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The Impact of Workload Perception and Occupation Pressure on Medical Error Trends in Hospitals in the Saudi Arabia 2023

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Abstract

Background

Health systems researchers are beginning to address nurses 'workload demands at different unit, job and task levels; and the types of administrative interventions needed for specific workload demands;Nowadays, 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. One of the basic causes of this issue's significance is primarily about human life and human health. 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 . 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.

Aim of the study: To assessment the impact of workload perception and occupation pressure on medical error trends in hospitals in the Saudi Arabia 2023.

Method: This study is a cross sectional descriptive study . This study was conducted between September and December 2023, with medical workers employed at hospitals affiliated with the Saudi Ministry of Health , will be carried among the study population constitutes the medical staff in hospitals registered.

Results: that most of the participants (51.0%) were in the age group(41-55) years, nationalitythe majority of participant are Saudi were(83.0%), willingness to work the majority of participant answer Yes were(74.0%), Salary satisfaction the majority of participant are Sufficient were(68.0%), Taking official leave the majority of participant answer No were(79.0%).

Conclusion.Work time management also be considered as human factors to satisfy the needs of medical staff , such as securing meal times and maintaining a low level of weekly overtime,that on medical staff' perception of work stress and work overload affects medical error attitudes. The overall average scores of medical staff on the scales of individual workload perception, occupational stress, and medical error attitude are directly proportional; the current workplace environment could increase the risk of stress among health care professionals.

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

Introduction

This study explored the level and selected determinants of burnout among five groups of healthcare workers (physicians, nurses, paramedics, and other medical and nonmedical staff) in hospitals working in in the Saudi Arabia. Work is an important aspect of people's lives.[1] It impacts their everyday functioning and may be a

source of great happiness and success. However, it can also be a source of stress and anxiety, pressure and source of medical error trends leading to emotional problems and depression over the past decades, work-related burden has been on the increase. It can reduce workers' self-efficacy and impact their health, thereby causing professional burnout [2]. The term 'burnout' was first explored in 1974, described as the emotional and psychological stress experienced by workers [3]. Since then, the concept of burnout has been conceptualized as workplace stress in every occupational context [4], also "Patient Safety" depends on healthcare and everyday practice in different workplaces, offering a way to give care without creating negative impacts for patients under the care of the medical group. [5] Since the Institute of Medicine (IOM) (currently, The National Academy of Medicine) released the report 'To Err is Human' in 1999, several initiatives have been established to prevent medical errors, improve patient safety and enhance population health and workload perception and occupation pressure.[6] Nonetheless, the burden of preventable medical errors has substantially increased during the last two decades; around 98,000 patients die annually in the United States (US).[7] Recently, up to 400,000 annual deaths in US hospitals were estimated to result from preventable adverse events.[8] Adverse events were considered as Work pressure or medical error the third leading cause of death.[9]

In Saudi Arabia, a total of 3041 annual incidents were reported in 2008.8 Moreover, the number of medico-legal complaints in Saudi Arabia increased from 1165 cases in 2007 to 2413 cases in 2013.[10] Most of these complaints were against physicians (88.4%).[11] The rise in incidents that may jeopardies patient care provided by physicians in Saudi Arabia is alarming[12].

The causes of medication errors in hospitals can be grouped into person-related factors, communication-related factors within the treatment team or between treatment team and the patient, and environment-related factors of medication processes[13]. Among them, the most common person-related factors are performance deficit and inadequate screening of patient, which account for nearly 30% of total medication errors Fatigue, stress and psychological burnout are error provoking conditions that affect person-related factors[14]. As an essential part of the clinical environment, time is an additional important factor contributing to medication errors [15]. Nurses work at the human limits and their capabilities as they engage in multiple tasks with frequent interruptions under high cognitive load and physical overload [16].

Literature Review

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 [17] 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 [13] The economic impact for avoidable medication errors is reported to be as much as £ 98.5 million per year in theUnited Kingdom [18] and $42 billion in the United States. The additional cost of treatmentattributed to medication errors is about $8600 per patient [19].

Brookset 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 [20]. 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 [21]. Study by Kakemam et al., 2021 found that higher levels of psychological burnout are also correlated with poor quality of patient care and increased medication error [22]. Additionally, ample works in the literature suggest that long-term andchronic 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 [23]

The existing data show that during the pandemic 70% of medical personnel suffered from anxiety and 50% of healthcare workers experienced depression [24]. Moreover, there were high rates of anxiety disorders and symptoms of depression in healthcare personnel during the pandemic, such as anxiety and depression disorders, especially in frontline healthcare workers (23% and 27%, respectively) [25]. Similar findings demonstrate that more than a third of the study clinicians experienced significant or moderate levels of constant stress or suffered from depression [26]. In other systematic review, the pooled prevalence of depression for frontline professionals was 43%, for nurses 25%, and 24% for medical doctors[27]

Kang et al (2020) reported that postulated that when care is not done or "missed", the quality and safety of patient care may be compromised.[28] Based on the RN4CAST protocol, Ball et al. surveyed National Health Service England nurses about job-level care left undone on their most recent shift worked for 13 essential, nursing care activities. On average, nurses reported leaving four care items undone on their most recent shift. A frequent missed care item was patient surveillance, or the capacity to monitor patients for status changes [29]. Ball et al. found significant associations between nurses' reports of missed care, RN staffing levels, and perceptions of patient care quality . These authors surmised that missed care may be a job-level "leading indicator" for identifying quality of care deficiencies before there are serious consequences, such as unnecessary loss of life [29]

The incident report prevalence of medical error in Eastern Region Saudi Arabiawas 19.8% and similar to numerous global studies 19.6% (8.6–28.3%), depending on the healthcare setting [21]. 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 [22]

In Bahrain, Al Khajaet al.explored prescription errors and found similar patterns of prescribing to those identified in our study. 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%) .Theauthorsmade 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[27].

Rationale

This study provides insights into burnout dimensions and their consequences on patient safety indicators (ie, adverse events) and medical steff. Work conditions (ie, leadership support, physician engagement, and workload) directly affect the rate of adverse events and indirectly through mediators like burnout-emotional exhaustion and burnout-interpersonal disengagement, Our study identifies some potential factors, which if eliminated or changed, could lead to a decrease the stress level among health care workers. Future research is recommended to assess the impact of high stress on medical errors. This should be accompanied by studying the introduction of new policies and programs that could reduce the stress level among our health care staff, administrators should work collaboratively with health care professionals to identify work environment strategies that ameliorate workload demands at different levels, medical errors may appear at any stage of health care. These errors can be classified under the titles below Wrong drug errors, surgical errors, diagnostic errors, errors related to system deficiencies and others which some important issues such as hospital infections and wrong blood transfusion are also among the medical errors .Nurses comprising the majority of medical professionals encounter the risk of medical errors more frequently than other professional groups, because of the multitude and variety of dependent and independent functions, and the continuity of their relationship with patient relatives.

Aim of the study:

To assessment the impact of workload perception and occupation pressure on medical error trends in hospitals in the Saudi Arabia 2023

Objectives:

Assess the workload perception and occupation pressure on medical error trends in hospitals in the Saudi Arabia 2023.

Methodology:

Study design:

This study is a cross sectional descriptive study, will be carried out hospitals in the Saudi Arabia 2023, conducted among the study medical staff in hospitals in the Saudi Arabia registered

Study Area

The study will be carried out in hospitals in the Saudi Arabia located in Riyadh, Jeddah, makkah city, AL Madinah AL Munawwarah

Study Population

The study will be conducted among the medical staff in hospitals in the Saudi Arabia registered. September and December 2023.

Selection criteria:

Inclusion criteria

Medical staff in hospitals in the Saudi Arabia

All nationalities

Both genders.

Exclusion criteria :

Medical staff who not registered in hospitals in the Saudi Arabia

Medical staff refused to participant .

Sample size

All the medical staff (Physicians/residents, register nurses, Health technician) in hospitals in the Saudi Arabia, 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 hospitals in the Saudi Arabia 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:

Systematic random sampling technique is adopted. After that, by using random number generator, then simple random sampling technique was applied to select the hospitals. 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 impact of workload perception and occupation pressure on medical error trends in hospitals in the Saudi Arabia 2023. 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 ∼10 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 September and 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 has be visits the selected hospitals after getting the approval from the ministry of health. The researcher has be obtained permission from hospitals director and participants

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

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Data entry and analysis:

The Statistical Package for Social Sciences (SPSS) software version 24.0 has be used for data entry and analysis. Descriptive statistics (e.g., number, percentage) and analytic statistics using Chi-Square tests ($\chi 2$) to test for the association and the difference between two categorical variables were applied. A p-value ≤ 0.05 will be considered statistically significant.

Pilot study

A pilot study has be conducted in hospitals 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 be clear and no defect will be detected in the methodology

Ethical considerations

Permission from the hospitals joint program has be obtained. Permission from the directorate of Health Affairs of the Holy Capital hospitals has be obtained.Verbal consents from all participants in the questionnaire were obtained. All information was kept confidential, and results has be submitted to the department as feedback .

Budget: Self-funded

Result

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

	N	%
Age		
19-30 years	54	27
31-40 years	44	22
41 -55years	102	51
Gender		
Female	122	59
Male	78	41
Marital status		
Married	94	47
Single	50	25
Divorced	56	28
Nationality		
Non-Saudi	34	17
Saudi	166	83
Level of education		
Diploma	58	29
Associate degree	64	32
Undergraduate and Graduate	78	39
Willingness to work		
Yes	148	74
No	16	8
Partially	36	18
Salary satisfaction		
Sufficient	136	68
Partly Sufficient	50	25
Insufficient	12	6
Quite Insufficient	2	1
Work experience		

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Less than 10 years	74	37
10–20 years	80	40
More than 20 years	46	23
Taking official leave		
Yes	42	21
No	158	79
Economic level		
<10,000	54	27
10,000 to 30,000	110	55
>31,000	36	18

Table 1 shows that most of the participants (51.0%) were in the age group(41-55) years follow by the 19-30 were (27.0%) , the majority of them female was higher compared to female(59.0% and 41.0%) , regarding the marital status most of participants married were(47.0%) while divorced were(28.0%), regarding Nationalitythe majority of participant are Saudi were(83.0%) while Non-Saudi were(17.0%), regarding level of education the majority of participant are Undergraduate and Graduate were (39.0%) while Associate degree were(32.0%)but diploma were (29.0%) , regarding willingness to work the majority of participant answer Yes were(74.0%) while No were(8.0%) but partially were (18.0%), regarding Salary satisfaction the majority of participant are Sufficient were(68.0%) while Partly Sufficient were(25.0%) but Insufficient were (6.0%), regarding work experience the majority of participant are 10–20 yearswere(40.0%) while Less than 10 years were(39.0%) while more than 20 years were (23.0%), regarding Taking official leave the majority of participant answer No were(79.0%) while answer Yes were(21.0%), regarding Economic level the majority of participant are 10,000 to 30,000 were(55.0%) while <10,000 were(32.0%) but the >31,000were (18.0%),

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

	N	%
Professional group		
Registered nurse	58	29
Physicians/residents	80	40
Pharmacists	62	31
Years of work experience		
Not specified	24	12
5 years and below	48	24
6-10 years	66	33
11-15 years	30	15
16-20 years	32	16
Workload		
>50 h/week	78	39
≤50 h/week	122	61
Are you working night shifts?		
Morning	144	72
Afternoon shifts	24	12
Sometimes both	32	16
Are you working on weekends?		
All the time	48	24
Sometimes	64	32
Not at all	88	44

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Were you exposed to any stressful event within a year outside of your work?		
No	58	29
Yes	142	71
Medical error		
No medication error made at all per month	162	81
Made at least one medication error per month	38	19

Table 2 shows regarding the distribution of Characteristics medical staff about workload perception and occupation pressure on medical error in hospital, regarding the Professional group the most of the participants Physicians/residents were (40.0%) while the Pharmacists were (31.0%) follow by Registered nurse were (29.0%) , regarding the Years of work experience the majority of them 6-10 years were (33.0%) while 5 years and below were (24.0%) but the 16-20 years were (16.0%) , regarding workload the most of participant ≤50 h/week were (61.0%) while >50 h/week were(39.0%), regarding are you working night shifts the majority of participant are morning were(72.0%) while Sometimes both were (16.0%) but the afternoon shifts were (12.0%) , regarding are you working on weekends the majority of participant are Not at all were (44.0%) while Sometimes were(32.0%) but all the time were (32.0%) , regarding were you exposed to any stressful event within a year outside of your work the majority of participant answer No were(71.0%) while Yes were(29.0%), regarding medical error the majority of participant No medication error made at all per month were(81.0%) while made at least one medication error per month were(19.0%) .

Figure (1) Distribution of medical error in hospital

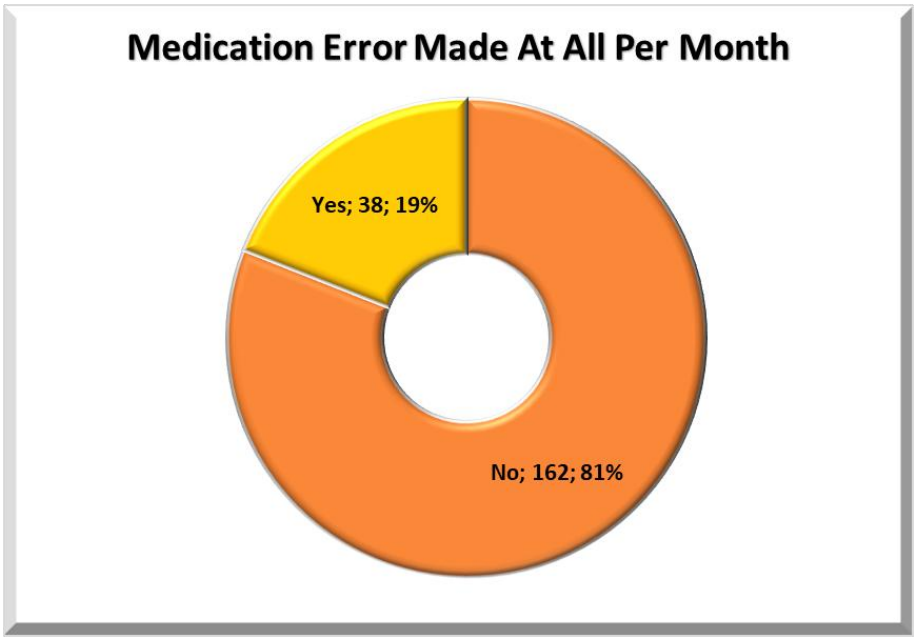

Table 3: Distribution of workload perception and occupation stress

workload perception and occupation stress		
Disruption of your home life through spending long hours at work?		
No	52	26
Yes	148	74
Feeling under pressure to meet deadlines?		

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No	66	33
Yes	134	67
Encountering difficulties in relationship with colleagues?		
No		59
Yes		41
Are you working at night/weekend call duties in addition to your daily work		
All the time	86	22
Sometimes	88	29
Not at all	26	49

Table 3 shows regarding the distribution of workload perception and occupation stress, regarding disruption of your home life through spending long hours at work the most of the participants answer Yes were (74.0%) while the No were (26.0%) , regarding the feeling under pressure to meet deadlines the majority of them answer yes were (67.0%) while No were (33.0%), regarding encountering difficulties in relationship with colleagues the most of participant answer No were (59.0%) while Yes were(41.0%), regarding are you working at night/weekend call duties in addition to your daily workthe majority of participant are not at all were(49.0%) while Sometimes both were (29.0%) while all the time were (22.0%).

Table 4 : Distribution of Effect of workload perception and occupation stress on medical error trends in hospitals

	Total		**Workload Perception**		**Occupational Stress**		**Medical Error Attitude Scale**		**Chi-square**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**		
Work unit									**X^2**	**P-value**
Emergency department Service	64	32	16	25.00	36	56.25	12	18.75	60.759	<0.001*
Department of General Medicine Service	42	21	9	21.43	8	19.05	25	59.52		
Vaccinations department Service	38	19	27	71.05	5	13.16	6	15.79		
Public clinics and general Surgery service	30	15	10	33.33	6	20.00	14	46.67		
Paediatric +General Surgery Service	26	13	11	42.31	3	11.54	12	46.15		
Assignment										
Head of Clinic	20	10	4	21	12	60.00	4	20.00	23.665	<0.001*
Clinic Nurse	90	45	29	32	40	44.44	21	23.33		
Physicians/residents	46	23	9	19	10	21.74	27	58.70		
Pharmacists	44	22	14	32	20	45.45	10	22.73		
Working pattern										
Permanent Day Shift	150	75	100	67	32	21.33	18	12.00	26.048	<0.001*
Permanent afternoon Shift	50	25	17	34	11	22.00	22	44.00		
Monthly average number of night shift										
1-3 duty	42	21	10	24	16	38.10	16	38.10	41.624	<0.001*

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4-6 duty	66	33	30	46	23	34.85	13	19.70		
7-10 duty	92	46	69	75	20	21.74	3	3.26		

	Total		**Workload Perception**		**Occupational Stress**		**Medical Error Attitude Scale**		**Chi-square**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**		
Total length of service										
0-1 year	68	34	45	66	17	25.00	6	8.82	21.704	0.005*
2-5 years	42	21	23	54	13	30.95	6	14.29		
6-10 years	22	11	13	60	7	31.82	2	9.09		
11-20 years	46	23	15	32	15	32.61	16	34.78		
21-35 years	22	11	9	40	10	45.45	3	13.64		
Length of service at the institution										
0-1years	46	23	21	45	18	39.13	7	15.22	38.627	<0.001*
2-5years	38	19	24	62	8	21.05	6	15.79		
6-10years	42	21	29	70	9	21.43	4	9.52		
11-20years	26	13	5	21	11	42.31	10	38.46		
21-35 years	48	24	9	19	21	43.75	18	37.50		
Daily number of patients taken care										
1-3 patients	38	19	16	41	14	36.84	8	21.05	61.143	<0.001*
4-6 patients	42	21	32	77	9	21.43	1	2.38		
7-10 patients	54	27	17	32	12	22.22	25	46.30		
11-14 patients	42	21	18	42	13	30.95	11	26.19		
15-25 patients	24	12	2	10	2	8.33	20	83.33		

Table 4 shows the distribution of Effect of workload perception and occupation stress on medical error trends in hospitals , regarding the **work unit**while is a significant were p-value =0.001 and X^2 60.759 regarding the emergency department Service most of participant in occupational Stress were (56.25%),followed by workload Perception were (25.0%) while medical error attitude scale were (18.75%), while total were (32.0%), regarding the department of General Medicine Service most of participant in medical error attitude scale were (59.52%),followed by workload Perception were (21.43%) while occupational Stress were (19.05%), while total were (21.0%), regarding the vaccinations department Service most of participant in workload Perception were (71.05%),followed by medical error attitude scalewere (15.79%) while occupational Stress were (13.16%), while total were (19.0%), regarding the Public clinics and general Surgery service most of participant in medical error attitude scale were (46.67%),followed by workload Perception were (33.33%) while occupational Stresswere (20.00%), while total were (15.0%), regarding the Paediatric +General Surgery Service most of participant in medical error attitude scale were (46.15%),followed by workload Perception were (42.31%) while occupational Stresswere (11.54%), while total were (13.0%),

Regarding the **Assignment** while is a significant were p-value =0.001 and X^2 23.665 . regarding the Head of Clinic most of participant in occupational Stress were (60.00%),followed by workload Perception were (21.0%) while medical error attitude scale were (20.75%), while total were (10.0%), regarding the Clinic Nurse most of participant in occupational Stress were (44.44%),followed by workload Perception were (32.0%) while

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medical error attitude scale were (23.33%), while total were (45.0%), regarding the Physicians/residents most of participant in medical error attitude scalewere (58.70%) followed by occupational Stresswere (21.74%) while workload Perceptionwere (19.0%), whiletotal were (23.0%), regarding the Pharmacists most of participant in occupational Stresswere (45.45%),followed by workload Perception were (32.0%) while medical error attitude scalewere (22.73%), while total were (22.0%),

Regarding the **Working pattern** while is a significant were p-value =0.001 and X^2 26.048 . regarding the Permanent Day Shift most of participant in occupational Stress were (67.00%),followed by workload Perception were (21.33%) while medical error attitude scale were (12.00%), while total were (75.0%), regarding the Permanent afternoon Shift most of participant in medical error attitude scalewere (44.0%),followed by occupational Stresswere (22.0%) while workload Perception were (22.0%), while total were (25.0%),

Regarding the **Monthly average number of night shift**while is a significant were p-value =0.001 and X^2 41.624 . regarding the 1-3 duty most of participant in medical error attitude scale were (38.10%),followed by occupational Stresswere (38.10%) while workload Perceptionwere (24.00%), while total were (21.0%), regarding the 4-6 duty most of participant in workload Perceptionwere (46.0%),followed by occupational Stresswere (34.85%) while medical error attitude scale were (19.70%), while total were (33.0%), regarding the 7-10 duty most of participant in workload Perception were (75.70%) followed by occupational Stresswere (21.74%) while medical error attitude scalewere (3.26%), whiletotal were (46.0%),

Regarding the **Total length of service**while is a significant were p-value =0.005 and X^2 21.704 . regarding the 0-1 year most of participant in workload Perceptionwere (66.0%),followed by occupational Stresswere (25.00%) while medical error attitude scale were (8.82%), while total were (34.0%), regarding the 2-5 years most of participant in workload Perceptionwere (54.0%),followed by occupational Stresswere (30.95%) while medical error attitude scale were (14.29%), while total were (21.0%), regarding the 6-10 years most of participant in workload Perception were (60.%) followed by occupational Stresswere (31.82%) while medical error attitude scalewere (9.09%), whiletotal were (11.0%), regarding the 11-20 years most of participant in medical error attitude scale were (34.78%),followed by occupational Stresswere (32.61%) while workload Perception were (32.0%), while total were (23.0%), regarding the 21-35 years most of participant in occupational Stresswere (45.45%),followed by workload Perception were (40.0%) while medical error attitude scalewere (13.64%), while total were (11.0%),

Regarding the **Length of service at the institution** while is a significant were p-value =0.001 and X^2 38.627 . regarding the 0-1 year most of participant in workload Perceptionwere (45.0%),followed by occupational Stresswere (39.13%) while medical error attitude scale were (15.22%), while total were (23.0%), regarding the 2-5 years most of participant in workload Perceptionwere (62.0%),followed by medical error attitude scalewere (15.79%) while occupational Stresswere (21.05%), while total were (19.0%), regarding the 6-10 years most of participant in workload Perception were (70.%) followed by occupational Stresswere (21.43%) while medical error attitude scalewere (9.52%), whiletotal were (21.0%), regarding the 11-20 years most of participant in occupational Stresswere (42.31%),followed by medical error attitude scale were (38.46%) while workload Perception were (21.0%), while total were (13.0%), regarding the 21-35 years most of participant in medical error attitude scale were (83.33%),followed by workload Perception were (10.0%) while occupational Stresswere (8.33%), while total were (24.0%),

Regarding the **Daily number of patients taken care** while is a significant were p-value =0.001 and X^2 61.143 . regarding the 0-3 patients most of participant in workload Perceptionwere (41.0%),followed by occupational Stresswere (36.84%) while medical error attitude scale were (21.05%), while total were (19.0%), regarding the 4-6 patients most of participant in workload Perceptionwere (77.0%),followed by occupational Stresswere (15.79%) while medical error attitude scalewere (2.38%), while total were (21.0%), regarding the 7-10 patients most of participant in medical error attitude scalewere (46.30%) followed by workload Perception were (32.43%) while occupational Stresswere (22.22%), whiletotal were (27.0%), regarding the 11-14 patients most of participant in workload Perception were (42.0%),followed by occupational Stresswere (30.95%) while medical error attitude scalewere (26.19%), while total were (21.0%), regarding the 15-25 patients most of participant in medical error attitude scale were (83.33%),followed by workload Perception were (10.0%) while occupational Stresswere (8.33%), while total were (24.0%).

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Discussion

This study explored the assessment the impact of workload perception and occupation pressure on medical error trends in hospitals in the Saudi Arabia 2023. This study drew on cross-sectional study data from 200 care health care workers from Saudi Arabia from (Physicians, Nurse, Health inspector). We 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]

Similar to other research reported that health care workers' perceptions of frequent, heavy workloads and interruptions to work flow showed strong associations with two patient outcomes, falls and UTIs, and a more modest association with the frequency of medication errors. This study's heavy workload measure includes items associated with health care workers perceptions of time pressure, or not enough time to get work done (e.g., arriving early/leaving late, missing breaks, too much work to do). In one simulated study of health care workers' decision-making performance, time pressure negatively influenced health care workers' capacity to detect the need for intervention, resulting in failure to rescue [32]. Of note is that under conditions without time pressure, health care workers with clinical expertise performed better than novice health care workers; the positive effects of clinical expertise, however, were negated when time pressure was introduced to clinical simulations. Our major findings are as follows; higher occupation pressure on medical error whilst on duty and longer weekly overtime were associated with an increase likelihood of medication error among[22].

Workloads among health care workers are associated with high turnover rates and absenteeism due to sickness, relative ineffectiveness in the workplace, as well as low job satisfaction [28]. In view of this, it is important to identify organizational stressors that are related to job workloads in order to promote and facilitate strategies aimed at its prevention and reduction, the relationship between workload and exhaustion . This interaction is considered one of the most controversial aspects of Karasek and Theorell's [33] theory. However, previous studies have shown that workload contributes toward the prediction of health care workers exhaustion [34], thus indicating incompatibility with Karasek and Theorell's [33] interaction hypothesis. Recently, Portoghese [35] showed that, of the 90 studies in which this interaction was tested, only nine provided support for the hypothesized interaction. Building on this result, we found a positive association between workload and Patient and healthcare worker Outcomes, and this relationship was strongest when Patient and healthcare worker Outcomes was lower. In this sense, both workload and Patient and healthcare worker Outcomes play important roles in improving working conditions. In turn, improved working conditions are demonstrated by a low workload and exhaustion level, which can also be attributed to an increase in Patient and healthcare worker Outcomes. In this manner, workloads control seems to protect workers from exhaustion when workload increases. Our findings showed that a high workload does not pose major concerns when health care workers have sufficient workloads control.[31]

Conclusion.

This study is the first of impact of workload perception and occupation pressure on medical error trends in hospitals and the mediation effect of burnout dimensions between the association of work conditions and perceived patient safety. This study has provided new insights regarding the effect of burnout dimensions and their consequences on patient safety. Furthermore, this study sheds light on the effect of work conditions on patient safety and how burnout influences this relationship. Burnout dimensions have dual roles, and they suppress the positive impact of leadership support engagement and complement the effect of workload on perceived patient safety. Supported and engaged medical staff reported lower perceived burnout, which, in turn, increased their perceived patient safety. At the same time, medical staffs with high workloads are more prone to burnout, which decreases patient safety. It highlighted the importance of human interactions and introduced the concept of a person-center journey to prevent patient harm and improve patient safety. A multifaceted approach between the individual and the healthcare organization is required to optimize patient safety and the quality of care and improve medical staff well-being

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