

Physical Examinations of Psychiatric Patients who Presented at the Emergency Department of a Tertiary-Care Hospital in Oman

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ABSTRACT

Objective: The objective of this study was to examine the completeness of physical assessment of patients presenting with psychiatric problems to the Emergency Department (ED).

Methods: This was to observational study based on a retrospective review of the medical records of patients who attended the ED of Sultan Qaboos University Hospital and referred to the on-duty psychiatrist for assessment over a 12 months period. All patients aged 16 years and above, who presented to the ED with a psychiatric complaint were included in the study. A data collection sheet was designed to gather each patient's demographic data such as age and gender, past psychiatric history, nature of the presenting complaints, thoroughness of physical assessment, medications prescribed by the ED doctor prior to psychiatric assessment, and whether the patient was discharged, admitted to a psychiatry or medical ward.

Results: A total of 202 patients met the inclusion criteria. The mean age of the patients was 34.2 years. Females represented 56% of the sample. The majority of the study group (60.4%) were patients with a documented past psychiatric history. Physical examination was conducted in the ED for 61.4% of the patients, while vital signs were recorded for 68.8% of them. Approximately, 31% of the patients required injectable psychotropic medications as tranquilizers in the ED. Patients with an isolated psychiatric complaint coupled with a documented past psychiatric history were more likely to be referred to the on-call psychiatrist without a physical examination by the ED doctors.

Conclusion: In our institution, not all patients with psychiatric presentations had a complete physical examination by the ED doctors.

Key words: Emergency Department, mental health, Oman, physical examination, psychiatric patients

ملخص البحث:

تهدف هذه الدراسة المبينة على مراجعة الملفات الطبية إلى تقصي معدل إجراء الفحوصات السريرية للمرضى النفسيين عند حضورهم لقسم الطوارئ بمستشفى جامعة السلطان قابوس بمسقط، شمل البحث 202 مريضاً خلال فترة الدراسة. وكانت نسبة السيدات 58%. تم إجراء الفحص الإكلينيكي لـ 61.4% منهم بينما تم تسجيل الوظائف الحيوية لـ 68.8%. يوصي الباحثون إلى نشر الوعي بين أطباء أقسام الطوارئ إلى ضرورة إجراء الفحص السريري للمرضى النفسيين لتلافي المضاعفات الجانبية للأدوية

Access this article online

Quick Response Code:



Website:

www.sjmms.net

DOI:

10.4103/1658-631X.188248

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How to cite this article: Al-Huseini S, Al-Madhani A, Al-Shehhi A, Al-Sinawi H. Physical examinations of psychiatric patients who presented at the emergency department of a tertiary-care hospital in Oman. Saudi J Med Med Sci 2016;4:206-11.

INTRODUCTION

Psychiatry is “a medical field concerned with the diagnosis, treatment, and prevention of mental health conditions.”^[1] Countries around the world are developing their mental health services due to the high prevalence of psychiatric disorders.^[2,3] According to the WHO atlas of mental health resources in the world published in 2014, globally, the median number of mental health workers is 9/100,000 population, but there is extreme variation (from below 1/100,000 population in low-income countries to over fifty in high-income countries).^[4] In general, mental health is a neglected area of research including the Gulf States, where there is a lack of attention to mental health research. Available studies indicate a high prevalence of psychosomatic disorders, depressive disorders, and anxiety disorders.^[5]

In Oman, the majority of mental health services are located in tertiary care hospitals with out-patient facilities based at regional polyclinics, which operate only during the working hours of the polyclinic. The distribution of diagnoses varies across facilities; in out-patient clinics, neurotic, and mood disorders are the most common whereas inpatients are more likely to have been diagnosed with schizophrenia or bipolar disorder. Patients in need of psychiatric care outside working hours present to the Emergency Department (ED) where they get triaged by the ED staff before being assessed by the on-duty psychiatrist.

Medical clearance of psychiatric patients is defined as the initial medical evaluation of patients presenting with psychiatric symptoms before referring them for psychiatric assessment.^[6] While some studies consider that screening of all patients is not necessary waste of resources, others consider it essential as some physical disorders can present with psychiatric symptoms. Furthermore, some psychotropic medications have serious side effects, such as cardiac dysrhythmia and metabolic disorders. Several studies have reported that patients with mental health issues have a greater risk of morbidity and mortality compared to the general population. This is often attributed to factors such as the side effects of medication, an unhealthy life style, obesity, and lack of exercise. Psychotropic medications are associated with an increased risk of developing diabetes, metabolic syndrome, dyslipidemia, cardiovascular disorders, and sexual dysfunction.^[7]

Conducting a physical assessment of a patient in the ED before admission to a psychiatric ward is a common task for ED doctors. The aim of this study was to examine the

extent of physical assessments of patients presenting to the ED with psychiatric problems.

METHODS

This was an observational study based on retrospective review of medical records of patients who attended the ED at Sultan Qaboos University Hospital (SQUH) from March 2014 to March 2015 and were referred to the on-duty psychiatrist for assessment.

SQUH is a tertiary care teaching hospital located in the capital city, Muscat. It is a general hospital with several specialties, including psychiatry. The ED at SQUH provides a 24-h walk-in service in which emergency and urgent cases are accepted from all over the country for assessment after being triaged by the ED triage nurse. Routine cases are referred back to regional primary health centers or referred to the specialized out-patient clinics at SQUH. The policy of the hospital states that all patients assessed in the ED must undergo a physical assessment, which includes a physical examination and recording of vital signs, including pulse rate, blood pressure, temperature, and oxygen saturation. This process is applied to patients who present with psychiatric complaints as well.^[9] In this study, patients who were not referred to the on-duty psychiatrist and those who were <16 years of age were excluded. Patients who attended the ED more than once during the study period were recorded once.

A data collection sheet was designed to gather the patients' demographic data, such as age, gender, past psychiatric history, nature of the presenting complaints, whether the patient presented with psychiatric complaints only or combination of physical and psychiatric complaints. The data collection sheet also included physical assessment, medications, medications prescribed by the ED doctor prior to psychiatric assessment, and whether the patient was discharged or admitted to a psychiatry or medical ward. The psychiatric complaints included behavioral disturbance, mood symptoms, delusions, hallucinations, memory impairment, and sleep and appetite disturbance.

The Statistical Package for Social Sciences (SPSS Version 20 BM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp) was used for data entry and analysis. Patient characteristics were summarized using means (\bar{x}) and standard deviation (s) for continuous variables (age) and frequencies and percentages for categorical variables. The case control approach analysis was used to identify factors affecting the performance

of physical examination and recording vital signs in the ED. Patients who underwent a physical examination represented the cases and those who were not examined represented the controls. Pearson Chi-square test, odds ratio, and the 95% confidence interval were used to estimate the magnitude of any association. The association was considered significant if the $P < 0.05$.

RESULTS

A total of 202 patients were eligible for inclusion in this study. The mean age of the sample was 34.2 years. Females represented 56% ($n = 114$) of the sample while 44% ($n = 88$) were males. The majority of the sample, 60.4% ($n = 122$) were patients who were under the care of the Psychiatry Department in SQUH before presenting to the ED whereas the remaining 39.6% ($n = 80$) had presented for the 1st time. A physical examination was conducted in the ED for 61% ($n = 124$) of the patients, while an assessment of vital signs was done for 68.8% ($n = 139$). Approximately, 31% ($n = 62$) of the patients required injectable psychotropic medications as tranquilizers in the ED. The most frequent prescribed medications were a combination of haloperidol and lorazepam injections, lorazepam injection alone and diazepam injection alone. Each of the three groups represented 6.9% of the total sample, followed by haloperidol injection alone (5.4%) then a combination of haloperidol and diazepam injections (2.5%). Other medications used were intramuscular promethazine and intravenous midazolam injections [Figure 1].

Of the total sample, 28.7% ($n = 56$) of the patients required assessment by an internal medicine specialist in the ED either before or after assessment by the on-duty psychiatrist. A specialist medical assessment was requested to evaluate and manage patients who had overdosed on medications and to assess patients who presented in an acute confused state or with neurological manifestations. The final dispositions of patients from the ED were grouped into three categories, those who were admitted to the psychiatry ward represented 49% ($n = 99$), those who were discharged home represented 47% ($n = 95$) and those who were admitted to the medical ward in SQUH represented 4% ($n = 8$).

Tables 1 and 2 illustrate the analyses of the factors that might affect the performance of a physical examination in the ED and assessment of vital signs, respectively. The following factors were addressed: Age, gender, and the nature of the presenting complaints. Age, gender and assessment of vital signs did not show a significant

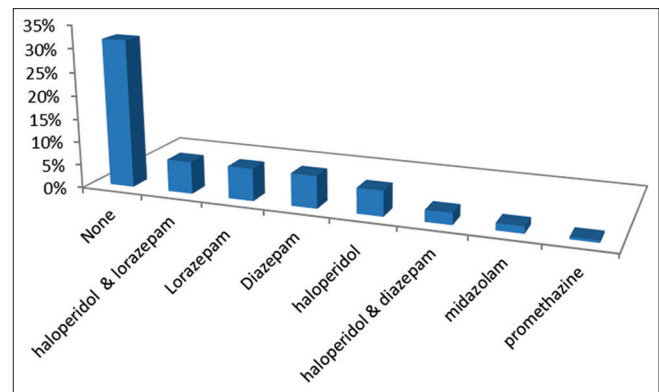


Figure 1: Percentage of patients received injectable psychotropic medications in the Emergency Department.

association with the performance of a physical assessment. A significant association was found between patients who had presented to the ED at SQUH hospital for the 1st time and the likelihood of being examined (They may have presented to an ED in another hospital.) by the ED doctor, compared to those who were patients known to the Psychiatric Department at the hospital ($P = 0.003$). With regard to the assessment of vital signs, no significant difference was found between the two patient groups. The nature of the presenting complaints was found to be strongly related to the physical assessment of the patients. Patients who presented mainly with psychiatric complaints were less likely to be examined by the ED doctor and less likely to undergo an assessment of vital signs compared to those patients who presented with physical complaints.

DISCUSSION

Physical examination is important to identify a medical condition that can cause or exacerbate an underlying condition and to identify cases that cannot be managed in the psychiatric ward.^[10] In general, a physical examination should be performed on all patients presenting to the ED. Doctors must obtain vital signs and address any abnormalities.^[10] Henneman *et al.* reported clinically significant findings in 25% of vital sign measurements in patients presenting with psychiatric symptoms.^[11] Psychiatric illnesses should not cause abnormal vital signs, therefore, abnormalities should raise the clinician's suspicion of an organic cause. Studies have shown that physical examinations are a necessary component of a comprehensive evaluation of psychiatric patients.^[12] The current study shows that a significant number of patients presenting to ED with psychiatric symptoms did not undergo a physical examination. These findings are similar to a retrospective chart review of 202 patients (mean age of 37.8 years), who presented over a 1 year period, which

Factors	Physical examination n (%)		χ^2	OR	95% CI	P
	Performed	Not performed				
Age in years						
<35	69 (56.1)	54 (43.9)	3.71	0.56	0.31-1.01	0.054
≥35	55 (69.6)	24 (30.4)				
Gender						
Male	59 (67.0)	29 (33.0)	2.11	1.53	0.86-2.74	0.147
Female	65 (57.0)	49 (43.0)				
Presentation to the hospital						
First presentation	59 (73.8)	21 (26.2)	8.54	2.46	1.34-4.54	0.003*
Known patient	65 (53.3)	57 (46.7)				
Presenting complaints						
Physical and psychiatric	50 (82.0)	11 (18.0)	15.62	4.12	1.98-8.55	0.000*
Psychiatric only	74 (52.5)	67 (47.5)				

*P value is significant (<0.05). OR – Odds ratio; CI – Confidence interval

Factors	Vital signs n (%)		χ^2	OR	95% CI	P
	Assessed	Not assessed				
Age in years						
<35	80 (65.0)	43 (35.0)	2.08	0.63	0.34-1.0	0.149
≥35	59 (74.7)	20 (25.3)				
Gender						
Male	62 (70.5)	26 (29.5)	1.15	1.53	0.63-2.09	0.658
Female	77 (67.5)	37 (32.5)				
Presentation to the hospital						
First presentation	61 (76.2)	19 (23.8)	3.42	1.81	0.96-3.41	0.065
Known patient	78 (63.9)	44 (36.1)				
Presenting complaints						
Physical and psychiatric	52 (85.2)	9 (14.8)	10.10	3.59	1.64-7.86	0.001*
Psychiatric only	87 (61.7)	54 (38.3)				

*P value is significant (<0.05). OR – Odds ratio; CI – Confidence interval

showed that a complete physical examination was regularly lacking and complete vital signs were documented in only 52% of cases.^[12] In 2012, an article published in the Journal of Emergency Medicine, concluded that a physical examination is a useful screening tool to determine if a patient needs further medical evaluation.^[13]

Similarly, another study showed that physical examinations performed on patients with psychiatric complaints were often documented incompletely.^[14,8] In comparison, the present study reflects that a physical examination was only completed in the ED in 61.4% of patients [Table 3]. A study conducted to evaluate the medical comorbidity in 200 patients with mental illness showed that a patient with a mental illness is more likely to have a respiratory condition, liver disease, or diabetes and a lifespan 8 years shorter than the general population.^[2,15]

A qualitative study conducted in four hospitals in South London during 2012 and 2013 based on semi-structured interviews with ED doctors and nurses as well as psychiatrists and psychiatric nurses addressed the issue of diagnostic overshadowing. The study identified direct factors that may lead to misattribution of the physical symptoms to a patient's mental illness. These factors are complex presentations and aspects related to poor communication and the challenging behavior of the patient. Other factors were the crowded nature of the ED environment, time pressures and targets and stigmatizing attitudes held by a minority of staff.^[16] Another study showed that younger patients had a greater chance of missed medical illness because they had lower rate of medical co-morbidity and they were generally healthier compared to older patients.^[8] In our study, the patients' age and gender were not significantly associated with

Table 3: Characteristics of the patients (n=202)

Patient's characteristic	n (%)
Age in years ($\bar{X}\pm SD$)	34.2 \pm 13.91
Gender	
Male	88 (43.6)
Female	114 (56.4)
Presentation to the hospital	
First presentation	80 (39.6)
Known patient to the psychiatric service	122 (60.4)
Presenting complaints	
Physical \pm psychiatric	61 (30.2)
Psychiatric only	141 (69.8)
Physical examination by ED	
Performed	124 (61.4)
Not performed	78 (38.6)
Vital signs	
Checked	139 (68.8)
Not checked	63 (31.2)
Received injectable psychotropic medications	
Yes	62 (30.7)
No	140 (69.3)
Referred to physician	
Yes	58 (28.7)
No	144 (71.3)
Final management plan	
Admission to a psychiatry ward	99 (49.0)
Admission a medical ward	8 (4.0)
Discharge home	95 (47.0)

SD – Standard deviation; ED – Emergency department

the performance of a physical examination or vital sign assessment.

Limitations of the study

Our study was done in one institution, which may not reflect the practice in other health care services in the country. This study was a retrospective study, which looked at the adequacy of physical examination using only the available documentation in the medical records. Our study design did not allow for differentiation between lack of documentation and lack of evaluation. Another limitation is that some confounding factors were not addressed in the study.

Future implications

We recommend that further studies be conducted to explore this area in order to optimize the quality of patient care. In addition, confounding factors need to be addressed to get more accurate conclusions. These factors may include diagnosis, level of cooperation of the patient with ED staff and extent of knowledge of ED staff about the importance of the physical assessment for patients with psychiatric disorders.

CONCLUSION

This study showed that not all patients who present to the ED with psychiatric symptoms underwent a physical examination by ED doctors. The ED physicians should be aware that medical problems can cause or worsen psychiatric symptoms. Vital signs and a physical examination are important factors in identifying these causes and guiding further evaluation, which will play an integral role in the patient's care. However, international guidelines are inconsistent on the thoroughness of this assessment.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

- Korn CS, Currier GW, Henderson SO. "Medical clearance" of psychiatric patients without medical complaints in the emergency department. *J Emerg Med* 2000;18:173-6.
- Gregory RJ, Nihalani ND, Rodriguez E. Medical screening in the emergency department for psychiatric admissions: A procedural analysis. *Gen Hosp Psychiatry* 2004;26:405-10.
- Disability Rights Commission. Equal Treatment: Closing the Gap. A Formal Investigation Into Physical Health Inequalities Experienced by People with Learning Disabilities and/or Mental Health Problems. London: Disability Rights Commission; 2006.
- World Health Organization. Regional Strategy on Mental Health and Substance Abuse. Geneva: WHO; 2012.
- Swadi H. Child mental health services in the United Arab Emirates. *Child Psychol Psychiatry Rev* 1999;4.1:27-9.
- Olshaker JS, Browne B, Jerrard DA, Prendergast H, Stair TO. Medical clearance and screening of psychiatric patients in the emergency department. *Acad Emerg Med* 1997;4:124-8.
- Latoo J, Mistry M, Dunne FJ. Physical morbidity and mortality in people with mental illness. *Br J Med Pract* 2013;6:621.
- Tintinalli JE, Peacock FW 4th, Wright MA. Emergency medical evaluation of psychiatric patients. *Ann Emerg Med* 1994;23:859-62.
- Squh.edu.om. [internet]. Muscat: Sultan Qaboos University Hospital Quality Manual, Inc.; c2008 [updated 2011, June 01; cited 2016 Feb 02]. Available from http://www/qm/services_manual_depts/A and E/SQUH-ED-PT.CARE-POLICY-06.pdf
- Tintinalli JE, Stapczynski JS. Tintinallis Emergency Medicine: A Comprehensive Study Guide. New York: McGraw-Hill; 2011.
- Henneman PL, Mendoza R, Lewis RJ. Prospective evaluation of emergency department medical clearance. *Ann Emerg Med* 1994;24:672-7.
- Szpakowicz M, Herd A. "Medically cleared": How well are patients with psychiatric presentations examined by emergency physicians? *J Emerg Med* 2008;35:369-72.
- Shah SJ, Fiorito M, McNamara RM. A screening tool to medically clear psychiatric patients in the emergency department. *J Emerg Med* 2012;43:871-5.

14. Riba M, Hale M. Medical clearance: Fact or fiction in the hospital emergency room. *Psychosomatics* 1990;31:400
15. Druss BG, von Esenwein SA, Compton MT, Zhao L, Leslie DL. Budget impact and sustainability of medical care management for persons with serious mental illnesses. *Am J Psychiatry* 2011;168:1171-8.
16. Shefer G, Henderson C, Howard LM, Murray J, Thornicroft G. Diagnostic overshadowing and other challenges involved in the diagnostic process of patients with mental illness who present in emergency departments with physical symptoms – A qualitative study. *PLoS One* 2014;9:e111682.