TRAUMATIC EVENTS FOR HOUSE OFFICERS AND THEIR COPING STRATEGIES

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ABSTRACT

Objective: To determine the major stresses of house officers, causes of these stress and the coping strategies.
Study Design: Descriptive cross sectional study.
Place and Duration of Study: Study was conducted in 13 different tertiary care hospitals of Karachi in both government and private sectors from Oct to Nov 2017.
Material and Methods: A descriptive cross sectional study with multistage random sampling technique was done in which a self-designed and self-explanatory questionnaire was used. Results were analyzed using statistical package for social sciences (SPSS) version 20.
Results: About 300 questionnaires were distributed to interns. From the total, 83.9% participants were female. The mean age of the participants was 24 years. Out of the total respondents, 9.4% participants stated no any significant medical mistake. Issues arising due to lack of knowledge or incompetency leading to mis diagnosis of patients were reported by 20.5% respondents. One of the common mistakes reported was wrong drug administration; either route, dosage or incorrect medicine, committed by about 25.3% of doctors participated. The most reported reason thought to be the underlying cause of mistakes was work overload that was about 36.3%.
Conclusion: It can be concluded by the present study that house officers are susceptible to stress which affects their overall work performance and it leads to significant medical mistake due to which patient suffer and because of this pressure it's very hard both physically and mentally for a doctor to cope up.

Keywords: Coping strategies, House officers stress, Misdiagnosis.

INTRODUCTION

Stress is defined as any uncomfortable emotional experience accompanied by predictable biochemical, physiological and behavioral changes. A stimulus that induces stress is called a stressor[1,2]. Stress is known to be prevalent in the field of medicine[3]. A constant proportion that is about 28% of doctors and other health care professionals have been shown to have above threshold levels of stress. Stressors in the field of medicine are sleep deprivation, long working hours, un-cooperative co-workers, family problems, fear of death of patient and self-reported mistakes[4]. Several studies have been carried out which have suggested the idea that house officers experience monstrous levels of stress during their training period (1 year after graduation). In 2013, a study was carried out in Karachi in which 47.9% of house officers (HO) were found to be under stress of whom 24.8% were males and 75.2% were females[5]. These high levels of stress can cause cognitive impairment, chronic anger, cynicism and family discord leading to mistakes which can threaten the life of the patient[6]. Optimal amount of stress facilitates learning and adaptation but despite such noble intentions it often leads to unfavorable consequences by suppressing the learning and decision-making abilities and impaired cognitive function, finally leading to fatal mistakes[2,7]. House officers are far more susceptible to make mistakes due to inexperience and also the because of the urge to learn more in a short time frame[8-10].

According to literature, the mistakes made by house officers included errors in diagnosis, drugs prescription, disease evaluation, communication errors and procedural complications.

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Examples of errors in prescribing and dosing could be that the house officer didn't read the syringe and gave more quantity of drug than the correct dose, mistakes due to faulty communication could be that the HO failed to document "don't resuscitate" order in chart. These mistakes were a result of unduly stress. Errors made in diagnosis or evaluation are because of incomplete knowledge and inexperience. Learning to cope with human tragedy, limitations of medicine, work overload and their own morality is hard work for even the most resilient of young doctors[11-13]. A study conducted by A.W.Wu *et al* found that house officers who accepted the responsibility and discussed their mistakes with their supervisor made constructive changes in their practice compared to those who refused and tried to escape the reality[12]. Female junior doctors are more likely to use direct helping strategies, while men use more cognitive strategies of coping[14,15]. Mistakes are inevitable in the field of medicine because of the complex nature of this field but trivial mistakes which are committed due to stress can be avoided easily. Avoiding these mistakes will improve the quality of health services and will save the lives of many patients[16,17]. Therefore, the aim of this study is to determine the major mistakes of house officers, causes of these mistakes and the coping strategies.

MATERIAL AND METHODS

A descriptive cross sectional study was conducted in 13 different tertiary care hospitals of Karachi in both government and private sectors from October to November 2017. These hospitals included: Jinnah Postgraduate Medical Centre (JPMC), National Institute of Child Health (NICH), the National Institute of Cardiovascular Diseases (NICVD), Altamash Institute of Dental Medicine, Ziauddin Hospital, Abbasi Shaheed Hospital and Civil Hospital. A self-designed and self-explanatory questionnaire was prepared using and disseminated using Google forms also by visiting different hospitals. The questionnaire was validated by pilot testing on a sample of 20 house officers. Multistage random sampling technique was used in which during the first stage thirteen different hospitals were randomly selected while in the second stage house officers were randomly selected from every ward of the hospital. The sample size was calculated to be 278, at 95% confidence level by using Open Epi calculator. The questionnaires were distributed to house officers of different hospitals of Karachi during their duty hours. The risk factors of stress covered: knowledge of the house officer stress syndrome, presence of symptoms pertaining to workplace stress (fatigue, depression etc.), mental well-being, work satisfaction, sleep schedule, balance between occupational and recreational activities, significant medical mistakes their outcome and way of coping up and effect of stress on cognitive function and decision making. The survey was completed in two months. The data was analyzed by using statistical package for social sciences (SPSS) version 20. All variables were presented as frequency and percentages. For Likert scale (0-5) was assigned to each option, starting from 'never' up to the 5th point assigned as 'very frequently'. The coefficient of reliability including Cronbach's alpha score for the questionnaire was 0.657 which showed that the questionnaire was approximately 65% internally consistent.

RESULTS

About 297 fully filled questionnaires were obtained, out of total 400 questionnaires, from 13 different public and private hospitals of karachi. Out of total participants, about 249 (83.9%) were female while about 252 participants were having marital status of single (84.6%). The mean age of the participants was 24 ± 1.2 years. Mistakes reported by the house officers were classified into 5 broader groups. Out of the total respondents, 28 (9.4%) participants stated no any significant medical mistake. Issues arising due to lack of knowledge or incompetency leading to misdiagnosis of patients was reported by 61 (20.5%) respondents. While error in patient's evaluation including missing vitals or laboratory reports was reported by 47 (15.8%) of participants. One of the common mistake reported wasinaccurate

treatment modalities including wrong drug administration, either route, dosage or incorrect medicine, committed by about 75 (25.3%) of doctors participated. Poor judgement (excluding errors due to lack of knowledge or incompetency) or poor decision included leaving patient unattended or making patient wait during work overload or for having lunch or talking was committed by 86 (29%) of participants. Some of the major mistakes done by every 5th house officer is summarized in table-I. The most reported reason thought to be the underlying cause of mistakes was work overload (36.3%). The second leading cause was inexperience

Table-I: Summary of major mistakes and their outcome.

Mistakes	Patient Outcome
Error in diagnosis (n=61)	
Did not diagnose patient critical condition	Shifted to ICU
Discharged patient who had severe diarrhea	Shock
Unable to answer patient medical issues	Delayed diagnosis
Discharged a patient in emergency room	Readmitted
Was taking care of MI	Death
Mishandled a tuberculosis patient	Delayed treatment
Got MRI Brain instead of MRI spine	Delayed diagnosis
Unnecessary tests	Delayed diagnosis
Error in evaluation (n=47)	
Didn't take vitals of patient	Death
Took wrong BP	Hypotension
Sent lab of one patient with another patient requisition/file	Delayed diagnosis
Forgot to check ABG's	Delayed diagnosis
Patient was bleeding profusely	Death
Error in Prescription (n=75)	
Wrong dosage	Toxicity
Gave KCl instead of 25% dextrose	Arrhythmias
Once replaced K+ in normokalemic patient	Hyperkalemia
Injected labetalol to patient and heart failure took place	Death
Transfused FFP'S to a patient having fever	None
Prescribed high dose of antibiotics to a kid	None
Filled NS instead of distilled water in Foley catheter	None
Rate of supporting drug (dopamine) was too fast	Shifted to CCU
Injected IV instead of IM	None
Injected patient D/S instead of N/S	Chest congestion
Gave patient extra dose of Lasix	Hypotension
Injected 40 units of Insulin	Hypoglycemia
Negligence (n=86)	
Not attending to a respective patient on a very busy call.	Delayed treatment
lacked in patient's care	Death
Wrong blood transfusion	Transfusion reaction
Couldn't attend my personal beds due to work load	Delayed treatment
Didn't explained the procedure to patient	Death
Forgot to give lasix to patient during transfusion	None
Was taking rest on heavy call	Death
Sent patient for dialysis without accompanying him with two blood bags to be transfused during dialysis	Delayed procedure
Pricked two patients with same needle	None

leading to either misdiagnosis or mishandling. Lack of knowledge as well as poor guidance or supervision from seniors was also a significant cause as shown in fig-1. Another significant point observed in house officers was the fear of patient's death which was reduced over time. There were multiple strategies mentioned in table-II, which were used by the house officers to cope up the fear of patients death, leading to young house officers (HOs) to learn from their mistakes as well as creating institutional change in clinical practice. Significant numbers of studies reported physical as well as emotional exhaustion at work resulting in non-existing enthusiasm for work. It might have resulted from enormous workload and patients' responsibilities that fall on HO's shoulders. This is common to all the studies[18,19]. HO's find some patients unbearable,

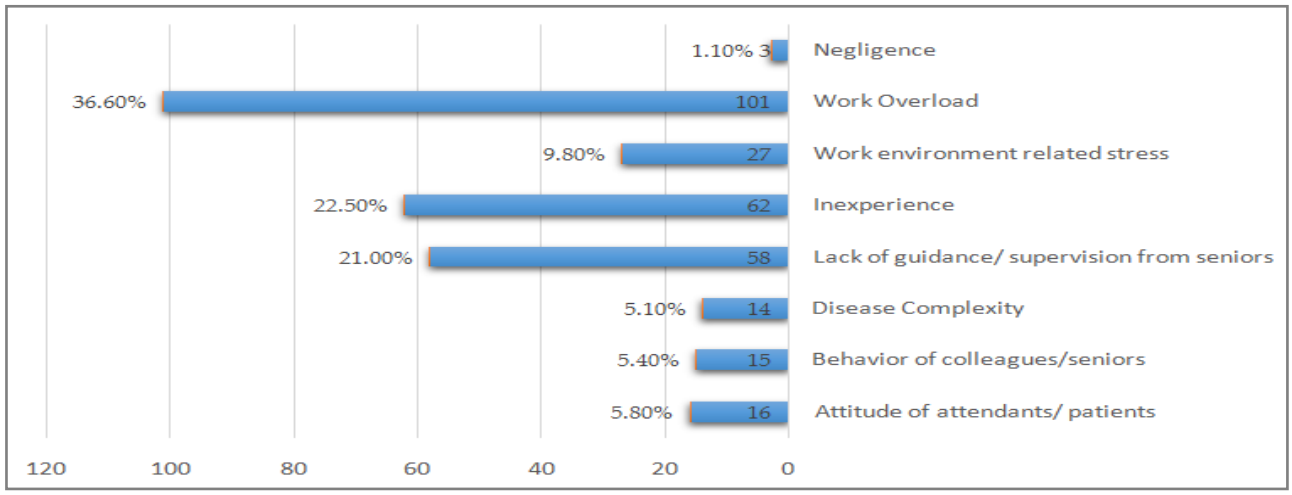

Figure: Causes of mistakes done by house officers.

Table-II: Coping strategies adopted by house officers to overcome the fear of death.

Coping Strategy	N=297	Percentage
Rationalized/ accepted	69	23.2
Supported patient	38	12.8
Talked to others for support	72	24.2
Avoid	17	5.7
Optimistic faith	37	12.5
Deny responsibility	2	0.7
Expressed emotion	50	16.8
Failed to cope	12	4

passive acceptance but very few of them about 12 (4%) of participants were failed to cope up the fear of patient's death.

DISCUSSION

Mistakes are unavoidable in the clinical practice, especially among the house officers as they are newly enrolled in clinical practice so having more chance of making mistakes the current study focus on the reasons behind the mistake, just to overcome the thing and help the and are unable to answer the patients' questions and demanding attendants are also a cause of increase stress among HO's which leads towards the greater chances of mistakes[20]. Other studies don't show such a large proportion[21] It may be because of the overwhelming size of underprivileged patients found in hospitals particularly government hospitals (offering almost free of cost treatment). Many reasons such as long work duration, sleep deprivation and fear of making mistakes results in house officers

committing blunders therefore risking the lives of patients. One third of HOs mentions the pressure they receive from senior doctors. Some studies support[19] while other differ to the current finding[22], the probable reason for the variation might be the different hospital settings and ward rotations. One of the common mistakes reported was wrong drug administration, either route, dosage or incorrect medicine. Despite all the above factors the participants said that the most important thing that adds to the stress is lack of sleep. Studies suggest that sleep deprivation has adverse effects on the health of individuals which leads to disorientation and wrong decision making by the house officers[23, 24].

CONCLUSION

It can be concluded by the present study that house officers are susceptible to stress which affects their overall work performance and it leads to significant medical mistake due to which patient suffer and because of this pressure it's very hard both physically and mentally for a doctor to cope up. Learn to be professionally responsible is an important part in making of a doctor but majority of mistakes committed by house officers are alarming for the senior doctors, to think they should either expect or not. So the supervision of house officers is recommended to give them confidence. It is further recommended that hospital management and all the concern authorities should unite together to resolve the problems facing by house officers to make a better healthcare system.

CONFLICT OF INTEREST

This study has no conflict of interest to be declared by any author.

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