, and lack of personal accomplishment in 27.4%; figures that are remarkably higher than what Velamoor et al (2000) found in the study carried out on a sample including senior as well as junior physicians (32.4%, 10.3%, 13.1% respectively).

However, burnout; as shown from this study is neither a reflection of the physician’s socio-demographic characteristics, nor a matter of prolonged hours of working. There were no significant differences between perceived stress levels in the males and females on direct comparison, which is similar to what Rathod et al (2000) found in their study of burnout. It is suggested that women have lower job expectations than men, are socialized not to express discontent, and value different characteristics in a career than do men (Phelan, 1994); characteristics that might recommend women to be less stressed by their job settings and interactions with people. However, in the current study sample, women are found

more at the "high" ranges of work-induced stress, an observation that may reflect cultural discrepancies between women from the two studies.

Work-induced emotional exhaustion, depersonalization, and lack of personal accomplishment were independent of the socio-demographic factors of sex or marital status; something repeatedly proved by Velamoor and his colleagues (2000). A survey conducted in the Netherlands surveying 1426 physicians in primary care and specialties (response rate, 63%; 18% women), the authors found no significant sex difference in burnout rates in Dutch physicians (Linzer et al, 2002). The power of physicians, defined as a combination of clinical freedom, autonomy, authority, influence, and participation in decision-making, has been decreasing both among male and female physicians (Friedman, 1995; Forsberg et al, 2001). The findings of no significant differences on any of the socio-demographic factors for the personal impact of work-related stress suggest equal vulnerability to emotional exhaustion, depersonalization, and lack of personal achievement.

Only "lack of personal accomplishment" proved to be influenced by socio-demographic factors. Single participants seem to be more into their job and more extreme in their attitude toward their accomplishment than their married colleagues, who may have other sources for a sense of accomplishment that their single counterparts do not have. Also, residents appear to get their sense of personal accomplishment from the number of hours they work- the more the hours the more the accomplishment. Such an attitude can reflect the way in which residents are being evaluated and the major aim they seek during their residency, namely; their seniors' appreciation. Although residents complain about the long working hours they have to admit to, they consider the number of working hours as the main evaluative tool for their accomplishment. This is not all good though, because it is the quality; not the quantity, that matters in medical practice.

On the other hand, burnout is more a matter of what the resident has to deal with in his or her workplace; namely the job setting and involvement with people. As it might appear in the current study, work-induced burnout proved to be dependent on work-induced stress. In 2001, Richard Smith asked "Why are doctors so unhappy?" and concluded that "The most obvious cause of doctors' unhappiness is that they feel overworked and under-supported" (Smith, 2001). As well, professional unhappiness among physicians, with increasing stress and decreased well-being, might partly be due to worsening working conditions (von Vultée et al, 2004).

However, some aspects are more stressful than others. Poor financial gain, poor contact with administration and negative feedback from seniors are especially stressful job settings, while a sense of helplessness toward terminal cases ranked first in the stressful aspects of involvement with people. This is at the time when it is known that: as a buffer against work-related stress, the support, which junior staffs perceive from consultants, may be crucial (Firth-Cozens, 1987).

Mismatch between the expectations of the patient and physician is another aspect of involvement with people-induced stress. This is especially true as the process of burnout "exhausts one's physical and mental resources by excessively striving to

reach some unrealistic expectation imposed by oneself or by the values of society" (Wessels et al, 1989).

Other common themes that are worthy of consideration seem to emerge from the findings on appraisals of work-related stress among medical faculty include: non-clinical functions (excessive paperwork), dealing with difficult patients, and dealing with relatives of patients (Velamoor et al, 2000). In another study, the areas most frequently rated as stressful were: out of hours duties, dealing with difficult and hostile relatives of patients, working long hours, arranging admissions, paperwork, demands of job interfering with personal life, and responsibility of suicidal and homicidal patients on increasing workload and bed scarcities (Rathod et al, 2000).

It has been stated "The attitude of the medical profession to the health of its members has always been one of disinterest which is transiently discarded when disaster overtakes one of its members ('Hagan & Richards, 1998).

It is incumbent on the individuals and healthcare systems that employ and supervise the new generation of medical practitioners that these young doctors are given the same care and support that people expects them to provide to their patients (Willcock et al, 2004).

The current study had several important limitations. Although the response rate was high, response bias remains a possibility, and the prevalence of burnout in this residency program could range from 45%, if all 32 non-respondents were not burned out, to 73.7%, if all non-respondents were burned out.

It was not possible to compare respondents with non-respondents because, to fully protect the anonymity of all residents (regardless of participation); we obtained only limited demographic information from respondents.

The outcome measures for work-induced stress were based on self-report, and it is not possible to know the extent to which these self-reports accurately reflect the degree of stress caused by the different aspects of job setting and involvement with people assessed in the survey. Criterion validity and reproducibility of the questions have not been studied. In addition, biased reporting of work-induced stress could explain the observed relationship between burnout and stress experienced due to job setting and involvement with people. For example, residents who met criteria for burnout could have over-reported work-induced stress they experience. Alternatively, residents who were not burned out might have been more susceptible to social desirability bias; therefore, these residents could have under-reported their work-induced stress.

Although the author believes the results regarding the association between burnout and work-induced stress should be viewed cautiously and should be used primarily to generate hypotheses for future research, the author doubts that these findings solely reflect biased reporting. Finally, this study is limited by its cross-sectional design. Future longitudinal studies are required to evaluate the possibility of a causal relationship between work-induced stress and burnout.

The generalizability of the results in this sample of residents from a single university hospital is unknown. However, the author doubts that the results reflect unique characteristics of the residency program or residents studied, as residents in this

hospital work in inpatient and outpatient settings that are typical for Egyptian university-based training programs in different specialties. For this reasons, it seems unlikely that these findings are unique to the hospital that was studied.

Recommendations:

Annual self-assessment of the level of burnout and work-induced stress, using validated measuring tools (e.g. MBI), to follow-up the level of burnout among the residents.

Establishing a mechanism for providing psychiatric counseling for physicians identified as "burned out" through the Psychiatry Department.

Organizing regular meetings between residents on one side and administration members and patients' relatives on the other side to simplify and clarify various controversies and to communicate openly.

Strict regulations considering the number of hours the resident has to work per week, which – if violated- give the resident the right to get more "off" hours.

Workshops for junior residents about the essential social skills they may need in dealing with different personalities

Improving the financial reward the residents gain from their work in respect to the duties they have to attain.

References

Barnett RC, Gareis KC and Brennan RT (1999): Fit as a mediator of the relationship between work hours and burnout. Journal of Occupational Health Psychology, 19, 385-391.

Colford JM Jr and McPhee SJ. (1989): The ravelled sleeve of care. Managing the stresses of residency training. JAMA; 261:889-93.

Deckard G, Hicks L and Hamory B. (1992): The occurrence and distribution of burnout among infectious disease physicians. J Infect Dis; 165:224–8.

Fields AI, Guerdon TT, Brasseux CO, Getson PR, Thompson AE and Orlowski JP. (1995): Physician burnout in pediatric critical care medicine. Critical Care Med; 23:1425–9.

Firth-Cozens J. (1987): Emotional distress in junior house officers. BMJ; 295:533-536.

Fir***th-Cozens J and Moss F. (1998):*** Hours, sleep, teamwork and stress. BMJ; 317:1335-1336.

Forsberg E, Axelsson R and Arnetz BB. (2001): Financial incentives in health care. The impact of performance-based reimbursement. Health Policy; 58:243–262.

Freudenberger HJ. (1974): Staff burnout. Journal of Social Issues, 30, 159-165.

Friedman E. (1995): The power of physicians: autonomy and balance in a changing system. Am J Med; 99:579–586.

Gabbe SG, Melville J, Mandel L and Walker E. (2002): Burnout in chairs of obstetrics and gynecology. Am J Obstet Gynecol; 186:601-612.

Grunfeld E, Whelan TJ, Zitzelsberger L, Willan AR, Montesanto B and Evans WK. (2000): Cancer care workers in Ontario. CMAJ; 163:166-169.

Hafferty FW and Franks R. (1994): The hidden curriculum, ethics teaching, and the structure of medical education. Acad Med; 69:861-71.

Henderson G. (1984): Physician burnout. Hospital Physician; 20:8–9.

Levert T, Lucas M and Ortlepp K. (2000): Burnout in psychiatric nurses: Contributions of the work environment and a Sense of Coherence. South African Journal of Psychology, 30, 36-43.

Linzer M, McMurray JE, Visser MR, Oort FJ, Smets E and de Haes HC. (2002): Sex differences in physician burnout in the United States and the Netherlands. J Am Med Womens Assoc.; 57:191-193.

Lloyd S, Streiner D and Shannon S. (1994): Burnout, depression, and life job satisfaction among Canadian emergency physicians. J Emerg Med.; 12:559-565.

Maslach C, Jackson SE and Leiter MP. (1996): Maslach Burnout inventory manual. 3rd ed. Palo Alto (CA): Consulting Psychologists Press; pp 24-31.

Maslach C, Schaufeli WB and Leiter MP. (2001): Job burnout. Annu Rev Psychol.; 52:397-422.

McCue JD and Sachs CL. (1991): A stress management workshop improves residents' coping skills. Arch Intern Med.; 151:2273-2277

Mirvis DM, Graney MJ and Kilpatrick AO. (1999): Burnout among leaders of the Department of Veterans Affairs medical centers: contributing factors as determined by a longitudinal study. J Health Hum Serv Adm; 21: 390-412.

Phelan J. (1994): The paradox of the contented female worker: an assessment of alternative explanations. Soc Psychol Q.; 57:95-107.

Rathod S, Roy L, Ramsay M, Das M, Birtwistle J and Kingdon D. (2000): A survey of stress in psychiatrists working in the Wessex Region. Psychiatric Bulletin; 24: 133-136.

Schaufeli WB and Buunk BP (1999). Burnout: An overview of 25 years of research and theorising. In M.J.; 122:301-312.

Shanafelt TD, Bradley KA, Joyce E, Wipf JE and Back AL. (2002): Burnout and Self-Reported Patient Care in an Internal Medicine Residency Program. Ann Intern Med.; 136:358-367.

Smith R. (2001): Why are doctors so unhappy? Brit Med J, 322:1073-1074.

Snibbe JR, Radcliffe T, Weisberger C, Richards M and Kelly J. (1989): Burnout among primary care physicians and mental health professionals in a managed health care setting. Psychological Reports, 65, 775-780.

Unknown. (2002): Burnout, A Vademecum for the use of Therapeutic and Rehabilitating Psychiatric Services Operators. Bari: pp 1-33.

Velamoor VR, Kazarian S, Persad E and Silcox JA. (2000): Work-Related Sources of Physician Stress: Perceived Impact on Personal, Familial, and Social Well-Being. Canadian Psychiatric Association - The Bulletin, pp 104-116.

Von Vultée PJ, Axelsson R and Arnetz B. (2004): Individual and Organizational Well-Being of Female Physicians — an Assessment of Three Different Management Programs. Med Gen Med.; 6(1): 4.

Wessels DT Jnr, Kutscher AM, Seeland IB. (1989): Professional burnout in medicine and the helping professions. New York: Hawthorn PressInc, 11-19.

Willcock SM, Daly GD, Tennant CC and Allard BJ. (2004): Burnout and psychiatric morbidity in new medical graduates. MJA; 181 (7): 357-360

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متلازمة الاحتراق النفسي بين الأطباء المقيمين في مستشفي جامعة قناة السويس

ان تعبير "الاحتراق النفسي" يشير إلى الاستنزاف، وهو يتعلق بالإرهاق الجسدي والنفسي الذي يتعرض له الطبيب.هدفت هذه الدراسة ألي التعرف على مدى انتشار "الاحتراق النفسي" بين أطباء مستشفي جامعة قناة السويس وأهم الضغوط التي يتعرضون لها، وما إذا كانت هناك اختلافات متعلقة بنوع الطبيب؛ ذكر أو أنثى.ولقد تم تطبيق هذه الدراسة على عينة تتكون من ٨٤ طبيبا مقيما يعملون في المستشفى الجامعي بالإسماعيلية؛ و لقد تم استخدام استمارة استبيان تتكون من ثلاثة أجزاء:جزء للاستعلام عن البيانات الشخصية، جزء للاستعلام عن درجة الاحتراق النفسي الذي يعانيه الطبيب ،وجزء للاستعلام عن الضغوط التي يتعرض لها الطبيب . تكونت عينة البحث بشكل كبير من الأطباء الذكور (٧٤,٢ %) وغير المتزوجين (٤٣,١ %)، كما وجد أن متوسط عدد ساعات العمل يزيد عن ٨٣ ساعة عمل في الأسبوع (بانحراف معياري ٣٥,٥). أما من حيث تأثير الضغوط المتعلقة بالعمل على الأطباء فقد وجد أن الإنهاك الشعوري كان متواجدا بدرجة كبيرة بين ٧٥% من عينة البحث، والتهكم بين ٤٠,٧%، ونقص الشعور بالكفاءة المهنية بين ٢٧,٤%.ووفقا للمعيار الذي اتخذته الدراسة لتعريف المصاب بمتلازمة الاحتراق النفسي بأنه الشخص الذي يسجل معدلا عاليا في اثنين- على الأقل- من الأبعاد الثلاثة لمتلازمة الاحتراق النفسي، فقد وجد أن معدل انتشار الاحتراق النفسي بين الأطباء المقيمين يصل الي ٤٣,٥ %.من ناحية أخرى؛ وصل معدل الشعور بالضغط الشديد الناتج عن ظروف العمل الي ٤٢,٩% و الشعور بالضغط الشديد الناتج عن التفاعل مع الجمهور الي ٣٣,٣ % بين الأطباء الذين شملتهم العينة.ومن النتائج الهامة التي توصلت لها الدراسة أن الإصابة بالاحتراق النفسي و الشعور بالضغط الناتج عن العمل لا يتوقفان على نوع الشخص-ذكر أو أنثى- فالجميع معرضون وبنفس الدرجة لمثل هذه المشاكل.وبأخذ بعض الأبعاد الاجتماعية الأخرى بالاعتبار، لوحظ أن الإنهاك الشعوري والتهكم الناتجين عن العمل لا يعتمدان في حدوثهما علي الحالة الاجتماعية للطبيب-أعزب أو متزوج- في حين أن نقص الشعور بالكفاءة المهنية يتأثر إحصائيا بهذا المتغير؛ فالطبيب المتزوج يكون أكثر اعتدالا في شعوره بالكفاءة المهنية. أما الشعور بالضغط الناتج عن ظروف العمل و التفاعل مع الجمهور فقد وجد أنه لا يتأثر بالحالة الاجتماعية للطبيب؛ فهذا الشعور يختبر بشكل متساو تقريبا بين الجميع.وبأخذ عدد الساعات التي يعملها الطبيب أسبوعيا في الاعتبار؛ وجد أن الإنهاك الشعوري والتهكم الناتجين عن العمل لا يعتمدان في حدوثهما علي هذا المتغير، وإن كان كلاهما أكثر انتشارا بين الأطباء الذين يعملون لأكثر من ١٠٠ ساعة أسبوعيا. وعلى الجانب الآخر، فإن نقص الشعور بالكفاءة المهنية يرتبط بعلاقة إحصائية قوية مع متغير عدد ساعات العمل، حيث يقل الشعور بنقص الكفاءة المهنية كلما ازداد عدد ساعات العمل والعكس بالعكس، وهو ما يشير إلى أن الأطباء المقيمين يقيمون كفاءتهم المهنية بالكم بشكل أساسي. وفيما يخص الشعور بالضغط الناتج عن ظروف العمل و التفاعل مع الجمهور فقد وجد أنه لا يتأثر إحصائيا بعدد ساعات العمل أسبوعيا، وإن كان هذا الشعور أقل نسبيا بين أولئك الذين يعملون لأقل من ٥٠ ساعة أسبوعيا.ولقد ثبت – من خلال هذه الدراسة- أن الأوجه المختلفة لظروف العمل لها اليد العليا على التفاعل مع الجمهور كمصدر للشعور بالضغط الشديد بين الأطباء المقيمين. ولقد جاء ضعف العائد المادي وفقدان الاتصال مع إدارة المستشفى وأخذ الملاحظات السلبية على أداء الطبيب لمساحة كبيرة مقارنة بالملاحظات الإيجابية من قبل من هم أقدم على رأس قائمة الأوجه المختلفة لظروف العمل المسببة للضغط بين الأطباء المقيمين. على الجانب الآخر؛ فقد جاء الشعور بعدم القدرة على مساعدة بعض المرضى و انعدام التوافق بين

توقعات كل من الطبيب وأهل المريض حول الرعاية التي يتطلبها المريض على رأس قائمة الأوجه المختلفة للتفاعل مع الجمهور والتي تسبب الشعور بالضغط الشديد. وبدراسة العلاقة بين الاحتراق النفسي و الشعور بالضغط الناتج عن العمل فقد وجد أن الإنهاك الشعوري يرتبط بعلاقة إحصائية قوية بظروف العمل التي يعمل من خلالها الأطباء المقيمون، في حين أنه لا يبدو أن أياً من التهكم أو نقص الشعور بالكفاءة المهنية يعتمدان في حدوثهما على متغير ظروف العمل.

أما عن النتيجة الأكثر بروزاً في هذه الدراسة فقد وجد أن الأوجه المختلفة للتفاعل مع الجمهور والمتسببة في الشعور بالضغط الناتج عن العمل ترتبط بعلاقة إحصائية قوية بكل من الأبعاد الثلاثة لمتلازمة الاحتراق النفسي - الإنهاك الشعوري و التهكم و نقص الشعور بالكفاءة المهنية- وهو ما يشير إلى أهمية تأهيل الأطباء الجدد لمثل هذه التفاعلات. وعليه فقد خلصت الدراسة إلى عدد من التوصيات التي تهدف للمساهمة في الحد من انتشار هذه المشكلة: القيام بعمل تقييم سنوي لمتابعة مستوى ومدى انتشارالاحتراق النفسي بين الأطباء المقيمين، إيجاد آلية لتقديم المشورة النفسية للأطباء الذين تتعرض إصابتهم بمتلازمة الاحتراق النفسي. تنظيم ورش عمل لتعليم الأطباء الجدد المهارات الاجتماعية الأساسية التي يحتاجونها للتعامل في المواقف المختلفة.