

The Effect Of Workload Perception And Occupation Stress On Medical Error Attitudes In Primary Health Care In Jeddah At Saudi Arabia 2023

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Abstract

Background

Despite global efforts, medical errors continue to pose a serious challenge to patient safety. Medication errors are defined as „any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer,“ which may also result in considerable economic burdens, between the need for medical error disclosure as a key tool for error prevention and the fear of disclosures' negative threats, medical staff are confronted with challenges and barriers to disclosing and reporting medical errors. Medication administration errors are a common cause of harm and death in the primary health care sector. These errors not only compromise patient safety but also cost a lot of money around the world. Medical staff must report medication administration errors so that healthcare systems can identify the causes and take preventative measures, the errors made intentionally or unintentionally threaten a human's life. The suspension of practices, knowledge and skill deficiency of healthcare employees, wrong practices, intense workload, inadequacy in patient care and communication between team members spring from medical staff. **Aim of the study:** To assessment the effect of workload perception and occupation stress on medical error attitudes in primary health care in Jeddah at Saudi Arabia 2023. **Method:** This study is a cross sectional descriptive study. This study was conducted between November to Decemb¹er 2023, conducted among the study population constitutes the medical staff in primary health care registered in Jeddah City. Our study 200 participant from medical staff. **Results:** shows that most of the participants (59.0%) were in the age group(19-30) years, majority of them female (82.0%), the marital status most of participants married were(66.0%), level of education the majority of participant are postgraduate were (58.0%) regarding taking official leave the majority of participant answer Yes were(91.0%) while No were(9.0%), regarding economic level the majority of participant are 10,000 to 30,000 were(50.0%) while <10,000 were(15.0%) but the >31,000were (35.0%) . **Conclusion.** The current study concluded that empowering the

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studied medical staff by implementing the instructional guidelines had a positive effect on their perceived barriers regarding medical error disclosure . Raising medical staff awareness regarding medical error disclosure, in addition to incorporating them into ongoing in-service training programs at different health care settings.

Keywords: *Impact, workload, perception, occupation, pressure, medical, error, trends, hospitals, Saudi Arabia.*

Introduction

Unsafe care or medical errors (MEs) are a growing global public health challenge to patient safety in primary health care settings. Medical errors are the third-leading cause of death after heart disease and cancer, accounting for more than 400,000 deaths in the United States alone (1). The World Health Organization (WHO) estimated that 134 million adverse events resulting from health care settings unsafe care in low- and middle-income countries caused approximately 2.6 million deaths annually in addition to the economic burden (2). Medical errors are global concerns that create serious medical consequences for patients (3). Despite increased awareness about patient safety and quality of care errors and adverse patient outcomes occur frequently in clinical practice (4). High levels of emotional exhaustion and depersonalization along with low levels of personal accomplishment are components of the stress (5). Several studies report a linear association between stress and frequency of self-reported medical errors among interns and of workload in occupation on medical error attitudes in PHC (6)

The Institute of Medicine (IOM) Committee on Quality of Health Care defined MEs as "the failure of a planned action to be performed as intended or the application of the incorrect plan to accomplish a desired goal" (7). The typical causes and types of MEs differ from one healthcare setting to another. (8) The common types of MEs are medication administration errors, diagnosis errors, and surgical errors, in addition to errors that lead to falls and infections. The most often cited causes of MEs are inadequate staffing and workload and a lack of updated knowledge and training (9), improving care quality and ensuring patient safety are basic challenges (10). Every day, approximately 178 different procedures and tasks are performed for each primary health care patient, reflecting the high workload in these units (11). In the acute-care setting, the issue of medication administration is being researched. Every step in a Medical staff professional's patient care is a potential opportunity for error, posing a risk to the patient's safety (12)

Medical error should be defined exactly first of all, in order to reduce the damages emanated from medical errors.(13) The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) defines the medical error term as "unethical and inappropriate behavior of a professional offering healthcare, his/her negligence and deficiency in professional practices that lead patient to suffer.(14) Stress due to working conditions and heavy workload in medical staff and also nursing play role in the occurrence of insufficiency and negligence in professional practices.(15) In a resource regarding this issue, one of the important errors place in the first rank of the most common wrong drug errors it was found some the people died because of wrong drugs administration in Saudi Arabia (16). After examining 33 documents about wrong drug administration, it was underlined that it is required to be careful while administering or preparing drug for patients in order to prevent wrong drug errors (17). Wrong dose (36.1%) and wrong drug (26.4%) errors place in the first rank of the most common wrong drug errors, medical errors rank definitely first among the issues occupying the health care sector most. Medical errors are one of the important issues emphasized in Saudi Arabia like other countries around the world. (18)

Medical mistakes can happen at any stage of providing medical service administration process, also in medication administration process, including the prescribing, transcription, dispensing, preparation and administration (19). The medication administration errors can be discovered using a variety of methods, including direct observation, patient chart review, incident reports review, attendance at medical rounds, and staff interviews (20). Failures in

communication, such as transcription errors, abbreviations, illegible handwriting, incorrect interpretation of a doctor's orders, verbal orders, and failure to record medications given are a few of the causes of medication administration errors (21).

Literature Review

King et al. (2021) identified factors affecting medical staff and nursing workload by conducting an integrative literature review, and then determining relevance and measurability of these factors through focus groups and a survey (22). The factor with the highest workload "impact score" was "high number of work interruptions". Work interruptions at the task-level negatively influence cognitive or mental load, leading to emotional duress and error. Since a significant component of RNs' work is knowledge work, competencies associated with assessment, analysis, synthesis and coordination, are compromised by unanticipated interruptions (23)

A study from the USA showed that staff involved in at least one of seven training programs covering one or more aspects of stress management experienced significant reductions in psychological distress, depression and anxiety immediately after the intervention (24). Follow-up of these subjects for 9–16 months revealed further reduction in psychological distress and emotional exhaustion (25). The second approach is organization-based interventions (22)

Studies about medication errors negatively impact health systems worldwide. For example, 10% of all hospital admissions in the United Kingdom result in adverse events caused by a medication error adverse event per 1000 patient days in United States (26). Across a 5-year period in Australia, 5.73 medication errors per every 1000 bed-days, or 0.56% per admission, was reported by researchers for a pediatrics hospital (27). The economic impact for avoidable medication errors is reported to be as much as £ 98.5 million per year in the United Kingdom and \$42 billion in the United States. The additional cost of treatment attributed to medication errors is about \$8600 per patient (28)

In a Canadian study of RN interruptions on medical-surgical units, almost one-third of interruptions occurred during patient assessments and procedures, while another one-third occurred during patient documentation (29). These authors concluded that 89% of observed interruptions had the potential to adversely impact patient safety.

According to their study, 5959 out of 77 511 prescriptions dispensed (7.7%) were found to contain errors compared with 990 out of 5299 (18.7%). The authors made a series of recommendations including training initiatives to improve physicians' prescribing skills, adherence to the essential drugs list and use of the national formulary to reduce medication errors in the PHC setting (30)

World Health Organization 2020 found that higher levels of psychological burnout are also correlated with poor quality of patient care and increased medication error, additionally, ample works in the literature suggest that long-term and chronic stress have a negative influence on both psychological and physical health, leading to serious health conditions such as post-traumatic stress syndrome (PTSD) and burnout (31)

The incident report prevalence of medical error in Eastern Region Saudi Arabia was 19.8% and similar to numerous global studies 19.6% (8.6–28.3%), depending on the healthcare setting (25). Although the majority of HCPs reported feeling stressed (68.4%), another study revealed that source-specific work-related stress, rather than overall stress is strongly associated with medical errors. Multiple studies indicate a significant relationship between stress and medical errors among HCPs although most of these studies were based on self-reported medication errors (32)

Rationale

Patient safety and ethical standards are crucial in healthcare settings to ensure optimal quality of care without harm or negative consequences. Medical errors pose a significant threat to patient safety. So, error detection is vital, and its disclosure and reporting are fundamental to prevention. However, the authors discovered from clinical practice and their

own previous study on medical staff entitled, direct bedside care for patients and who are responsible for patient safety were reluctant to disclose MEs and had several conflicts to disclose and report them when they occurred . Therefore, there is a pressing need for the development of educational guidelines and training programs to change nurse perceptions and attitudes and promote a culture of disclosure in health care settings.

Aim of the study:

To assessment the effect of workload perception and occupation stress on medical error attitudes in primary health care in Jeddah at Saudi Arabia 2023

Objectives:

To assessment the effect of workload perception and occupation stress on medical error attitudes in primary health care in Jeddah at Saudi Arabia 2023.

Methodology:

Study design:

This study is a cross sectional descriptive study, has be out in the Jeddah city of in PHC in Jeddah Saudi Arabia 2023, conducted among the study medical staff in primary health care in the Saudi Arabia registered

Study Area

The study has be carried out in the Jeddah city of in PHC in Jeddah Saudi Arabia 2023. Jeddah is a Saudi city located in the middle of the eastern coast of the red sea known as the Bride of the Red Sea and is considered the economic and tourism capital of the country. Its population is estimated around 4.2 million, and it is the second largest city after Riyadh. It has grown during the last two decades of the 20th Century, which made the city a center for money and business in the Kingdom of Saudi Arabia and a major and important port for exporting non-oil related goods as well as importing domestic needs. According to Jeddah Directorate of Health (33), there are 48 primary health care centers in Jeddah City distributed into five geographical areas around to the nearest hospital.

Study Population

The study has be conducted among the study population constitutes the medical staff in primary health care registered in Jeddah City. During the period of November to December 2023 .

Selection criteria:

Inclusion criteria

- Medical staff who registered for the study PHCCs
- All nationalities
- Both genders

Exclusion criteria :

- Medical staff who not registered for the study PHCCs
- Medical staff refused to participant .

Sample size

All the medical staff (Physicians/residents, register nurses, Health technician) in PHCCs in Jeddah City, The sample size will be calculated by applying Raosoft sample size calculator based on (The margin of error: 5%, Confidence level: 95%, and the response distribution was considered to be 20%) accordingly the Sample size is(190) of (Physicians/residents, register nurses, Health technician) ' in the primary care and adding 10 more to decrease margin of error. After adding 5% oversampling, the minimum calculated sample will be

(200). Computer generated simple random sampling technique was used to select the study participants.

Sampling technique:

A two-stage cluster sampling technique has been used. The researcher has divided the area according to geographical regions north, and south. The researcher will use a simple random sampling technique to select primary healthcare centers from a list of regions. The simple random sampling process will be conducted using a software tool, which will randomly select the centers from the list

to be included in the study. All members from those primary healthcare centers selected randomly will be included in our sample.

Systematic random sampling technique is adopted. After that, by using random number generator, then simple random sampling technique was applied to select the PHC. Also, convenience sampling technique will be utilized to select the participants in the study. By using systematic sampling random as dividing the total population by the required sample size; (200).

Data collection tool

The self-administered questionnaire is designed based on previous studies and frameworks to assess the effect of workload perception and occupation stress on medical error attitudes in primary health care in Jeddah at Saudi Arabia. The questionnaire was developed in English. The questions were first pre-tested and were revised and finalized after it was pilot tested. Before completing the survey, participants were required to indicate their consent using a forced response question followed by the survey questionnaires. The survey is estimated to take ~8 min to complete.

To collect the information, a set of questions were constructed and developed. All questions were closed-ended, with tick boxes provided for responses; participants answered the questionnaires from the November- December 2023, the period of study in 2023.

The questionnaire consisted of questions that

First part General and Socio demographic information. These variables included contact data (email or mobile phone number), age, date, city of birth, and smoking (yes/no). Other variables were education level, employment status, income, marital status, parental status, and number of children, and area of residence.

A questionnaire was developed that had Socio demographic data and questions related to workload perception and occupation stress on medical error. The two senior faculty members checked the questionnaire's validity and comprehension, and it was revised according to their suggestions. A pilot study was conducted on 20 primary care medical staff to check the questionnaire understands and responses further. The results of the pilot study were not included in the final analysis.

Data collection technique:

Researcher will be visits the selected PHCCs center after getting the approval from the ministry of health. The researcher has been obtained permission from primary health care director and participants.

After the arrival of the participants to PHCCs center, they should go to the reception first to register and ensure the presence of the center's card, the researcher has been select participants conveniently until the target number achieves and gives the questionnaire for answering. She has been explained the purpose of the study to all participants attending the clinic.

Data entry and analysis:

The Statistical Package for Social Sciences (SPSS) software version 24.0 has been used for data entry and analysis. Descriptive statistics (e.g., number, percentage) and analytic

statistics using Chi-Square tests (χ^2) to test for the association and the difference between two categorical variables were applied. A p-value ≤ 0.05 has been considered statistically significant.

Pilot study

A pilot study has been conducted in one PHC in the same sector due to the similarity to the target group using the same questionnaire to test the methodology of the study. As a feedback, the questionnaire has been clear and no defect has been detected in the methodology.

Ethical considerations

Permission from the Directorate of Health Affairs of Jeddah has been obtained. Verbal consents from all participants in the questionnaire were obtained. All information was kept confidential, and a result has been submitted to the department as feedback.

Budget: Self-funded

Result

Table 1 Distribution of socio-demographic data in our study in Saudi Arabia. (n-200)

	N	%
Age		
19-30	20	59.0
31-40	62	31.0
41-55	118	10.0
Gender		
Female	164	82.0
Male	36	18.0
Marital status		
Married	133	66.5
Single	37	18.5
Divorced	30	15.0
Level of education		
Diploma	22	11.0
Bachelors	62	31.0
Postgraduate	116	58.0
Number of children		
No Child	54	27.0
<3 Children	82	41.0
>3 Children	64	32.0
Willingness to work		
Yes	174	87.0
Partially	26	13.0
Nationality		
Saudi	178	89.0
Non Saudi	22	11.0
Salary satisfaction		
Sufficient	117	58.5

Partly Sufficient	57	28.5
Quite Insufficient	16	8.0
Insufficient	10	5.0
Taking official leave		
No	18	9.0
Yes	182	91.0
Economic level		
<10,000	30	15.0
10,000 to 30,000	100	50.0
>30,000	70	35.0

Table 1 shows that most of the participants (59.0%) were in the age group (19-30) years follow by the 31-40 were (31.0%) followed by 41-55 years were (10.0%), the majority of them female was higher compared to male (82.0% and 18.0%), regarding the marital status most of participants married were (66.0%) while single were (18.5%) while divorced were (15.0%), regarding level of education the majority of participant are postgraduate were (58.0%) while bachelors were (31.0%) but diploma were (11.0%), regarding number of children the majority of participant <3 Children were (41.0%) while >3 Children were (32.0%) but no Children were (27.0%), regarding willingness to work the majority of participant answer Yes were (87.0%) while partially were (13.0%), regarding Nationality the majority of participant are Saudi were (89.0%) while Non-Saudi were (11.0%), regarding Salary satisfaction the majority of participant are sufficient were (58.5%) while partly sufficient were (28.5%) but quite insufficient were (8.0%) while insufficient were (5.0%), regarding taking official leave the majority of participant answer Yes were (91.0%) while No were (9.0%), regarding economic level the majority of participant are 10,000 to 30,000 were (50.0%) while <10,000 were (15.0%) but the >31,000 were (35.0%).

Table 2: Distribution of Characteristics medical staff about workload perception and occupation pressure on medical error in primary health care

	N	%
Professional group		
Registered nurse	39	19.5
Physicians/residents	145	72.5
Pharmacists	7	3.5
Technical	9	4.5
Years of work experience		
5 years and below	22	11.0
6-10 years	38	19.0
11-15 years	44	22.0
More than 15 years	96	48.0
Workload		
50 h/week	144	72.0
>50 h/week	56	28.0
working shifts		
Morning	155	77.5
Sometimes both	45	22.5
Are you working on weekends		
All the time	5	2.5

Sometimes	33	16.5
Not at all	162	81.0
Were you exposed to any stressful event within a year outside of your work?		
No	32	16.0
Yes	168	84.0
Medical error		
Made at least one medication error at last 3 months.	65	32.5
No medication error made at last 3 months.	135	67.5
Disruption of your home life through spending long hours at work?		
No	51	25.5
Yes	149	74.5
Feeling under pressure to meet deadlines?		
No	46	23.0
Yes	154	77.0
Encountering difficulties in relationship with colleagues?		
No	100	50.0
Yes	100	50.0

Table 2 shows regarding the distribution of Characteristics medical staff about workload perception and occupation pressure on medical error in primary health care, regarding the professional group the most of the participants physicians/residents were (72.5%) while the registered nurse were (19.5%) follow by technical were (4.3%) while pharmacists were (3.5%) , regarding the years of work experience the majority of them more than 15 years were (48.0%) while 11-15 years were (22.0%) but the 6-10 years were (19.0%) while 5 years and below were (11.5%) , regarding workload the most of participant 50 h/week were (72.0%) while >50 h/week were(28.0%), regarding are you working shifts the majority of participant are morning were(77.5%) while Sometimes both were (22.5%), regarding are you working on weekends the majority of participant are Not at all were (81.0%) while Sometimes were(16.5%) but all the time were (2.5%) , regarding were you exposed to any stressful event within a year outside of your work the majority of participant answer Yes were(84.0%) while No were(16.0%), regarding medical error the majority of participant No medication error made at all per month were(67.5%) while made at least one medication error per month were(32.5%), regarding disruption of your home life through spending long hours at work the most of participant answer Yes were(74.5%) while No were(25.5%), regarding feeling under pressure to meet deadlines the majority of participant answer Yes were(77.0%) while No were(23.0%), regarding encountering difficulties in relationship with colleagues the majority of participant answer No were (50.0%) while Yes were(50.0%) .

Table 3 : Distribution of Effect of Working pattern and occupation stress on medical error trends in primary health care

Working pattern	Workload Perception		Occupational Stress		Medical Error Attitude Scale	
	N	%	N	%	N	%
Permanent Day Shift	108	54.0	47	23.5	67	33.5
Permanent afternoon Shift	77	38.5	104	52.0	90	45.0
All-Total	15	7.5	49	24.5	43	21.5

Total		200	100	200	100	200	100
Chi-square	X²	48.639					
	P-value	<0.001*					

Table 3 shows the distribution of effect of workload perception and occupation stress on medical error trends in primary health care, regarding the Working pattern while is a significant were p-value =0.001 and X² 48.639, regarding the Permanent Day Shift most of participant in workload perception were (54.0%), followed by medical error attitude scale were (33.5%) while occupational Stress were (23.5%), regarding the permanent afternoon Shift most of participant in occupational stress were (52.0%), followed by medical error attitude scale were (45.0%) while workload perception were (38.5%), while all-total in occupational stress were (24.5%) followed by medical error attitude scale were (21.5%) while workload perception were (7.5%) .

Figure (1) : Distribution of Effect of Working pattern and occupation stress on medical error trends in primary health care

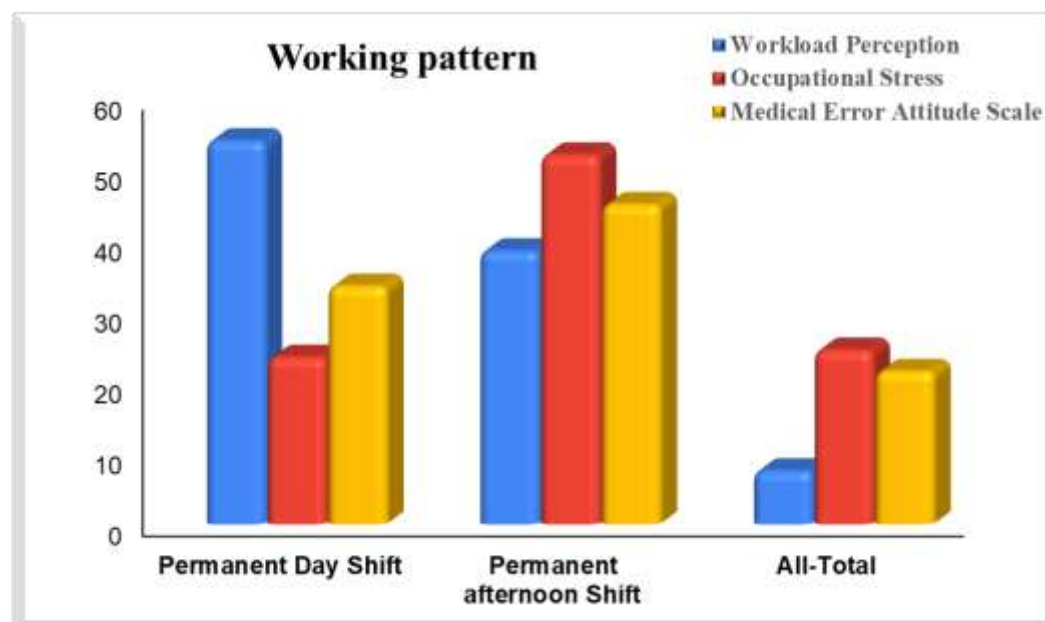


Table 4 : Distribution of Effect of Total length of service [Workload Perception] and occupation stress on medical error trends in primary health care

Total length of service [Workload Perception]	Workload Perception		Occupational Stress		Medical Error Attitude Scale	
	N	%	N	%	N	%
0-1 year	26	13.0	93	46.5	62	31.0
2-5 years	16	8.0	37	18.5	16	8.0
6-10 years	32	16.0	31	15.5	22	11.0
11-20 years	75	37.5	23	11.5	53	26.5
21-35 years	34	17.0	11	5.5	29	14.5
Total length of service	17	8.5	5	2.5	18	9.0

Total		200	100	200	100	200	100
Chi-square	X²	98.982					
	P-value	<0.001*					

Table 4 shows the distribution of Effect of Total length of service [Workload Perception] and occupation stress on medical error trends in primary health care , regarding the Total length of service [Workload Perception] while is a significant were p-value =0.001 and X² 98.982, regarding the 0-1 year most of participant in occupational Stress were (46.5%) followed by medical error attitude scale were (31.0%) while workload Perception were (13.0%), regarding the 2-5 years most of participant in occupational stress were (18.5%) followed by medical error attitude scale were (8.0%) while workload perception were (8.0%), regarding the 6-10 years most of participant in workload perception were (16.0%) followed by medical error attitude scale were (11.0%) while occupational stress were (15.5%), regarding the 11-20 years most of participant in workload perception were (37.5%), followed by medical error attitude scale were (26.5%) while occupational stress were (11.5%), regarding the 21-35 years most of participant in workload perception were (17.0%), followed by medical error attitude scale were (14.5%) while occupational stress were (5.5%), while total length of service in medical error attitude scale were (9.0%) in workload perception were (8.5%) followed by occupational stress were (2.5%)

Figure (2) Distribution of Effect of Total length of service [Workload Perception] and occupation stress on medical error trends in primary health care

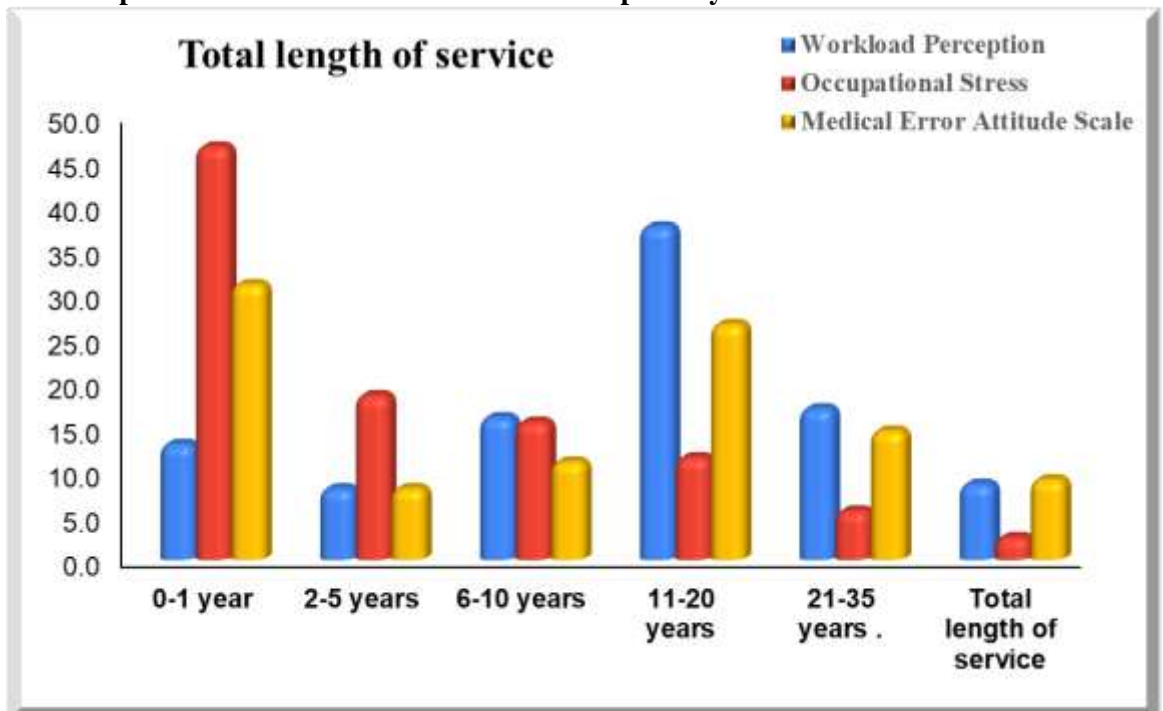


Table 5 : Distribution of Effect of Total length of service at the institution and occupation stress on medical error trends in primary health care

Length of service at the institution	Workload Perception		Occupational Stress		Medical Error Attitude Scale	
	N	%	N	%	N	%
0-1 year	26	13.0	67	33.5	58	29.0

2-5 years	25	12.5	59	29.5	22	11.0
6-10 years	26	13.0	30	15.0	33	16.5
11-20 years	91	45.5	34	17.0	55	27.5
21-35 years.	32	16.0	10	5.0	32	16.0
Total	200	100	200	100	200	100
Chi-square	X²	83.969				
	P-value	<0.001*				

Table 5 shows the distribution of Effect of Total length of service at the institution and occupation stress on medical error trends in primary health care , regarding the length of service at the institution while is a significant were p-value =0.001 and X² 83.969, regarding the 0-1 year most of participant in occupational Stress were (33.5%) followed by medical error attitude scale were (29.0%) while workload Perception were (13.0%), regarding the 2-5 years most of participant in occupational stress were (29.5%) followed by medical error attitude scale were (11.0%) while workload perception were (12.5%), regarding the 6-10 years most of participant in medical error attitude scale were (16.5%) followed by occupational stress were (15.0%) while workload perception were (13.0%), regarding the 11-20 years most of participant in workload perception were (45.5%), followed by medical error attitude scale were (27.5%) while occupational stress were (17.5%), regarding the 21-35 years most of participant in workload perception were (16.0%), followed by medical error attitude scale were (16.0%) while occupational stress were (5.0%), while total in medical error attitude scale were (100.0%) in workload perception were (100.0%) followed by occupational stress were (100.0%)

Figure (3) Distribution of Effect of Total length of service at the institution and occupation stress on medical error trends in primary health care

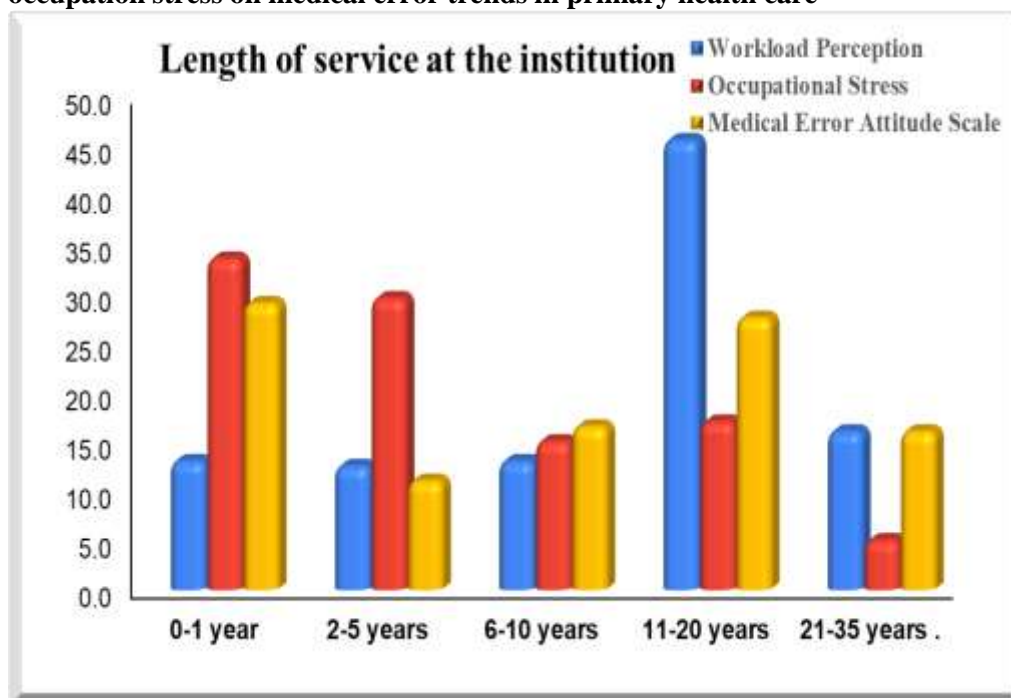
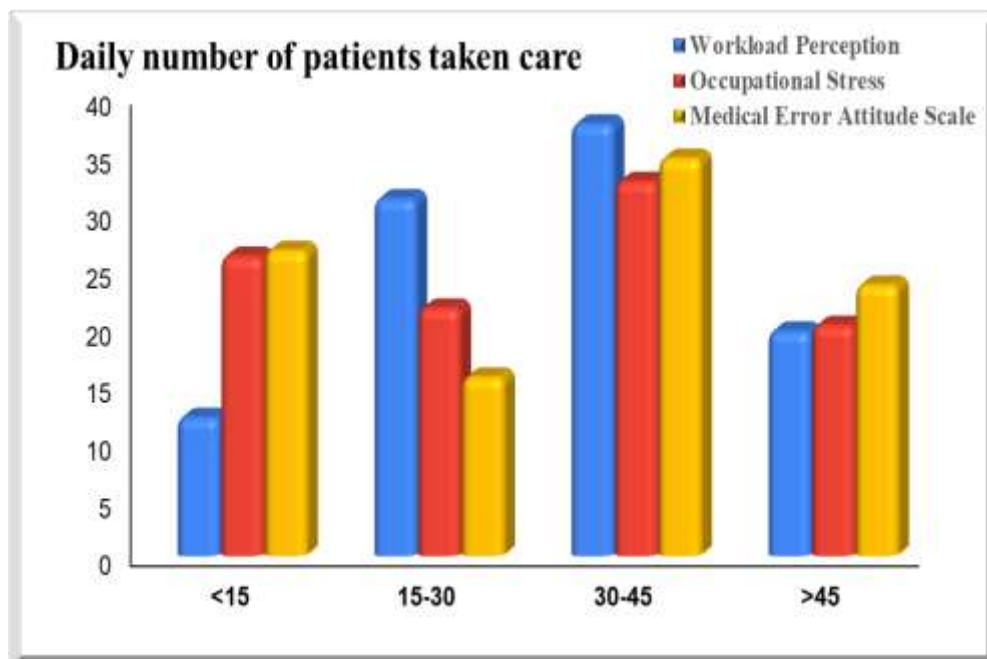


Table 6: Distribution of Effect of Daily number of patients taken care and occupation stress on medical error trends in primary health care

Daily number of patients taken care		Workload Perception		Occupational Stress		Medical Error Attitude Scale	
		N	%	N	%	N	%
<15		24	12.0	52	26.0	53	26.5
15-30		62	31.0	43	21.5	31	15.5
30-45		75	37.5	65	32.5	69	34.5
>45		39	19.5	40	20.0	47	23.5
Total		200	100	200	100	200	100
Chi-square	X²	25.016					
	P-value	<0.001*					

Table 6 shows the distribution of Effect of Daily number of patients taken care and occupation stress on medical error trends in primary health care, regarding the daily number of patients taken care while is a significant were p-value =0.001 and X² 25.016, regarding the <15 most of participant in occupational Stress were (26.0%) followed by medical error attitude scale were (26.5%) while workload Perception were (12.0%), regarding the 15-30 most of participant in workload perception were (31.0%) followed by occupational stress were (21.5%) while medical error attitude scale were (15.5%), regarding the 30-45 most of participant in workload perception were (37.5%) followed by medical error attitude scale were (34.0%) while occupational stress were (32.5%), regarding the >45 most of participant in medical error attitude scale were (23.5%), followed by occupational stress were (20.0%) while workload perception were (19.5%), while total in medical error attitude scale were (100.0%) in workload perception were (100.0%) followed by occupational stress were (100.0%)

Figure (4) Distribution of Effect of Daily number of patients taken care and occupation stress on medical error trends in primary health care



Discussion

Although health care providers believe that medical errors disclosure should be disclosed to patients and their families when it happens, they often hesitate and are uncomfortable doing so (33). Guidelines for error disclosure have not yet been established in Saudi Arabia until now, and a lack of in-service training and empowered educational programs regarding medical errors disclosure negatively affect nurses' willingness to disclose MEs. Since all previously conducted studies in Jeddah in Saudi Arabia were descriptive studies, the current study aimed to assess the effect of workload perception and occupation stress on medical error attitudes in primary health care in Jeddah at Saudi Arabia 2023. As regards the socio-demographic characteristics of the studied participants, the current study found that most of the participants (59.0%) were in the age group (41-55) years, majority of them female were (82.0%), the marital status most of participants married were (66.0%), level of education the majority of participant are postgraduate were (58.0%), number of children the majority of participant <3 Children were (41.0%), willingness to work the majority of participant answer Yes were (87.0%), nationality the majority of participant are Saudi were (89.0%), salary satisfaction the majority of participant are sufficient were (58.5%), taking official leave the majority of participant answer Yes were (91.0%) (See table 1)

This can be explained by traditional participant working styles and job descriptions that require young participant to deal directly with patients, and as they grow older, they will be responsible for managerial duties. Furthermore, the majority of nurses in primary health care in Jeddah are female, and their numbers in nursing fields have remained higher than males for the past ten years. Nursing is a naturally feminine activity, and women have traditionally dominated this profession. This finding was consistent (25), which discovered that three-quarters of the nurses they studied were females under the age of 30. This finding was also consistent with an Egyptian study by (30).

Regarding the distribution of Characteristics medical staff about workload perception and occupation pressure on medical error in primary health care shows regarding the distribution of, regarding the professional group the most of the participants physicians/residents were (72.5%) while the registered nurse were (19.5%), the years of work experience the majority of them more than 15 years were (48.0%), workload the most of participant 50 h/week were (72.0%), working shifts the majority of participant are morning were (77.5%), were you exposed to any stressful event within a year outside of your work the majority of participant answer Yes were (84.0%), medical error the majority of participant No medication error made at all per month were (67.5%) (See table 2). study by (29) found that due to error frequency and potential patients risk, medication administration errors are frequently used in hospitals especially ICU as an indicator of patient safety and primary health care (29). A patient in a hospital experiences one medical error each day, most frequently when taking the medication. (30). These errors are common and will be a long-term problem in the healthcare system (20).

Regarding the distribution of Effect of Working pattern and occupation stress on medical error trends in primary health care shows the, regarding the Working pattern while is a significant were p-value =0.001 and X² 48.639, the permanent day shift most of participant in workload perception were (54.0%), the permanent afternoon Shift most of participant in occupational stress were (52.0%) (See table 3), similar another study considered some indicators of workload staffing levels, patient acuity and patient dependency, health care workers' perceptions of heavy workload, health care workers tasks left undone, compromised professional health care workers standards, and interruptions to workflow. (31) Regarding the distribution of Effect of Total length of service [Workload Perception] and occupation stress on medical error trends in primary health care's how's the, regarding the Total length of service [Workload Perception] while is a significant were p-value =0.001 and X² 98.982, regarding the 0-1 year most of participant in occupational Stress were (46.5%), the 11-20 years most of participant in workload perception were (37.5%), followed by medical error attitude scale were (26.5%) (See table 4,5), In similar study findings revealed that all the studied have been exposed to medical

error, and medication administration errors were the most common type of MEs they exposed. This finding could be attributed to the fact that any human work is exposed to error, especially if there are frequently performed procedures with a multistep nature, such as medication administration. This result is supported by (19). This similarity can be justified as medication administration and its related issues are among the high-priority responsibilities of nurses. In addition, fatigue, stress, night shifts, increased workload, workflow interruptions, and the nurse staffing ratio are significant predictors of medication errors.(18)

Regarding the distribution of Effect of Daily number of patients taken care and occupation stress on medical error trends in primary health care (See figure 4). A study by (17) reported that the highest barriers were the time-consuming nature of reporting processes and fear of repercussions. This may be due to different organizational processes and punishment rules. Interestingly, nurses consistently believe that reporting MEs is the accurate entity to do, but in their practice, most of them rarely report such errors if occurred. A study conducted in the United States (US) showed inadequate time or the perception that reporting MEs is too much time-consuming (Rutledge, et al., , 2018), also the findings of the study by (20) the study showed that more than one-third of the studied nurses strongly agree that MAEs are not important enough to be reported and had an unclear definition of MAEs. This finding was supported by (27) who revealed that the lowest mean score was a lack of education about reporting medication errors. This emphasized the importance of in-service training programs for nurses about reporting medication administration errors.

Conclusion .

Strongest barrier to workload perception and occupation stress on medical error attitudes in primary health care in Jeddah. Continuous and effective education programs should be provided for all participants about medical error and open are required for motivating nurses to report medication errors. Heavy workload followed by personnel negligence was the most common causes of medical error. Fear factors were perceived as the highest barriers to reporting medical error while the reporting process was the lowest barrier to reporting from the health care worker's point of view, the current study concluded that empowering the studied participants by implementing the instructional guidelines had a positive effect on their perceived barriers regarding medical error disclosure and workload perception and occupation stress, moreover, confidence, knowledge, psychological, financial, and institutional barriers were the most perceived barriers for medical error among the studied participant's' pre-instructional guidelines. Post-implementing instructional guidelines .

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