

ARTICLE INFO

Received: 10-03-2021

Accepted: 10-05-2021

Online: 30-09-2021

Clinical Audit in a General Surgery Rotation: Responses and Professional Opinion of Participating House Officers

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To cite this article: Huei TJ, Novinth K, Henry TCL. Clinical audit in a general surgery rotation: responses and professional opinion of participating house officers. *Education in Medicine Journal*. 2021;13(3):15–19. <https://doi.org/10.21315/eimj2021.13.3.2>

To link to this article: <https://doi.org/10.21315/eimj2021.13.3.2>

ABSTRACT

House officers (HOs) face numerous challenges to adapt to new working environment following months of unemployment. Several studies have addressed their psychological distress, and identified that general surgery is one of the most stressful rotation. In this current study, we intend to study their emotional responses when they are participating in clinical audit. The responses were assessed with Positive Affect and Negative Affect Scale (PANAS). Those who participated in the survey had more positive affect than negative affect. A small proportion of them had a sense of guilt and fear. HOs work far from original hometown and away from family members are having less positive affect. Appropriate measures to allow HOs to work close to family may improve work efficacy and emotional health.

Keywords: *Audit, House officers, Opinion, General surgery*

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INTRODUCTION

In Malaysia, fresh graduates embark on their journey as professional health care providers as a house officer (HO). Due to the disparity between the vast number of medical schools in comparison to limited number of training posts available, the waiting list to commence this compulsory rotating housemanship ranges from 8 months to 11 months upon graduation. Furthermore, this is an arduous journey, with one-third of them requiring extended period of training due to lack of aptitude or unsatisfactory competency assessments. There is a possible correlation between rates of extension during housemanship

with the rate of psychological distress which is reported between 31% to 50% from Malaysian hospitals (1). The HOs reported the highest rate of distress in general surgery (1). The main reasons for distress were due to the pressure to perform competently. The most common coping strategy used was emotion-focused coping (2). To alleviate these distressing factors, preparatory courses for general surgery HOs was conducted and were found to be effective in improving levels of confidence and competency. Clinical audits are routinely conducted for quality improvement purposes in the general surgery department. These audits are often led by a surgeon and medical officers, with the HOs contributing to the data

collection process. HOs play a pivotal role in data entry as they are clinically trained in conducting audits from medical school and often are the first medical personnel that is involved in performing the general clerking of newly admitted patients. Being in a stressful condition of a general surgery posting and being involved in additional work of a clinical audit, we could not find any literature to substantiate that participation in these audits may lead to an increase in stress among HOs. Furthermore, the previous reports on distressed HOs did not address their attitude or perception in regard to the involvement in quality improvement and additional clinical audit tasks. Knowing that the general surgery is the most stressful posting (3), the objective of this study is to explore the emotional responses and attitude of the HOs when they are assigned to a role in a clinical audit. Secondary objective of this study is to determine other possible stressful conditions which may allow improvement for better mental health outcomes during a general surgery rotation. The tool to assess the emotional responses was the Positive Affect and Negative Affect Scale (PANAS) (4). This scale was validated and is commonly used in assessing the well-being or emotional status in health care workers (5).

METHODS

The aim of this study is to determine the emotion responses and attitudes towards an additional non-clinical assignment of a clinical audit in the General Surgery Department of Hospital Sultanah Aminah (HSA). In addition, the overall completion rate of assignment will be described.

Study Design and Subjects

This was a descriptive cross-sectional study conducted in HSA, Johor Bahru, Malaysia which is the largest teaching hospital and tertiary referral centre within the state. An average of 50 to 80 HOs rotate through the general surgery department every quarter of

the year since 2016. The response given to the online questionnaire by the participating surgical HOs were collected from 1st January 2021 to 28th February 2021 using universal sampling. All general surgery HOs rotating through the department that consented for the study were included in this study.

Study Instruments

All general surgery HOs were given an online survey which includes sociodemographic data and PANAS that is completed during their general surgery rotation over period of four months. The PANAS was used to assess the emotion of the individual HO towards the clinical audit over a one-month period. Each HO was tasked with collection of data pertaining to a specific audit which was performed in the general surgery department for one month. Each item of the scale was scored in Likert scale of 1 to 5 and there were 20 items for emotional assessment (10 for positive affect, 10 for negative affect). The final scores for both positive and negative affect ranging between 10 to 50 after summing up all the items for both groups of responses.

The sociodemographic data that were obtained from the respondents include age, gender, marital status, number of children, number of HO rotation completed, interest towards surgical field, graduating medical schools and their place of origin.

Statistical analysis and data analysis were performed with SPSS with the appropriate statistical tests. The calculated outcome variables were presented in mean (SD) and frequency (%) whenever possible. The association between the sociodemographic factors towards the emotions were analysed using student *t*-test. A *p*-value of less than 0.05 with a confidence interval of 95% were considered significant in this analysis.

RESULTS

A total of 28 HOs that responded to the questionnaire which completed 58.4% of the clinical audit that comprises of 143/248 patient data.

This cohort of HOs were equally distributed in terms of seniority by clinical service duration, ranging from one rotation to six rotations. The average age of the respondents were 27 years (25 to 32). There were 64.3% of female respondents of which, majority (85.7%) were single and unmarried. Nearly half of the participants were serving housemanship away from their place of origin or hometown. Majority (82.1%) had the aspiration to pursue postgraduate specialty education.

From Table 1, the positive affect items had higher scores in comparison to the negative affect item. All the positive affect items were scored more than 3, compared to negative affect items which only had two items being scored more than 3 which are “sense of guilt” and “scared” if the assignment were incomplete.

From Table 2, the only factor which is staying away from hometown (outstation) had a significant decreased positive affect. This might be a sign of depressed mood in this group of HOs due to being away from family and desired hometown. Other factors such as gender, marital status, interest towards surgery, seniority of HO, university of origin did not reveal any significant difference towards their emotional response when assignments were given to them.

Table 1: PANAS item from the respondents

PANAS item	Mean	SD
Positive affect item (1 to 5)		
Interested for this assignment	3.61	0.832
Excited for this assignment	3.29	0.810
Feeling strong following completion of this assignment	3.25	0.844
Feeling enthusiastic with this assignment	3.36	0.826
Feeling proud to be involved in this assignment	3.61	0.994
Felt alert when doing this assignment	3.82	0.863
Felt inspired for doing this assignment	3.54	0.838
Felt determined when doing this assignment	3.75	1.041
Feel attentive when doing this assignment	3.79	0.995
Feel active when doing this assignment	3.71	0.976
Negative affect item (1 to 5)		
Distressed for this assignment	2.07	0.858
Upset for this assignment	1.61	0.832
Feeling guilty if not doing this assignment	3.64	1.062
Feeling scared if this assignment not done	3.43	0.920
Do you feel hostile towards your superiors as a result of this online discharge?	1.71	0.897
Feeling irritable to do this assignment	1.68	0.905
Felt ashamed while doing this assignment	1.25	0.585
Felt nervous for doing this assignment	2.21	1.397
Feel jittery towards this assignment	1.46	0.793
Felt afraid towards this assignment	1.68	0.983

Table 2: Emotional response from HOs towards the clinical audit assignment

Item	Positive affect	p-value	Negative affect	p-value
All HOs (n = 28)	35.71 (7.27)	–	20.75 (5.13)	–
Female (n = 18)	36.1 (8.54)	0.706	19.7 (4.69)	0.137
Male (n = 10)	35.0 (4.49)		22.7 (5.56)	
Married (n = 4)	38.3 (5.7)	0.469	20.3 (3.2)	0.838
Single (n = 24)	35.3 (7.5)		20.8 (5.4)	
Hometown nearby (n = 14)	38.8 (3.8)	0.022	19.0 (4.07)	0.070
Outstation (n = 14)	32.6 (8.7)		22.5 (5.6)	
Intention to pursue surgery (n = 23)	36.5 (7.3)	0.214	20.13 (4.98)	0.175
No intention to pursue surgery (n = 5)	32.0 (6.5)		23.6 (5.36)	
Senior HO (Year 2) (n = 8)	33.25 (10.2)	0.265	20.75 (1.73)	1.000
Junior HO (Year 1) (n = 20)	36.7 (5.7)		20.75 (1.19)	
Local university graduates (n = 10)	38.3 (4.19)	0.165	20.3 (3.6)	0.737
Private university graduates (n = 18)	34.27 (8.28)		21 (5.88)	

In regard to their professional opinions of the potential value or benefit of the clinical audit, they rated an average score of 7.6 out of 10. In a scale of 1 to 5, they rated an average score of 2.1 when asked whether the assignment was troublesome. They rated a low score of 1.8 out of 5 when asked whether to discontinue the clinical audit. Inferentially, the respondents were receptive in actively participating in a clinical audit and were keen to proceed further if given another opportunity.

DISCUSSION

Data collection for clinical audit is a norm in the general surgery department. As the HOs were often assigned to the same ward for a given period, they were tasked to assist in most of the data collection related to inpatient clinical parameters. In this current study, we studied the HOs' perspectives when they are being assigned to an additional role of participation in a clinical audit by keying patient clinical information. Interestingly, we found that this cohort of HOs had mostly positive affect and positive attitude towards involvement in clinical audit and data collection (see Table 1).

General surgery department was reported to induce higher stress levels among the HOs in certain centres in Malaysia, attributed by the long working hours which led to irregular meal intake (3). In contrast, the factors resulting in less depression were having lectures or continuous medical education and protected study time (3). In this study, the additional assignment of clinical audit revealed a positive affect from the HOs. The relevant items of positive affect include enthusiasm, interest, determined, excitement and inspired. They scored more than 3 on average for each item out of total score of 5. Their professional opinions revealed the understanding of potential benefit of participation in a clinical audit and did not feel troubled in needing to complete the assignment. However, the overall completion rate was only 58%. This may be due to self-distraction as demonstrated by minority of respondents that had a more negative affect. Similarly, a previous local study revealed that more than a third of the HO were in distress and one of their coping strategy is by distraction (2). In this current study population, those who were not interested or having a negative affect were possible contributing factors of incomplete data collection.

Current analysis revealed that those who were geographically distanced from family had a lower score for positive affect. This result concurs with a previous study performed in Kuching Hospital. HOs that graduated from foreign medical schools had higher odds of depression, anxiety and stress (1). These findings may be communicated with the human resources department in order to improve the geographical manpower distribution, especially for doctors in the future. The measure of allowing junior doctors to work close to their hometown may increase job satisfaction and alleviate stress and depression. This study is limited by the small sample size. However, the participants involved were from an equal distribution of work experience and they have provided truthful and accurate responses following assurance of confidentiality.

CONCLUSION

Contrary to the previous report, this cohort of HOs' perspective towards non-clinical assignment such as clinical audit is encouraging. When given this assignment of clinical audit in addition to routine clinical duties, majority experienced a positive affect. Nonetheless, a small percentage did have a negative affect of fear and guilt. The main factor that resulted in reduced positive affect was being away from the comfort of home and family.

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