

Original article

Impact of Essential for Safety Requirement (ESR) on the Job Performance and Productivity of Healthcare Employees in Taif-Children's Hospital

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Abstract

The aim of this study was to assess the impact of the Essential Safety Requirements (ESR) of Taif Children's Hospital on the productivity and job performance of its healthcare employees. A self-administered questionnaire was used to collect data from a total of 350 employees representing 50% of physicians, nurses, pharmacists, lab technicians, administrative employees, and infection control coordinators of the Taif Children's Hospital. Demographic information such as age, gender, and employment status was collected in the first section of the questionnaire. The second section assessed the participant's knowledge of the hospital's ESR and the last section assessed the impact of these safety practices on employees' job performance. Data was analyzed using the Chi Square Test, Statistical Package for Social Sciences (Tukey Post Hoc Multiple comparisons and Anova). The results of the study indicated that there was a correlation between hospital safety and the performance of employees. The adherence of a hospital to ESR largely affects their job performance. Having standards and policies assure employees of their safety while at work thus increasing their morale which in return improves their performance.

Keywords: *Taif Children's Hospital, productivity, Job Performance, safety requirements, and healthcare employees.*

1.0 Introduction

1.1 Background of the study

The healthcare facilities in the Kingdom of Saudi Arabia (KSA) have come a long way. The number of hospitals has continued to increase since the establishment of the first public healthcare facility in Makkah in 1954. The government has also shown its commitment to improving the health of the people of Saudi Arabia and has shown a priority in the development of tertiary, primary, and secondary levels healthcare services (Al-Hanawi et al., 2019). The government has also introduced different health standards meant to regulate the operations of all private and government hospitals in the country. The health and safety practices in hospitals help to prevent incidences and accidents at the workplace and to protect employees from occupational diseases and injuries due to the risks and hazards present at the workplace. Inadequate safety practices lead to workplace accidents putting employees under stress and pressure hence the introduction of the essential safety requirements (ESR) in all Saudi hospitals not only to safeguard the healthcare providers but the patients as well. However, research shows that ESR affects the job performance and productivity of healthcare employees.



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1.2 Justification for the Study

Health and safety requirements at the workplace are a moral responsibility in a society that can have serious consequences on patients, individual workers, institutional management, and the nation as a whole. In their line of duty, healthcare providers are exposed to numerous risks and hazards such as chemicals, radiation, and body fluids. While the goal of a healthcare organization is to optimize its human resource to achieve its objectives, issues of health and safety requirements are significant in the accomplishment of employee tasks. Notably, some of these requirements may have consequences on the performance of the organization. While the impact of these consequences on job performance and productivity of healthcare employees have been largely studied in different parts of the world, research shows that there are only a few studies that have been conducted in Saudi Arabia on this topic and thus the need for conducting this study to bridge the existing gap.

1.3 Study Objectives

The aims of the study were:

- To assess the Essential Safety Requirements (ESR) of Taif Children's Hospital
- To assess the impact of ESR on productivity and job performance of healthcare employees in the hospital.
- To examine the role of the hospital in ensuring the safety and health of employees
- To examine the inadequacies in the safety requirements of the hospital

1.4 Research Questions

The study helped in answering the following questions:

- What are the national essential safety requirements (ESR)?
- Does Taif Children's Hospital has ESR in place?
- What are the effects of ESR on the job performance and motivation of employees?

2.0 Literature review

The Essential Safety Requirements (ESR) were established by Saudi Central Board for Accreditation of Healthcare Institutions (CBAHI) and were put in place with the intention of putting hospitals in Saudi Arabia in line with nationally accepted standards on safety, welfare, and health of employees. ESR requires all hospitals have systems of safety in place not only to protect the patient but also the healthcare providers. Workers in any healthcare organization are the most valuable assets meaning that organizations must do everything within their means to protect them (Onoh, 2021). It is, therefore, necessary that a lot of attention is paid to the occupational health and safety of employees than ever before. According to Olonade et al. (2022), the health and safety of employees is a major concern for management. However, the management's approach and attitudes towards safety are often reflected in the values, perceptions, beliefs, and attitudes shared by the employees. Thus, if an employer is not interested in safety of the organization, then it will be reflected in the employees and their patients.

Ullah et al. (2021) Further, emphasize that the heart of safe management is a healthcare facility's commitment to comprehensive safety efforts. This effort should include all members from top-level management to lower-level employees. Putting in place safety requirements in organizations such as installing fire alarm systems and ensuring proper management of equipment can help make a safer work environment. Designing a job requires the management to consider its physical setting. Notably, the safety of the work environment influences how well a worker performs the job. The safety of a work environment is determined by different factors

which should be considered when designing safety policies and requirements in hospitals.

Notably, every employee has the right to work in a secure and safe environment. It is therefore the prime duty of an employer to give the workforce a safe, friendly, and healthy environment. Since human resources are the greatest asset of any organization, the health and safety of workers should be a primary concern for all employers (Onoh, 2021). Adequate protective equipment and safe work practices affect employees' performance and productivity. A Poor work environment is associated with a lot of stress for workers leading to lower business performance. Chesro (2018) observed that the costs of unsafe and unhealthy workplaces have been well documented and the costs are related to employee absenteeism. Research by the world health organization indicates that work-related stress is the main cause of an increase in ill-mental health cases. Excessive stress can be in the form of absenteeism, fatigue, reduced productivity, impaired decision-making, and an increase in staff turnover. Therefore, occupation health and safety practices at the workplace have a positive relationship with organization performance.

3.0 Methodology

Materials and Method

Data for the study was collected from 350 out of 850 employees representing 50% of physicians, nurses, pharmacists, lab technicians, administrative employees, and infection control coordinators of the Taif Children's Hospital. Ethical clearance was obtained from the hospital's ethical committee through the Regional Research Committee Board with an IRB No: HAP-02-T-067 Approval No: 733 and an additional permission was obtained from the heads of the different departments involved in the study.

Data was collected using a self-administered questionnaire written in English and divided into three sections. The first section recorded demographic data such as age, gender, and employment status. The second section assessed the knowledge of respondents on the ESR such as do you think the hospital's fire alarm system is effective, etc. The last section assessed the impact of these safety practices on employees' job performance by asking questions such as: "does adherence to ESR such as do the hospital's process of preventing wrong patient, wrong side, and wrong surgery/procedure engender the accountability of healthcare workers? etc, have an impact on the quality of job performance?"

4. Data Analysis

Data analysis of this study involved processing both qualitative and quantitative data. Quantitative data was analyzed using the Statistical Package for Social Sciences (Tukey Post Hoc Multiple comparisons and Anova) Alpha Cronbach Equation Quantitative data analysis and Chi-Square Test which involved calculating frequencies and descriptive statistics.

5.0 Results

According to Table 1, a total of 350 employees representing 50% of physicians, nurses, pharmacists, lab technical administrative employees, and infection control departments of the Taif Children's Hospital were interviewed. 42.9% of the participants were between 36-45 years, 36.6% between 26-35 years, 15.1% between 45-55 years, and those above 56 years were 4.3%. 198 (56.6%) were females while 152 (43.4%) were males. Table 1 further shows that most of the employees interviewed (40.9%) had an experience of more than 10 years. 44.6% of the respondents had a bachelor's degree, 37.7% had a diploma, and the rest were equally distributed between masters and postgraduates. The highest percentage of respondents were nurses (36.6%).

Table I: Socio-Demographic Information

Variables	Categories	No	%
Age group	Under 25	4	1.1
	26-35	128	36.6
	36-45	150	42.9
	46-55	53	15.1
	Above 56	15	4.3
Gender	Male	152	43.4
	Female	198	56.6
Experience	Below 6 months	12	3.4
	6 months to 1 year	18	5.1
	1 - 5 years	90	25.7
	5 – 10 years	87	24.9
	Above 10 years	143	40.9
Level of education	Diploma	132	37.7
	Bachelor degree	156	44.6
	Masteral Degree	31	8.9
Work	Medical (Physician)	58	16.6
	Nursing	128	36.6
	Pharmacy	27	7.7
	Laboratory	13	3.7
	Administration Employees	22	6.3
	Infection Control Department	10	2.9
	Radiology	17	4.9
	Others	75	21.4

Reliability and validity were done to check whether the items explain the performance measures of the health providers at Taif Children’s Hospital. The reliability value was 0.78 while the alpha correlation was 0.01. Most of the respondents responded yes to the different items on adherence of the hospital to ESR. The chi-square

of the seven items on “adherence of the hospital to ESR” came significant at the 0.01 level in the direction of selection (Table 2-7). The 8 items on “effects of safety practices on job performance” were significant at the 0.01 level in the direction of selection (yes) (Table 8- 15).

Table 1: Knowledge about Essential for Safety Requirement Standards and Policies

Item	Yes		No		Not sure		Chi-Square	Sig
	f	%	f	%	f	%		
Do you have a knowledge about Essential for Safety Requirement (ESR) Standards and Policies?	288	82.3	12	3.4	50	14.3	383.6	0.01

Table 2: Status of the hospital’s Essential Safety Requirement

Item	Yes		No		Not sure		Chi-Square	Sig
	f	%	f	%	f	%		
Does the hospital have essential safety requirements in place? Such as (checking the qualifications of practitioners - alarm and firefighting system - radiation protection ... etc.)?	311	88.9	8	2.3	31	8.9	487.8	0.01

It is clear from the previous table that the value of the chi-square came significant at the 0.01 level in the direction of selection (Yes)

Table 3: Orientation and training about ESR Standards and policies

Item	Yes		No		Chi-Square	Sig
	f	%	f	%		
Have you been oriented and trained about the Standards and policies of ESR?	282	80.6	68	19.4	130.8	0.01

It is clear from the previous table that the value of the chi-square came significant at the 0.01 level in the direction of selection (Yes)

Table 4: Staff training on Occupational Health and Safety

Item	Monthly		Quarterly		Annually		Chi-Square	Sig
	f	%	f	%	f	%		
	How often is staff training on occupational health and safety organized?	55	15.7	113	32.3	182		

It is clear from the previous table that the value of the chi-square came significant at the 0.01 level in the direction of selection (Annually)

Table 5: Incidents and injuries in the hospital

Item	Yes		No		Chi Square	Sig
	f	%	f	%		
Have you suffered any accidents or injuries in the hospital?	21	6.0	329	94.0	271.1	0.01

It is clear from the previous table that the value of the chi-square came significant at the 0.01 level in the direction of selection (no)

Table 6: Satisfaction on management's effort on improving the hospital's safety requirements

Item	Very satisfied		Satisfied		Neither satisfied nor dissatisfied		Dissatisfied		Very dissatisfied		Chi-Square	Sig
	F	%	f	%	f	%	f	%	f	%		
How satisfied are you with the management's efforts in improving the hospital's safety requirements?	81	23.1	163	46.6	72	20.6	19	5.4	15	4.3	205.7	0.01

It is clear from the previous table that the value of the chi-square came significant at the 0.01 level in the direction of selection (Satisfied)

Table 7: Employee's belief on the safety requirement on improvement of a safety work environment

Item	Yes		No		Not sure		Chi-Square	Sig
	f	%	f	%	f	%		
Do you believe that the safety requirements has improved the safety at your work environment?	264	75.4	25	7.1	61	17.4	284.5	0.01

It is clear from the previous table that the value of the chi-square came significant at the 0.01 level in the direction of selection (Yes)

Effects of safety practices on job performance

Table 8: Adherence to safety requirements as protecting healthcare providers from radiation

Item	Yes		No		Not sure		Chi-Square	Sig
	f	%	f	%	f	%		
Does adherence to safety requirements such as protecting healthcare providers from radiation give you a sense of safety when performing your duties?	294	84.0	20	5.7	36	10.3	405.4	0.01

It is clear from the previous table that the value of the chi-square came significant at the 0.01 level in the direction of selection (Yes)

Table 9: Adherence to safety requirements as protecting healthcare providers on an effective alarm system

Item	Yes		No		Not sure		Chi-Square	Sig
	f	%	f	%	f	%		
Does adherence to safety requirements such as protecting healthcare providers on having an effective alarm system give you a sense of safety when performing your duties?	312	89.1	16	4.6	22	6.3	490.7	0.01

It is clear from the previous table that the value of the chi-square came significant at the 0.01 level in the direction of selection (Yes)

Table 10: Reduced rate of accidents

Item	Yes		No		Not sure		Chi-Square	Sig
	f	%	f	%	f	%		
Does ESR reduces the rate of accidents?	314	89.7	6	1.7	30	8.6	503.1	0.01

It is clear from the previous table that the value of the chi-square came significant at the 0.01 level in the direction of selection (Yes)

Table 11: Reduced rate of healthcare-associated infection (HAIs)

Item	Yes		No		Not sure		Chi-Square	sig
	f	%	f	%	f	%		
Does ESR reduces the rate of healthcare-associated infections (HAIs)?	309	88.3	9	2.6	32	9.1	477.9	0.01

It is clear from the previous table that the value of the chi-square came significant at the 0.01 level in the direction of selection (Yes)

Table 12: Level of safety

Item	Yes		No		Not sure		Chi-Square	Sig
	f	%	f	%	f	%		
Does this level of safety affect the quality of your job performance?	256	73.1	62	17.7	32	9.1	253.5	0.01

It is clear from the previous table that the value of the chi-square came significant at the 0.01 level in the direction of selection (Yes)

Table 13: Hospital Administration and employee's accountability

item	Yes		No		Chi-Square	Sig
	f	%	f	%		
Does safety in the hospital ensure accountability by the management and the employees?	318	90.9	32	9.1	233.7	0.01

It is clear from the previous table that the value of the chi-square came significant at the 0.01 level in the direction of selection (Yes)

Table 14: Inspection and evaluation of safety practices at the hospital

Item	Yes		No		Chi-Square	Sig
	f	%	f	%		
Does effective inspection and evaluation of safety practices at the hospital reduce absenteeism of health practitioners?	274	78.3	76	21.7	112.0	0.01

Table 15: Safety measures that improves adherence to safety practices

Item	Yes		No		Not sure		Chi-Square	Sig
	f	%	f	%	f	%		
Does these safety measures improve your adherence to safety practices in the hospital?	337	96.3	13	3.7	0	0	299.9	0.01

Table II: The value of ANOVA for differences according to age

ANOVA						
Item		Sum of Squares	df	Mean Square	F	Sig.
Adherence of the Hospital to ESR	Between Groups	60.968	4	15.242	2.127	.077
	Within Groups	2472.807	345	7.168		
	Total	2533.774	349			
Effects of safety practices on job performance	Between Groups	35.912	4	8.978	1.697	.150
	Within Groups	1825.105	345	5.290		
	Total	1861.017	349			

It is clear from the previous table that there are no significant differences according to age.

Table III: The value of ANOVA for differences according to experience

Item		Sum of Squares	df	Mean Square	F	Sig.
Adherence of the Hospital to ESR	Between Groups	85.269	4	21.317	3.004	.019
	Within Groups	2448.505	345	7.097		
	Total	2533.774	349			
Effects of safety practices on job performance	Between Groups	62.566	4	15.641	3.001	.019
	Within Groups	1798.452	345	5.213		
	Total	1861.017	349			

It is clear from the previous table that there are significant differences according to experience.

To find out the direction of the differences, the average scores were calculated according to the experience groups, as well as the Tukey test for of Post-Hoc Multiple Comparisons of the averages. The results were as shown in the following table.

Table IV: The value of ANOVA for differences according to education

Item		Sum of Squares	df	Mean Square	F	Sig.
Adherence of the Hospital to ESR	Between Groups	9.924	3	3.308	.453	.715
	Within Groups	2523.850	346	7.294		
	Total	2533.774	349			
Effects of safety practices on job performance	Between Groups	15.707	3	5.236	.982	.401
	Within Groups	1845.311	346	5.333		
	Total	1861.017	349			

It is clear from the previous table that there are no significant differences according to education.

Table V: The value of ANOVA for differences according to work

Item		Sum of Squares	df	Mean Square	F	Sig.
Adherence of the Hospital to ESR	Between Groups	74.450	7	10.636	1.479	.174
	Within Groups	2459.324	342	7.191		
	Total	2533.774	349			
Effects of safety practices on job performance	Between Groups	72.673	7	10.382	1.985	.056
	Within Groups	1788.344	342	5.229		
	Total	1861.017	349			

It is clear from the previous table that there are no significant differences according to work.

Table VI: The value of t-test for differences according to gender

	Gender	N	Mean	Std. Deviation	t	Sig.
Adherence of the Hospital to ESR	male	152	11.3618	2.83906	1.75	0.08
	female	198	11.8687	2.56349		
Effects of safety practices on job performance	male	152	9.1382	1.97014	2.86	0.01
	female	198	9.8434	2.50091		

It is clear from the previous table that the value of the t-test for differences between males and females was not significant in the first dimension, while it was significant in the second dimension in the direction of females.

It is also evident that there are significant differences according to the years of experience (Table III). The employees who are having lesser experience at work (5-10 years) are more adherent in following the Standards and policies of ESR and has the perception of having an effects of safety practices on their job performances while (Table VI) shows that Females by gender are more adherent than the male employees. (Table II, IV and V) which are the age, education and job description of the employees has no significance.

6.0 Discussion

This study explored the impact of Essential for Safety Requirement (ESR) on the job performance and productivity of healthcare employees in Taif-Children's Hospital. The results of the study showed that there was a correlation between hospital safety and the performance of employees. The adherence of a hospital to ESR largely affects their job performance. Having standards and policies

assure employees of their safety while at work thus increasing their morale which in return improves their performance. The findings of this study are consistent with the findings of other studies that indicate that safety requirements in a hospital affect the job performance of its healthcare providers. Mardani et al. (2017) also reported that the quality and safety of workplaces have a strong positive correlation with nurse staff work commitment.

There is no evidence of correlation between the level of education and job performance (Table IV) regardless of the presence or absence of safety measures. Most employees believe that the hospital's training programs on safety measures have improved their job performance. They believe that the hospital is committed to safety training and this gives the urge to do better in terms of adhering to safety in the hospital. Ashour & Hassan (2019) also reported the importance of implementing a safety management program on increasing the performance, knowledge, and attitude of the medical staff.

Findings of this study support the hypothesis that the extent to which health care providers perceive safety procedures as suitable to their daily work processes and demands, the higher the extent to which are perceived to be unambiguous and clear in their work thus leading to lower clinical incidences. It is also evident that a management's safety practices reflect the employees' adherence to safety measures as supported by the study Teuma Custo et al. (2019). They further show that healthcare providers will ensure that they improve safety at the workplace when they know that the management support safety activities. Increased safety in hospitals results in increased quality of staff performance. The improvement in the quality of lifelong programs increases the productivity of employees. It is therefore evident that the presence of training programs on safety offers employees the relevant knowledge in matters relating to safety thus giving them confidence when performing their duties.

This study manifests that safety standards and principles in the hospital reduce the number of injuries and accidents suffered by employees. Ashour & Hassan (2019) further shows that observing safety standards and principles in a hospital reduces the risks and number of accidents of both staff and patients while providing or receiving services thus improving the treatment and discharge services. This also improves the quality of services and productivity of nurses. An increase in the safety measures of a hospital increases the accountability of healthcare providers towards their clients and they become more responsible when performing their duties.

Basing from the result of Table III and Table VI, the Administration should equally assess, and to keep track of the adherence of employees not only on the lesser experience (5-10 years) particularly to physicians and nurses who works collaboratively with their patients and to remonstrate the significance to both genders is an imperative factor to consider. This is supported by Tlili et al. (2020) findings regarding medication errors and safety climate which showed that safety climate is correlated with organizational outcomes such as patients' perception towards nurses in terms of accountability, discipline, time, quality, and quantity.

7.0 Conclusion

It is evident from this study that there is a significant relationship between work safety practices and improved productivity and job performance by healthcare employees. The study was important in shedding some light on the safety practices that can be adopted by hospitals to improve the performance of healthcare providers. The study proved that an increase in hospital safety ensures that healthcare providers are more attentive to the quality of services offered to their patients. It ensures that employees take their time when performing their duties at a reduced cost. ESR ensures that employees follow safety regulations and that they are more careful

in their line of duties. Employees will become more accountable to clients and will be more responsible when finishing their assigned tasks. Again, ESR ensures that employees are also accountable to the Hospital Administration. With safety practices put in place, more employees can acknowledge their errors and faults.

Notably, as the safety of the hospital increases, the job performance of workers improves, and consequently, the quality of services also improves. Improvement in the quality of services provided also reduces wastage of time thus translating to improved patient satisfaction. Importantly, the number of accidents concurred for healthcare providers and patients. Safety measures at a hospital will increase efficacy and productivity. Enhancing safety measures reduces the time required for timely completion of tasks and the probability of unwanted occurrences at the hospital which will in return reduce costs. By following the safety requirements, a hospital is able to ensure the safety of its patients, and it's employees and also ensure their accountability. Therefore, according to the findings of this research, adhering to essential safety requirements is a necessity for every healthcare organization for improved job performance and productivity of employees. The study can therefore be used by hospital administrations to carry out upgrading of healthcare facilities.

8.0 Recommendations

Based on the findings of this study, hospital administrations and management are recommended to ensure that employees perceive safety measures as suitable and ensure that safety information is unambiguous and clear. This can be achieved by regularly updating safety measures in line with up-to-date evidence, assessing the perception of employees, using technology to ensure employees can access safety information, encouraging discussions on safety, and creating education programs for the staff on risk management (Lin et al., 2017). Safety training ensures that employees understand their roles in ensuring quality services for patients and helps them to understand that they are change agents for safety at the workplace. Managers should also ensure that all employees prioritize safety over workload, pace, and pressures. The behavior of the management should also reflect that safety at the workplace is valued, supported, and rewarded (Walston et al., 2019). Managers should advocate for safety standards at the workplace and engage other stakeholders in safety initiatives. Again, Taif Children's Hospital is hectic, which means that employees did not have enough time to answer questions it is therefore important to allocate more time to studies of such nature.

Declaration

Ethical Consideration

Ethical clearance was obtained from Taif Children's Hospital Research Ethics Committee in collaboration with the Taif Regional Directorate Research Committee, IRB No: HAP-02-T-067 Approval No:733. The study was conducted ethically according to the principles of the Declaration of Helsinki.

List of abbreviations

ANOVA: Analysis of Variance
CBAHI: Saudi Central Board for Accreditation of Healthcare Institutions
ESR: Essential for Safety Requirement
HAIs: Healthcare-associated infection
IRB: Institutional Review Board
KSA: Kingdom of Saudi Arabia

Data Availability

The Authors confirm that the data supporting the findings of this study are available within the article. Raw data that supports the findings of this study are available from the corresponding author, upon reasonable request.

Conflicts of Interest

The Author and Co-authors of this study had no competing interests.

Funding Statement

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Authors' contributions:

The individual contributions of authors to the manuscript are as follows:

AAG and JLJ conceived and planned the presented idea. AAG and JLJ wrote the draft, research proposal, JLJ obtained the Ethical Approval from the Taif Regional Directorate Research Committee. SAA organized the group and participated in revising the draft. AMS, NSJ, MMO, RRS, AMJ,AAA-obtained the data from the assigned units and departments in the hospital. IAZ, LHT and RAB participated in organizing the collected data from AMS, NSJ, MMO, RRS,AMJ,AAA. MZS and RRS collected all the data from the work of AMS, NSJ, MMO, RRS, AMJ, AAA developed it, performed computations and statistically analysed it. All the authors read, discussed the results, commented and approved the final manuscript.

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