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Exploration of Workplace Hazards Faced by Healthcare Workers in Pakistan

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Abstract

Safety and quality care in hospitals is determined by the institutionalization of safety culture in healthcare settings. This study focused on identification of work place hazards in healthcare settings. The aim of the study was to examine the effects of occupational hazards that cause hindrance in delivering safer healthcare. Occupational hazards are a source of potential harm for healthcare workers. This study utilized a qualitative design based on focus group discussions with healthcare workers including house officers, post graduate trainees, nurses, and paramedic staff dealing with patients. The study was carried out at three regional hospitals. Six focused group discussions were carried out with healthcare workers including house officers, post graduate trainees, nurses, and paramedic staff. Focus group discussions were analyzed with the help of content analysis. The employees at hospitals face varying kinds of health hazards such as physical, biological, and psychosocial hazards that interfere with the smooth and efficient provision of safer care. The absence of safety culture norms in healthcare settings create the preconditions of occupational hazards obscuring meaning of work and drainage of motivation; damaging healthcare workers, patients, healthcare setups, families, and economy as a whole. This study revealed that safety culture is not fully implemented both in theory and practice in Pakistani context.

Key Words: *Hospitals, Occupational Hazards, Occupational Exposure, Occupational Health, Safety Culture.*

Introduction

Healthcare system is enormously beneficial and plays a leading role in keeping any society, ailment and illness free; despite all these charms it is inherently hazardous too. The rapid evolution of healthcare and nature of illnesses being evolving simultaneously brings additional urgency to the quest for highlighting the hazards faced by the healthcare workers (Boyer, 2019; Khan et al., 2017; Simsekler & Jayaraman, 2018). Healthcare facilities play a pivotal role during emergencies, disasters, and crises thus aiding the community in recovering and healing (Bakatsaki & Zampetakis, 2020; Organization, 2019). Globally occupational hazards are among the major health problems and all workplaces are prone to occurrence of accidents; whereas hospitals in this regard specifically are among the most vulnerable work places (Denis, Dumetier, Poyard-Berger, Mantha-Belisle, & Vézina, 2019; Huang, Tsai, & Wang, 2019; Lebni et al., 2020).

There is a wide range of occupational factors that should be taken into account for occupational health and safety of healthcare workers; from workload to the occupational hazards which healthcare workers are exposed to; it can be said that not only the physical health but also psychological health of the healthcare workers is compromised. It is therefore very necessary to identify the hazards and risks at the workplace with the aim of minimizing and eliminating them. It is highly worthy to study the risks at work form the workers' perspective and point of view to reduce mistakes and rationality of the research being conducted (Fabiano, Reverberi, & Varbanov, 2019; Ferreira, Figueiredo, Girão, & Lança, 2020).

Risk identification is an important field of public and environmental health to work on risk communication through various methodologies, aiming at mitigation of risks, and addressing the uncertainties of the participants of the study by resolving communication barriers (Gibson et al., 2012; Hill et al., 2020). Therefore safety performance of an organization can be improved by properly understanding the organizational risk factors and hazard identification (Pandit, Albert, Patil, & Al-Bayati, 2019). Future qualitative studies can better identify and provide extended findings so, that comparisons across different areas and industries can be made and links can be created between management practices and safety policies more broadly (Jääskeläinen, Tappura, & Pirhonen, 2020; Tubaishat, 2019). In Pakistan, there is no independent legislation of occupational health and safety in healthcare sector (Rehman, 2015); safety legislations shortfalls include inadequate legislative structure, fragmented and outdated laws and unavailability of data base recommending legislative reforms, updating reporting system and need for capacity building trainings (Qayoom & Hadikusumo, 2019).

Objectives

The main objectives of the study are enlisted below:

1. To identify the barriers and challenges faced by the HCWs that hinder the effective and efficient working in Pakistani healthcare settings.
2. To understand the occupational hazards in healthcare settings from HCWs perspective.

Method

There is a wide range of contributory factors linked to the substandard safety measures so, drawing attention to safety issues is highly encouraged. Regulation of both employees and organization is clearly necessary. The current study is qualitative in nature involving focused group discussions with healthcare workers (HCWs); aiming at identifying occupational hazards faced by HCWs (Hennink, 2017; McLafferty, 2004) that lead to negligence in provision of safer health care. The focused group discussions will be analyzed using content analysis (Dobrzykowski, McFadden, & Vonderembse).

Sample

Six focused group discussions were carried out in three hospitals of Rawalpindi. Two focus group discussions were conducted with House Officers (*N*=16; 4 males and 4 females in each focus group with an age range 22-26 years). Two focus group discussions were carried out with Post Graduate Trainees (*N*=20; 5 males and 5 females in each group with an age range of 24-31 years). One focus group discussion was conducted with nurses (*N*=7; all were females with an age range 24-48 years), and one focus group discussion was held with paramedic staff (*N*= 9; 3 females and 6 males age ranging between 27 and 35 years).

Procedure

FGDs were carried out after taking approval from the concerned hospital authorities. The healthcare workers were taken consent for volunteering being the part of the study; they were assured that the information gathered from them will only be used for research purpose and their identities will be concealed while revealing the findings of the study. FGD protocols (Gill, Stewart, Treasure, & Chadwick, 2008; Holsman, 2002) were followed; a focus group guide was prepared to follow open ended questions (Jebb, 2015). The questions were simple and clear. The sequence of the questions was arranged from general to specific (Hennink, 2007, 2013). The questions were formulated so that they can satisfactorily generate responses in the domain of research objectives. The sessions were formally started by welcoming the participants and introduction of researcher, moderator and the participants. They were provided with oral instructions about the nature of research. The participants of the study were ensured that the information gathered from them will be kept confidential and their anonymity will be maintained. The participants were encouraged to share their opinion and observations regarding the questions inquired. Each session took approximately forty minutes to one hour; in total six sessions were carried out. The sessions were recorded and the participants were thanked in the end for their participation, cooperation, and time. Focus group discussions were analyzed with the help of content analysis (Neuendorf, 2016).

Results

Keeping in view the existing paradigms of occupational hazards, data was analyzed. The data was transcribed line by line and divided into meaningful analytical units. After segmenting the data into meaningful units maximum coding categories were generated. The recordings of the focus group discussions were listened carefully repeatedly to organize the responses of participants into meaningful coding categories and merge the similar categories to reduce into meaningful units (Neuendorf, 2016). Coding categories that emerged in data were evaluated by experts that were two industrial organizational psychologists and two senior consultants at Fauji Foundation Hospital. The experts were requested to review the coding and alignment of data in each category independently; then consensus between the experts' opinion was evaluated through Krippendorff's alpha that came out to be .91 showing strong inter rater reliability (Krippendorff, 2009). Three broader themes of occupational hazards faced by healthcare workers in Pakistan generated from the data presented in Table 1.

Table 1: Themes, Subthemes and Coding of Occupational Hazards in Healthcare Settings

Theme: Physical Hazards and Enviromechanical Hazards	
Subthemes	Codes
Light	Poor illumination
	Lack of backup in case electricity breakdown (load shedding)
	No light in parking areas at night; making it difficult to bring any stuff from the car
Temperature	No centralized heating or cooling system
	Cannot wear lab coats on jackets in winters
	Sweating makes wearing personal protective equipment more difficult in summers
Air	No proper ventilation
	Unclean air
Noise	Noisy and overcrowded hospital premises.
	Noise causes irritability and give headaches

Water	Water in the hospital is not safe to drink
Cleanliness/Hygiene	Dirty/unhygienic doctors' rooms
	Insects (cockroaches, bed bugs) in doctors' rooms
	Poor hygiene of duty rooms and washrooms
Inadequate tools	No monitors to see patient vitals in certain cases in emergency
	Inadequate beds
Inadequate staff	Patient influx is not manageable by the staff on duty
Slips and trips	Slippery floors and stairs
Poorly designed work areas/ equipments	Long working hours, manual handling of loads leading to musculoskeletal diseases
Theme: Biological Hazards	
Inadequate resources	Shortage of personal protective equipment delays in procedure due to
Isolation rooms	Inadequate isolation rooms and inadequate beds for highly communicable diseases
	MERS patients are not treated in isolation
Waste management	Used hospital syringes are recycled
	No proper waste disposal system
Bacterial flora	Unavailability of soaps and sanitizers lead to mixing patient flora
Needle stick injuries	Hepatitis B, Hepatitis C, HIV
Transmission of diseases	Cats, rodents, insects transmit diseases across patients and staff
Theme: Psychosocial Hazards	
Senior to junior bullying	Bad attitude of seniors with their juniors.
	Juniors are always victimized by seniors
	PGs don't encourage us
Disrespect	Juniors don't respect seniors
Personal security	Less number of security guards
	Incompetent security guards
	Lack of female security guards
Violence and assault	Attendants are not filtered; most of them are not educated
	Abusive attendants
	Intolerant and aggressive attendants
	Doctors are assaulted by patient attendants
Theft	Doctors' personal belongings are stolen
	No cupboards to keep our stuff
Workload	Long working hours
Burnout	Exhaustion, fatigue, sleep deprivation
Inadequate staff	Inadequate staff and greater patient influx
Night Stays	No safe rooms for both male and female HCWs especially who are on night calls
Harassment	Coworkers harass

Physical health Hazards and Enviromechanical Hazards

Physical health hazards and enviromechanical hazards are the leading cause of injury or illness for health care providers and receivers. Physical hazards is one of the themes identified from our data and it is further categorized into unavailability of light and backup in case of shortage of electricity in public sector hospitals of Pakistan; it was reported that surgical procedures have been continued by using mobile

torches in some cases. Poor illumination in clinics have led to examining patients with mobile torches. No centralized heating or cooling system within the hospital settings. The healthcare workers reported that it is difficult to wear personal protective equipment over layering of clothes in winters; whereas, in summers and high humidity personal protective equipment interfere a lot in carrying out the routine job with safety. There is unclean air of the hospital surroundings. The hospitals premises are very noisy and it gives continuous headaches to the healthcare workers. Dirty drinking water in the hospital premise keep the HCWs dehydrated at times, they have to carry their own water bottles. Dirty and unhygienic restrooms with no soaps and sanitizers; in hospitals the patients flora keep on mixing as well due to unavailability of soaps, the female HCWs reported of using the allied hostels washrooms because the washrooms in the hospital premises were really unhygienic. Inadequate resources cause delays in carrying out simple procedures, and inadequate beds have led to bed sharing especially in case of children's wards. Slippery floors, delay in cleaning the floors lead to fall hazards. HCWs reported falls due to patient's spills on stairs. HCWs have to work for hours in awkward postures leading to significant stress and strain.

Biological Hazards

Biological hazards was the second theme emerging from the data. Healthcare workers find these hazardous agents almost everywhere in the operating room, maintenance, food services, laboratories, radiology, officers, and even in the laundry. Blood borne pathogens, airborne pathogens are present throughout in the hospital environment. Therefore it is very necessary for the healthcare workers to deploy hazard communication programme to encourage employees to follow safe work practises and dispose of the hospital waste effectively. Pakistani healthcare workers have limited supply of personal protective equipment and they have to bring in their own equipment such as gloves and masks in certain cases, limited isolation rooms make the doctors, nurses and other paramedical staff to fear of contacting highly contagious diseases, the mismanagement of disposal of hospital waste make the sanitary workers prone to needle stick injuries and contact to other infectious diseases, inadequate soaps and sanitizers lead to the mixing of flora between patients and healthcare workers. The insects, pests and rodents roaming in the hospitals also tend to contribute in the transmission of diseases.

Psychosocial Hazards

Psychosocial hazards concerns about hazardous occupational exposure; including incivility/ disrespect by colleagues, bullying, poor staffing, long hours and double shifts and violence directed towards the employees (Walton & Rogers, 2017)]. Psychosocial hazards are classified as organizational factors and psychosocial issues both. Psychosocial hazards was the third theme emerged from our data. The healthcare workers in Pakistani hospitals face a number of psychosocial hazards such as bullying; senior to junior bullying was reported a lot, the house officers reported being bullied the most, they were of the view that post graduate trainees are just an exam ahead of them and keep on telling that they are of no use and doing their jobs in a wrong way; abusing, accusing and cursing are common practices from seniors to juniors in healthcare sectors, even senior nurses keep the young doctors at an arm's length. Lack of respect; the senior HCWs reported that the juniors in the healthcare surroundings don't keep up their work professionally and disregard their seniors and profession, intolerance towards the colleagues make difficulties in carrying out duties in collaboration and deteriorate the essence of teamwork. HCWS lack personal security as aggressive and volatile attendants and some patients have attacked the HCWs in certain cases. One doctor reported '*Doctors aren't safe how can they keep their patients safe? I was personally attacked by the attendant after the patient was declared DNR* (do not resuscitate/ allow natural death)*. There was no security guard present at that time. The ward master was unable to handle this situation appropriately'.* HCWs lack security of belongings and personal stuff; HCWs reported theft of

personal belongings, increased workload with understaffing, physical and verbal violence, assault, burnout, and harassment.

Discussion

Healthcare workers face numerous challenges while providing care to patients, often they neglect their own personal health and forget to have sight of their own personal wellbeing. They confront numerous stressors and hazards such as increasing work load, balance between work and family life, evolution of ailments and rapidly increasing knowledge base (Mohanty, Kabi, & Mohanty, 2019). In fewer healthcare settings the environment is calm and there are clear protocols for taking safety measures whereas in most of the health care settings work force do not have ideal circumstances for taking effective safety measures. Healthcare workers deviate from the safety performance standards at times as pressures in healthcare setup are great, their environment is chaotic and noisy; there is great pressure of productivity with less available resources (Amalberti & Vincent, 2020). When they healthcare workers are tired, exhausted, and stressed; they apt to cut corners in taking safety measures, in a rush to get on to the next case with limited staff and greater patient influx. Working daily in such conditions depart the healthcare workers from safe operating standards and overtime they tend to further loose efficacy in use of personal protective equipment.

It is the basic precondition to make the workplace safer by protecting the physical and psychological safety of the workforce; whereas in healthcare settings both are considered optional or even absent in many healthcare settings (Foundation, 2013; Loh, Idris, & Dollard, 2019). Occupational accidents and injuries physical, psychological, and economic harm to healthcare workers indirectly affecting their dependents too. The vulnerability of healthcare workers is even more in the developing nations as there are inadequate facilities and equipment (da Silva, Costa, Ribeiro, & Guedes, 2019; Mbarki, Kabbachi, Ezaidi, & Benssaou, 2013).

The data of the current study is collected in 2019, before the outbreak of Covid-19. Healthcare workers were already prone and at high risk of infections of communicable diseases such as Ebola Virus Disease, SARS, and MERS; infection can be prevented by the use of protective equipment such as protective gowns, gloves, masks, goggles to prevent cross contamination (Verbeek et al., 2019). In our indigenous perspective the healthcare workers fear that they are unknown if the patient is suffering from a highly contagious or communicable disease and they can contact the disease as they are not provided by the adequate personal protective equipment in the healthcare setups. The participants of the study were afraid that they can catch a disease and can potentially be a carrier and cross contaminate their patients and family members.

There is high prevalence of physical harm experienced by the healthcare workers (Adigun, Mikhail, & Hatcher, 2019; Yenealem, Woldegebriel, Olana, & Mekonnen, 2019). There are enormous outcomes of workplace violence such as psychological, physical, emotional, relationship with patients, provision of quality care, work functioning, financial, and social. Psychological outcomes could be depression, suicidal ideation, post-traumatic stress disorder; emotional outcomes could be fear or anger and the debilitating impact on work functioning can lead to absenteeism, sick leaves, or low job satisfaction (Lanctôt & Guay, 2014). Workplace violence such as bullying and physical assault can negatively impact as the healthcare worker may intend to leave job as they no longer find themselves safe and secure in the healthcare setup (Heponiemi, Kouvonen, Virtanen, Vänskä, & Elovainio, 2014). Significant links between workplace violence and musculoskeletal disorders have been seen; physical violence is seen to be a predisposing factor for acute and chronic lower back pain (Karahan, Kav, Abbasoglu, & Dogan, 2009). Physical harm at workplace

is beyond financial strain on a healthcare system rather it matters more as the quality of life of the healthcare workers when once debilitates the productivity and functioning of the institution suffers too (Lin et al., 2015).

In different healthcare organizations staff are routinely treated with disrespect; they do not feel psychological safety at work ; workers basic need is the provision of necessary resources to carry out work; they need appreciation and motivation to keep moving in healing the ailing society Disrespect and maltreatment from the colleagues and supervisors is the manifestation of physical hazard that makes the healthcare workers stranded in risk prone conditions; if the healthcare workers don't find themselves safe, they cannot perform to their potential, which is the underlying key to deliver safe care by deriving meaning and joy at work (Foundation, 2013; Templeton, Nilsen, & Walling, 2020; Vargas et al., 2019). It has become quite normal in few healthcare workplaces where emotional abuse, bullying, humiliation, mocking can be used in the process of training and learning; less overt behaviors such as nonverbal gestures, ignoring and isolating are also seen to be tolerated in healthcare settings. These behaviors impair learning, and create a culture of fear and intimidation, diminish morale, impair learning, and sap meaning of the work (McElroy, 2019; Rahm, Rystedt, Wilde-Larsson, Nordström, & Strandmark K, 2019)].

Conclusion

Safety culture is not fully implemented both in theory and practice in Pakistani context. These gaps in practice can be attributed to no error reporting, lack of communication, fragile teamwork within hospital units and management. The absence of safety culture norms in healthcare settings create the preconditions of physical, biological and psychosocial hazards obscuring meaning of work and drainage of motivation; damaging healthcare workers, patients, healthcare setups, families, and economy as a whole. Burnout, turnover intentions, absenteeism, and the inability to attract new comers to this noble caring profession add to the burden of illness on healthcare sector. The expectations and practices of management, inadequate resources create conditions with major downstream, impacts on patient safety, worker safety, and the community. Disrespectful treatment of workers increases the risk of patient injury and repute of the organization. All of these factors are combining to create a critical shortage of health care workers. The safety culture of healthcare organizations can be improved by recognizing and reporting of psychosocial hazards; encouraging and motivating healthcare workers to report errors and near misses. Identification of hazards by the healthcare workers should be taken positively by the management, so that the blame culture and fear of reporting be reduced and safety performance be prioritized in healthcare sector of Pakistan.

Future Directions

Recognizing challenges and opportunities for the healthcare workers outlines important aims and interventions to enhance safe work practices. The access to advance education on handling, storing, using personal protective equipment; the effective ways of handling and disposing hospital waste is the basic curriculum for the healthcare workers. Safety culture should be incorporated both theoretically and practically in healthcare sector. Practical implications arise from integrated frameworks; suggesting healthcare sector to rely on safety incidents, error reports, hazards, and risks to better gauge the prevailing health issues. Safety system in an organization need to recognize and integrate underreported psychological hazards such as emotional labor, burnout, exhaustion, bullying than simply mere emphasis on peak physical incidents such as needle stick injuries, slips and trips. The shift of key safety performance indicators from work place accidents and incidents towards cause identification; can better gauge a prevailing safety system in the organization.

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