Master of Science in Public Health

Knowledge and Practices of Occupational Health Safety Among Physiotherapist in Health Facilities of Rawalpindi and Islamabad

By

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Declaration

In submitting this dissertation, I certify that I have read and understood the rules and regulations of DPH and QAU regarding assessment procedures and offences and formally declare that all work contained within this document is my own apart from properly referenced quotations.

I understand that plagiarism is the use or presentation of any work by others, whether published or not, and can include the work of other candidates. I also understand that any quotation from the published or unpublished works of other persons, including other candidates, must be clearly identified as such by being placed inside quotation marks and a full reference to their source must be provided in proper form.

This dissertation is the result of an independent investigation. Where my work is indebted to others, I have made acknowledgments.

I declare that this work has not been accepted in substance for any other degree, nor is it currently being submitted in candidature for any other degree.

_____ _____

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ABSTRACT

Background:
Occupational health and safety (OHS) is a concept designed to prevent work-related hazards. The leeway for widespread practice of OHS among healthcare professionals underscores its appraisal on profession-specific basis, particularly in under-staffed settings.

Objectives:
To determine the knowledge and practices of occupational health safety among physiotherapist in Health Facilities of Rawalpindi and Islamabad.

Methodology:
A cross-sectional study was carried out in health facilities in Rawalpindi and Islamabad. A total of 217 physiotherapists within the health facilities were purposively sampled to participate in the cross-sectional survey. Chi-square test of association was applied to examine the association of outcome variables with socio-demographic
factors.

Results:
Out of 217 physiotherapist 52.5% (114) were males and 47.5% (103) werefemales. Approximately 43.3% (94) physiotherapist were between ages of 19-39 years and 56.7% (128) were between ages 40-59 years. High proportions of the physiotherapists demonstrated adequate specific knowledge on physical hazards (89.3%), perceived risks of work-related hazards (93.2%), which were not significantly associated with their gender, and years of practice experience ($p>0.05$).

Conclusion:
Our findings demonstrated adequate knowledge, and practice of Occupational Health Safety among the physiotherapists. The highly perceived occupational hazards in their practice suggests exigency for adequate support to ensure positive occupational environment.

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CHAPTER I: Introduction

Occupational health safety is a cross-disciplinary area and it is concerned with guarding the safety, health and welfare of people who are engaged in work or employment. Health is associated to the physical conditions of both mind and body, of all people at the workplace including the workers, contractors and visitors, and their protection from harm in the form of injury or disease. Occupational health safety is related to the physical condition at the worksite and applies to a state where the risk of harm and damage has been removed or reduced to a tolerable level. And the protection of environment is comprised of usually two types. First is the internal environment at the workplace and it is related to overall condition in the workplace. Second are the harmful conditions which are present in the external environment outside the workplace (Towlson 2015).

The purpose of this study was to examine the knowledge, and attitudes of physical physiotherapists in Rawalpindi and Islamabad, as the majority of studies on this topic have been conducted in other cities of Pakistan without identifying its barriers.Healthcare professionals (including physiotherapists) work in a range of environments that merit safety evaluation. The optimal practices of physiotherapists continue to be of utmost importance in order to ensure their safety and provide patients with the best possible care. Physiotherapists operate from vantage points to improve and promote the health and safety of disabled patients. They are well-known advocates for appropriate body mechanics and posture, constituting an integral part of occupational health promoters. To assume such a role model requires adequate knowledge, perception, attitude, and practice of standard preventive measures for self-protection, as well as the maintenance of their clients' optimal health. Manual handling is defined as "any activity requiring the use of force exerted by a person to lift, push, pull, carry or otherwise move, hold or restrain... an animate or inanimate object" (Cromie et al., 2001). Physiotherapy practice is characterized by manual handling. The work demand necessitates extensive body mechanics, such as repetitive tasks, high-force manual techniques, patients' body support as well as prolonged body contacts, and the display of constrained postures during specific man oeuvres (Mbada et al., 2015). In physiotherapy practice, the high demand

for postural man oeuvres remains a potential cause of work-related injuries and disorders. (Wang et al., 2017) Occupational health and safety (OHS) is a universal guideline widely implemented as a means of self-preservation by a vast array of workers, including health workers. Indeed, studies have demonstrated that physiotherapists are susceptible to work-related musculoskeletal disorders (WMSDs), which are the primary physical hazards (Cromie et al., 2001 and Adegoke et al., 2008). According to Biadgilign et al. (2011), adherence to OHS fundamental guidelines is effective in reducing occupational illnesses, injuries, and hazards among healthcare employees. However, there are numerous potential barriers to the effective practice of OHS across organizations, including a lack of knowledge, a lack of motivation, a negative attitude, and limited staff resources (Haslam et al., 2016). The purpose of the present study was to determine the knowledge, perceptions, attitude, and practice of occupational health and safety among physiotherapists in order to provide insight into the adequacy of its adoption according to the needs of the profession (Ellapen and Narsigan, 2014).

Occupational hazards are conditions encircling a workplace that increase the likelihood of a worker's death, disability, or illness. According to (Pasha et al., 2003) more than one million employees worldwide are exposed to workplace accidents and hazardous substances. Annually, there are approximately one million workplace-related fatalities and 250 million occupational incidents. In Pakistan, a developing nation, conditions are deteriorating due to the fact that many employees suffer injuries, lack of education, inadequate medical facilities, lack of accurate information, and illiteracy on the job. According to the World Health Organization, workplace hazards are the tenth leading cause of disease and death (Faremi et al., 2014). It was stated that the nature of workplace hazards varies across occupations (Sadleir et al., 2010). Hospitals pose a moderate health risk because they are associated with a variety of services and professions. The hospital is a service delivery industry; the efficient delivery of services is reliant on a large workforce (Sadleir et al., 2010). Reducing risk to safety and health by assuring safe design and selection of safe equipment through the establishment of safe work environments is a characteristic of occupational health and safety, according to (Loewenson, 1998)

In hospitals in the most populous nations, such as Pakistan, India, China, Nigeria, and Bangladesh, ineffective infectious waste management practices pose occupational and public health challenges for the general population (Harhay et al., 2009). There is a paucity of information regarding infectious healthcare waste management in Pakistan. However, no interventional studies have been conducted in the past, and the practices of health employees, who are responsible for waste management in any health care organization, are not supported by the literature. However, a recent study found that the practices of general practitioners operating in their own clinics were not up to par (Qaiser, 2012). Consequently, this study focuses on the Knowledge, Attitude, and Practices of occupational health safety among physiotherapist in Rawalpindi and Islamabad health facilities. The present study sought to determine the physiotherapists‟ knowledge, attitude and practice of OHS with the view to provide insight into the adequacy of its adaptation according to profession needs.

Study Objectives:

- To determineKnowledge of occupational health safety among physiotherapist in Rawalpindi and Islamabad health facilities.
- To assess the Practices of occupational health safety among physiotherapists
- To find association of knowledge and practices of physiotherapists with social demographic factors.

Literature Review

1.1Background

Occupational health safety is an important issue because of high rates of associated morbidity and mortality of exposed workers. An estimated 100,000 people die from occupational illnesses, while about 400,000 new cases of occupational diseases are diagnosed every year (Evanoff et al., 2013). This affects workers in various occupations as a result of their exposure to different types and varying degrees of hazards in the workplace. However, studies indicate that workers in the farming, general contracting, steel, automobile, truck driving and nursing sectors have the highest risk of exposure to high-risk occupational hazards (Oluwagbemi et al., 2017).

Globally, occupational health and safety employ over 59 million workers and offer variety of services to clients and patients, and are classified as hazardous and high-risk work place (Giroult et al., 2012). Healthcare facilities like other high risk work places are characterized by a high level of exposure to occupational health hazardous agents, which significantly endangers the health and life of workers. Occupational health hazards are an inherent property of a substance, agent, source of energy or situation that has the potential of causing undesirable consequences while risk is the probability that damage to „life, health, and or the environment" may occur from a hazard. In this regard, occupational hazards refer to workplace activities that have the potential to cause/increase the risk of injury or ill health. Occupational health safety is the control of hazards in the work place to achieve an acceptable level of risk, while workplace safety generally refers to the process of protecting the health and safety of staff while on the job, irrespective of vocation (Kalokairinou et al., 2016).

Occupational health and safety interventions have an effect on upper extremity musculoskeletal symptoms, signs, disorders, injuries, claims and lost time. Across all interventions, the results suggest a mixed level of evidence for the effect of OHS interventions on upper extremity MSD outcomes. A mixed level of evidence means there were medium to high quality studies with inconsistent findings. Importantly, no evidence was found that any OHS intervention had a negative or harmful effect on upper extremity musculoskeletal health. The above conclusions do not change when considering only

high-quality studies or when methodological issues of small sample size or lack of adjustment in final analysis for covariates/ confounders are considered. The mixed level of evidence finding may be due to the heterogeneity of intervention types grouped together where some interventions were effective and others not.

1.2Role of Physiotherapist in Preventing Occupational Health Hazards

Physiotherapists play an important role in preventing occupational health hazards by helping individuals maintain good physical health and well-being. They use a variety of techniques and strategies to assess, prevent and manage occupational health hazards, which can help to reduce the incidence of workplace injuries and illnesses (Kabeer et al., 2014).Physiotherapists experience work related musculoskeletal disorders of sufficient severity that one in six make career changes as a consequence (Cromie et al 2000). Musculoskeletal injury is frequently associated with manual handling defined as “any activity requiring the use of force exerted by a person to lift, push, pull, carry or otherwise move, hold or restrain … an animate or inanimate object” (Manual Handling Regulations 1999). Although physiotherapists frequently need to use manual handling and awkward postures in the course of their workthere are no professionspecific guidelines to assist them. As the coming decade is designated the decade for the prevention and treatment of musculoskeletal disorders (Garfin et al 1999), it is timely for physiotherapists to consider preventive measures they might implement to reduce their own related musculoskeletal disorders.

Perceived their insights to evaluate the efficacy of physiotherapist provision in an occupational health setting as part of a quality improvement initiative. A one-year retrospective evaluation of the outcomes following discharge from physiotherapist was conducted (Chetty et al., 2011). The physiotherapist service has demonstrated efficiency, cost-effectiveness, and positive results. The enhanced outcomes are a result of an innovative, rapid-access service and multidisciplinary input. The occupational health specialist plays a very important role in maintaining the safety and health of employees by carefully assessing the work site for potential hazards that can cause serious harm and reducing or preventing the risk inflicted by them (Alli et al., 2019).

1.3World Statistics of Occupational Health Hazards

International Health care facilities (HCFs) are establishments that provide counselling, clinical, surgical, and/or psychiatric consultations and treatment services for the healthy, ill, and injured (Aluko et al., 2016). Over 59 million workers worldwide are employed in HCFs, which offer a diversity of services to clients and patients and are classified as hazardous and high-risk workplaces (Zaman and Afroze, 2021). As with other high-risk workplaces, healthcare facilities are characterized by a high level of exposure to hazardous agents, which endangers the health and lives of healthcare workers (HCW). Hazards are an inherent property of a substance, agent, source of energy, or situation that has the potential to cause undesirable outcomes, whereas risk is the probability that injury to 'life, health, and/or the environment' may occur as a result of a hazard. In this context, occupational hazards refer to activities in the workplace that have the potential to cause or increase the risk of injury or illness (Tziaferi et al., 2011). Occupational safety is the control of hazards in the workplace to attain an acceptable level of risk, whereas workplace safety is the process of protecting the health and safety of employees while on the job, regardless of occupation (Tziaferi et al., 2011; Oluwagbemi, 2011). Due to the high rates of associated morbidity and mortality among exposed employees, occupational health and safety is a crucial issue. An estimated 100,000 people die annually from occupational diseases, while approximately 400,000 new cases are diagnosed annually (Ajayi et al., 2006; Bell et al., 2013). As a consequence of their exposure to various types and degrees of workplace hazards, this affects workers in a wide range of occupations. However, studies indicate that employees in the agriculture, general contracting, steel, automobile, truck driving, and nursing industries are most likely to be exposed to high-risk occupational hazards (Bell et al., 2013). In the course of performing their statutory duties, HCWs may be exposed to hazards that substantially impair their health and quality of life, with a multiplicative effect on their immediate and extended families. Consequently, HCWs require protection from workplace hazards just as much as employees in other high-risk occupations, such as mining or construction.

WHO (2012) classifies the hazards in healthcare settings as physical, biological, mechanical, chemical, and psychosocial. Prior research has demonstrated that the rate of

occupational injuries and ailments among HCWs is among the highest of any industry, but that this rate can be reduced or eliminated. Blood-borne infections [Human Immunodeficiency Virus (HIV), Hepatitis B virus (HBV), and Hepatitis C virus], back and neck pain, burnout stress, allergic reactions to latex materials, chemical spills, exposure to radiation, and assault by patients; among others; are the most prevalent risks to HCWs (Amosu et al., 2011). Factors that contribute to occupational illnesses and injuries in HCFs include the negligence and carelessness of health care workers, a lack of adequate protective aids and equipment, an inadequate number of staff, an excessive workload, the failure to observe basic safety and hygiene guidelines, and an insufficient understanding of how to operate modern healthcare equipment (Amosu et al., 2011). Therefore, the occupational vulnerability of HCWs threatens the quality of health care delivery in developing nations, particularly among physicians, nurses, and nursing assistants. A greater proportion of the scant studies on occupational hazards among healthcare workers in developing nations focused on specific job titles within the healthcare delivery system.

Chidozie et al. (2015) determined that the manual handling is an integral component of physiotherapy education and training. Despite this, physiotherapists are prone to Work Related Musculoskeletal Disorders (WRMSDs) associated with manual handling. This study investigated the level and determinants of knowledge, attitude, and perception regarding manual handling techniques among Nigerian physiotherapists. Materials and Procedures: In this cross-sectional investigation, 98 physiotherapists participated. As the survey instrument, an adapted, self-administered questionnaire pilot tested for its content validity was utilized. The questionnaire aimed to collect information on sociodemographic, knowledge, attitude, and perception regarding manual handling techniques, as well as WRMSDs associated with manual handling. The analysis utilized descriptive statistics, such as mean, frequency, and percentages, and inferential statistics, such as the Chi-square test. The level of Alpha was set to p0.05). Lack of apparatus was the leading reason (90.4%) for not employing recommended manual handling techniques in practice. The prevalence of manual handling-associated WRMSDs was high among Nigerian physiotherapists. The majority of physiotherapists demonstrated a negative

attitude towards the use of manual handling techniques in clinical practice due to the lack of necessary apparatus. This study demonstrates a gap between theory and practice regarding manual handling techniques among Nigerian physiotherapists.

Aluko et al. (2016) conducted a study to evaluate the workplace hazards and safety practices of selected healthcare workers (HCWs) in a typical health care facility (HCF) in Nigeria. By trade, healthcare workers (HCWs) provide a variety of preventive and curative services to customers and patients. However, while their emphasis is on providing care, they are susceptible to dangers that could be detrimental to their health and wellbeing. This is especially true in developing nations where minimal precautions are taken against exposure to numerous pathogens and infectious agents during the delivery of health services. This study evaluated the workplace hazards and safety practices of selected healthcare workers (HCWs) in a typical Nigerian health care facility (HCF). 290 respondents were selected using a descriptive cross-sectional design and stratified sampling technique. The study employed a mixed methodology, collected data using validated instruments, and analyzed the resultant data using IBM-SPSS, version 20. The results revealed that more than half of the respondents were female registered nurses with a median work experience of five years (70.3%). The majority of respondents (89%) were aware of hazards in HCFs, identified recapping used needles as a hazardous practice (70%), and acknowledged that effective hand washing before, during, and after every clinical procedure prevents cross infection (100%). In addition, the majority of respondents (96.2%) believed they were vulnerable to occupational hazards, with approximately two-thirds perceiving the risk as elevated. In addition, only 64.2% and 87.2% had been immunized against Hepatitis B and Tetanus, respectively. Only 52.1% of respondents "always" followed standard procedures, and the vast majority (93.8%) dispose of sharps safely, while those who did not (40%) cited a lack of fundamental safety equipment. In this study, occupation and education did not influence respondents' hand-washing behavior. The high level of knowledge demonstrated by respondents was not reflected in practice; consequently, measures aimed at promoting safety practices and minimizing exposure to hazards, such as the provision of safety equipment, pre-placement and routine training of staff on safety practices, and adequate reinforcement of

staff capacity and capability through drills, should be institutionalized and made mandatory in all HCFs. The protocol for safety training and exercises should be responsive to emerging and sector-specific safety challenges supported by evidence.

Schreiber et al. (2009) assessed the strategies utilized to promote evidence-based practice in pediatric physical therapy. The profession of physical therapy has been perceived as one that relies heavily on anecdotal evidence and employs treatment techniques with limited scientific support. As a means of addressing this perception and enhancing the translation of knowledge from research evidence into clinical practice, physiotherapists have been urged to adopt more evidence-based practice behaviors. However, little consideration has been given to the most effective means of supporting clinicians' efforts to enhance evidence-based practice. This study sought to identify, implement, and assess the efficacy of strategies designed to improve the ability of five pediatric physiotherapists to integrate scientific research evidence into clinical decision making. This study was a pilot experiment for formative evaluation. Participants in this study collaborated with the first author to identify and implement strategies and outcomes designed to improve their ability to utilize research evidence in clinical decision making. The outcome data were analyzed qualitatively. Participants reported modest self-reported improvements in evidence-based practice behaviors, such as perusing journal articles and performing database searches. They identified a number of obstacles, including a lack of time, other influences on clinical decision-making, and an absence of incentives for evidence-based practice activities. Participating pediatric physiotherapists had favorable attitudes towards evidence-based practice and made modest progress in this area. It is essential for the profession to continue investigating the most effective strategies for assisting clinicians in their application of research findings to clinical decision making.

Mahmood and Hashim (2018) conducted a study to assess the knowledge, attitudes, and practices of nurses regarding occupational health hazards in teaching hospitals in Kerbala. The descriptive study was conducted from January to April 2018 on a sample of 300 nurses randomly selected from three teaching hospitals in the Iraqi city of Kerbala. This research instrument was adapted from a previous study by reviewing the relevant literature. The research instrument comprised of four sections: demographic variables,

nurses' knowledge (18 items), nurses' practices (10 items), and nurses' attitudes (17 items). Statistical Package for the Social Sciences for Windows (SPSS-PC, version 20) was utilized for data analysis. There were a total of 300 nurses who participated in the investigation, including 90 males (30%) and 210 females (70%). 188 (62%) were between the ages of 20 and 39, 171 (57%) had completed secondary nursing education, 171 (57%) had 7 to 22 years of work experience, and 231 (77%) participated in training course-related occupational hazards. Approximately 252 (84%) and 207 (69%) subjects possessed adequate knowledge and practices, respectively. 276 nurses (92%) had a positive attitude. There was a significant correlation between the years of experience and the nurses' knowledge, attitude, and practices.

1.4 Occupational Health Hazards Situation in Pakistan

A study conducted to evaluate the knowledge, attitude, and practices of nurses in a public hospital regarding occupational hazards. Health-related occupational hazards are evident in all occupations and are the leading cause of death and mortality. Occupational safety at the workplace enhances the health and productivity of employees. Nurses comprise the largest group of healthcare employees in the medical field and are exposed to a higher rate of workplace hazards than other health care workers. This study seeks to evaluate the knowledge, attitudes, and practices of nurses in a public hospital regarding occupational hazards. The research procedure was cross-sectional and descriptive. The information was gathered at Nawaz Sharif Social Security Hospital in Lahore, Pakistan. The information was gathered from nurses using questionnaires. The results indicated that 67.5% of nurses had a comprehensive understanding of occupational hazards. The overall positive attitude was 56.91 percent and the overall level of practice was 57.72 percent, which is inadequate. The study has the practical implication of enhancing practices and decreasing occupational risk exposure. There should be educational and training sessions for nurses to improve occupational safety and devise policies for all aspects of occupational hazards (Awan et al. 2017).

Kumar et al. (2013) had the foresight to assess the knowledge, attitude, and practices of health personnel regarding the handling of infectious waste at tertiary care health facilities in a metropolitan city in Pakistan. Health Care Waste (HCW) is the second most

hazardous waste in the world and must be disposed of appropriately by trained health care personnel. Medical personnel must have extensive knowledge, a positive attitude, and secure practices when managing infectious waste. This evaluation was conducted to ascertain the situation and KAP of infectious waste management among health care workers in Rawalpindi, Pakistan, tertiary care settings health facilities. This research was part of an ongoing quasi-experimental with control and intervention design and was conducted in Rawalpindi's tertiary care government hospitals by randomly selecting and interviewing healthcare workers (HCWs). The participants were selected based on the proportional size of each HCW to ensure that each group was equally represented. After receiving written consent, a valid and dependable self-administered questionnaire was adapted. The Health Services Academy Pakistan's ethical committee provided ethical consideration. Results: During this baseline survey, 275 HCWs, including physicians, nurses, paramedics, and janitors, were interviewed. The average age of health care employees was 30.5 years. The management of infectious waste in both institutions was not statistically significant (p=0.33). However, socio-demographic information such as age, gender, level of education, and experience were statistically significant (p0.05) when compared to the practices. In these tertiary care hospitals of Pakistan, it was discovered that HCWs were not adhering to the correct guidelines and WHO regulations.

Bello et al. (2021) determined physiotherapists OHS knowledge, perceptions, attitudes, and practices. Occupational health and safety (OHS) is an approach to preventing work-related dangers. The flexibility for widespread OHS implementation among healthcare professionals calls for a profession-specific evaluation, particularly in understaffed environments. The sector's practicing physiotherapists were purposefully sampled to participate in the cross-sectional survey. Their email and WhatsApp addresses were obtained from the Ghana Physiotherapy Association's membership database. A Google software interface was developed to facilitate the completion of a validated questionnaire on OHS knowledge, attitude, perception, and practice. To summaries demographic profiles, percentages and proportions were used. Using the Pearson Chi-square test with a significance level of p=0.05, correlations between their knowledge and perceptions and socio-demographics were determined. Physiotherapists demonstrated adequate OHS

knowledge, perception, attitude, and practice, according to our findings. The elevated perception of occupational risks in their practice indicates the need for adequate support to ensure a positive work environment.

CHAPTER II: METHODOLOGY

1. Study Design

A quantitative research approach using cross-sectional study design was used for the current study.

2. Study Duration

Study period for the current research was six months (March-2022 to August-2022)

3. Study Setting

The study was carried out at public and private health care facilities of Rawalpindi and Islamabad.

4. Study Participant

The participants were practicing physiotherapists within Health care Facilities.

2.4.1Inclusion Criteria

They were included in the cross-sectional survey if they were: actively practicing, currently licensed by Allied Health Professions Council, duly registered with (PMDC), and deemed to have actively practiced for over one-year post-internship training programme.

2.4.2 Exclusion Criteria

Unemployed physiotherapist and those who were on external Aid mission were excluded from the study.

5. Sampling Techniques

Desired sample was collected using non-probability consecutive sampling strategy.

5.1 Sample Size Calculation

Sample Size for Frequency in a Population

Population size(for finite population correction factor or fpc)(*N*):	1000000
Hypothesized % frequency of outcome factor in the population (*p*):	83%+/-5
Confidence limits as % of 100(absolute +/- %)(*d*):	5%
Design effect (for cluster surveys-*DEFF*):	1

Sample Size(*n*) for Various Confidence Levels

ConfidenceLevel(%)	Sample Size
95%	217
80%	93
90%	153
97%	266
99%	375
99.9%	611
99.99%	854

Equation

Sample size $n = [DEFF*Np(1-p)]/ [(d^2/Z^2_{1-\alpha/2}*(N-1)+p*(1-p)]$

Results from OpenEpi, Version 3, open source calculator--SSPropor
Print from the browser with ctrl-P
or select text to copy and paste to other programs.

6. Data Collection Instruments

A adapted questionnaire (interview based) was used. The alternations were discussed with supervisor, were duly approved. The adapted questionnaire was checked for reliability of its items. To assess the validity and reliability of the questionnaire, two academic staff (a physiotherapist and an occupational therapist) who are knowledgeable in the subject area, participated in a peer-reviewed process for content validity. The inputs from the review process were incorporated, and the questionnaire was subsequently subjected to test re-test reliability among 30 physiotherapists, who were not involved in the final study. A Cronbach‟s alpha of 0.71 was obtained following the process.

2.6.1Data Collection Procedure

The socio-demographic profile of the participants was captured in a data collection form. A modified version of previously validated questionnaire on OHS among doctors and nurses was adapted for this study. All the specific items for physiotherapist were modified to suit physiotherapists‟ job descriptions.

2.6.2Questionnaire (Data collection form)

The questionnaire comprises four domains i.e., knowledge, attitude, and practices. Response options on the knowledge, attitude and practices domains are largely measured on nominal (Yes/No) scales with few closed ended items.

7. Data Analysis

Data was analyzed with IBM-SPSS version 20. Descriptive statistics such as mean, standard deviation and percentages/frequency were used to present the data. The associations of the respondents‟ knowledge and perception of OHS with their gender, levels of education and years of practice experience were determined with Pearson Chi-square. The level of significance was set at $p<0.05$.

8. Ethical Consideration

Before starting formal data collection, approval from Institutional Review Board (IRB) of Al-Shifa School of Public Health Rawalpindi, Pakistan has been taken (Annexure-4). Permission letter from the Head of Department of Al-Shifa School of Public Health was obtained regarding access to public & private hospitals. Permission was taken from the public & private hospitals of Rawalpindi city for conducting research. Patients were explained the purpose of the research and oral consent was taken from each participant (Annexure-3). Participants were assured for the confidentiality of their data. Data collected from the respondents was kept anonymous and was not shared with anyone. Data was entered in SPSS anonymously. After data entry, hard copies of collected were kept at a safe place.

CHAPTER III: RESULTS

3.1.Descriptive Results:

A total of 217 participants were interviewed and the response rate was 100%. Participants were only physiotherapist of age 19-59 years.

3.1.1. Socio Demographic Factors of Study Participants:

A total of 217 people volunteered for the study. The 217 participants varied in age, marital status, educational status, current income, qualification and work experience. The 52.5% (114) participants were male and 47.5% (103) of the 217 participants were females. Approximately 43.3% (94) were between the ages of 19 and 39. 56.7% were between the ages of 40 and 59. In terms of marital status, approximately 58.8% (128) of participants were married, 28.7% (92) were single, 7.5% (16) were divorced, and 5.1% (11) were widowed. 66.8% (145) of the 217 participants were bachelor, which means they had 16 years of education. 23.3% (70) were completed theirmaster‟s degree, 0.9% (2) received a doctoral degree. According to the data collected, 65.9% (143) of the participants having 2-5 years of experience, while 34.1% (74) having 6-10 years of relevant experience. Taking participant‟s area of living into account, approximately 43.6% (95) were from Rawalpindi, 38.5% (83) were from Islamabad and 17.9% belongs to some other city areas of Pakistan. Participants' income ranged from less than 60,000 were 50.7% (110) and 49.3% (107) earned above 61000. 59.4% (129). Taking in account their duties, 63.6% (138) were performing their duties in OPD/Wards while 36.4% (79) were doing their duties in ICU.

Table 1: Socio Demographic Factors

Variable	Options	Frequency (f)	Percentage (%)
Gender	Male Female	114 103	52.5 47.5
Age of respondent	19-39 40-59	94 123	43.3 56.7
Marital status	Married Single Divorced Widowed	128 62 16 11	58.8 28.7 7.5 5.1
Living areas	Rawalpindi Islamabad Other	95 83 39	43.6 38.5 17.9
Income	Less than 60000 61000 and Above	110 107	50.7 49.3
Area of duty	OPD/Ward ICU	138 79	63.6 36.4
Work experience	2-5 Years 6-10 Years	143 74	65.9 34.1
Qualification	Bachelor Masters PhD	145 70 2	66.8 32.3 0.9

According to the data collected, from the participants 22 doctors, 102 physiotherapist, 42 nurses and 22 lab technicians.

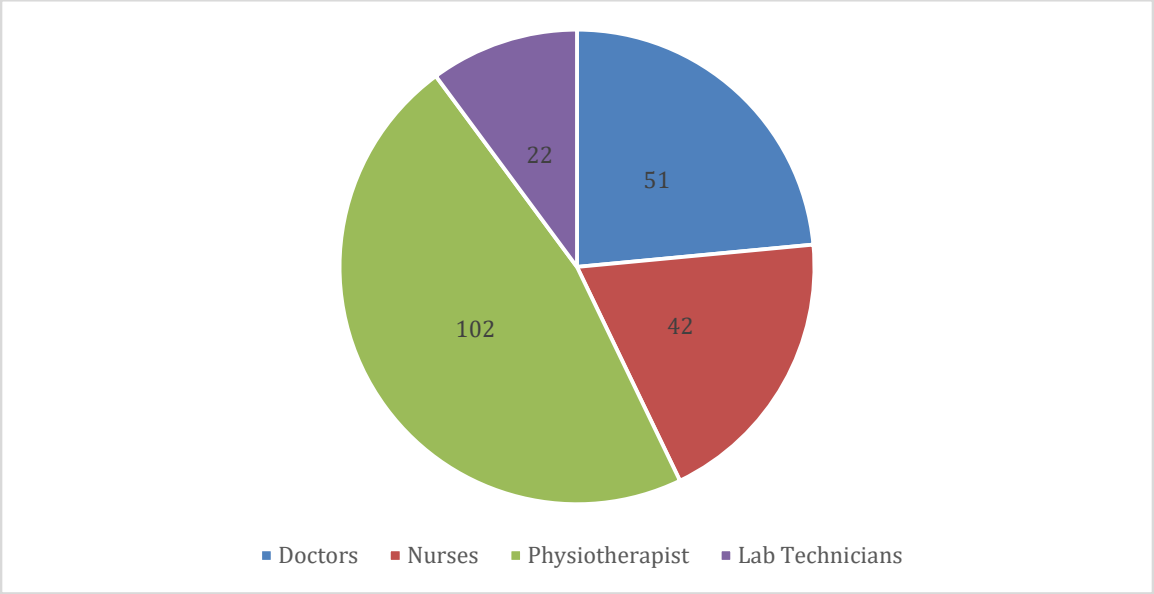

Fig. 1 Health Care Workers Category

3.1.2: Knowledge of Occupational Health Safety of the physiotherapists

Taking in account the knowledge of the physiotherapist"s out of 217, 52.1% (113) having the knowledge of occupational health while 47.9% (104) do not have proper knowledge of occupational health safety. Taking in account the vitality of the occupational health safety 53.5% (116) consider it vital to the health of the physiotherapists while 46.5% (101) do not think it as vital. In answer of the question "do you consider environmental control reduces the risk to the exposure of biological agents" the 41.9% (91) respond positively and the answer was yes while 58.1% (126) of 217 participants do not thinks that environmental control reduces the risk to the exposure of biological agents. Showing the knowledge of the physiotherapists 55.8% (121) perceived that they were at the risk of occupational health hazards while 44.2% (96) physiotherapists rated their perceptions as no. In account of the cross infection could be prevented by regular hand washing, 57.1%

(124) physiotherapists perceived as yes while 42.9% (93) rated their perception as no. Showing the knowledge of the physiotherapists about the replacement of gloves with different patients while giving session 55.3% (120) perceived as yes while 44.7% (97) of 217 participants rated their perceptions as no. In answer of the question that paying extra attention to occupational hazards is an unnecessary burden on you, 38.7% (84) perceived as yes while 61.3% (133) rated their perception as no. 55.8% (121) participants thinks that there is a need of an injury surveillance system to reduce the risk while 44.2% participants do not think as. 49.8% (108) physiotherapists perceived that the patients of HBV, Measles and Mumps should be received by the physiotherapists while 50.2% (109) rated their perceptions as no. Showing the knowledge of the physiotherapists in account of preventions to the occupational health hazards are the joint responsibility of all the health care facility staff, 59% (128) perceived as yes while 41% of the participants perceived as no. In account of the question that do you think the procedures where most needlestick injuries are likely to occure, 58.1% (126) respond as yes while 41.9% (91) of total participants rated their perceptions as no. showing the knowledge of the physiotherapists about the immunization against communicable disease such as Hepatitis, 54.8% (119) rated their perceptions as yes while 45.2% (98) physiotherapists perceived as no.

Table 2:Knowledge of Occupational Health Safety of the physiotherapists

Variable	Options	Frequency (f)	Percentage (%)
Knowledge of occupational Health	Yes No	113 104	52.1 47.9
Do you consider occupational health safety as vital to the health of physiotherapist	Yes No	116 101	53.5 46.5
Do you consider that environmental control reduces the risk to the exposure of biological agents	Yes No	91 126	41.9 58.1
Do you have any knowledge about	Yes No	121 96	55.8 44.2

occupational hazards that are posed to your health			
Do you think that cross infection could be prevented by regular hand washing	Yes No	124 93	57.1 42.9
Should all the exposure to the occupational health hazards be reported and documented	Yes No	99 118	45.6 54.4
Does Proper Maintenance of the body posture while giving therapy session is vital to prevention	Yes No	129 88	59.4 40.6
Do you consider that taking intermittent breaks between therapy session	Yes No	99 118	45.6 54.4
Do you believe in replacing gloves with different patients while giving session	Yes No	120 97	55.3 44.7
Does paying extra attention to occupational hazards is an unnecessary burden on you	Yes No	84 133	38.7 61.3
Is Training of staff and provision of personal protective equipment necessary to reduce the risk	Yes No	99 118	45.6 54.4
Do think that there is a need of an injury surveillance system to reduce the risk	Yes No	121 96	55.8 44.2
Should patient with HBV, Measles Mumps etc be	Yes No	108 109	49.8 50.2

received by therapist as well			
Should prolonged standing be avoided by therapist to reduce the risk of onset of mechanical back ache	Yes No	104 113	47.9 52.1
Prevention of occupational health hazards is a joint responsibility of all the health care facility staff	Yes No	128 89	59 41
Do you know about the procedures where most needlestick injuries are likely to occurred	Yes No	126 91	58.1 41.9
Do you consider immunization against communicable disease such as Hepatitis	Yes No	119 98	54.8 45.2

3.1.3: Practices of Occupational Health Safety of the physiotherapists

43.8% (95) physiotherapists used gloves and ward coats while giving treatment to the patients and 56.2% (122) does not used gloves and ward coat during practicing treatment to patients. 43.8% (93) practiced hand washing after giving treatments to patients while 56.2% do not practiced it. While giving session to the patients 53.9% (117) of 217 physiotherapists maintains the correct body posture and 46.1% (100) participants do not maintain the correct body posture. 32.7% (71) physiotherapists having the body contacts with the retroviral patients while 67.3 % (146) of 217 participants do not have this contact with the patients. One hundred twenty-one (55.8%) practiced correct body mechanics for lifting while ninety-six (44.2%) does not maintain the correct body mechanics for lifting patients during therapy session. After giving a session to patients 41% (89) physiotherapists take breaks while 59% (128) does not take breaks after giving

the session. Ninety-one (41.9%) suffered back pain immediately after giving a session to patient while 58.1% (126) participants do not suffer this pain after giving a session to patient. One hundred and four (47.9%) physiotherapists treat patients with open wounds while one hundred and thirteen (52.1%) do not treat patients with open wounds. 52.5% (114) physiotherapists do not treat patients while standing on a wet floor while 47.5% (103) treat the patients while standing on a wet floor. 44.7% (98) practiced in a proper lightening while 54.8 (119) do not practiced in proper lightening in department. Eighty-seven (40.1%) treat the patients while patients receiving an IV solution while one hundred and thirty (59.1%) do not treat patients while patient receiving an IV solution. 68.7% (149) had completed immunization against measles and hepatitis while 31.3% (68) were not immunized with necessary doses for measles and hepatitis.

Table 3:Practices of Occupational Health Safety of the physiotherapists

Variable	Options	Frequency (f)	Percentage (%)
Do you wear gloves and ward coat while giving treatment to the patients	Yes No	95 122	43.8 56.2
Do you wash or sanitize your hands after giving treatment to patients	Yes No	95 122	43.8 56.2
Do you maintain correct body posture while giving sessions to the patients	Yes No	117 100	53.9 46.1
Do you have any body contacts with retroviral patient	Yes No	71 146	32.7 67.3
Do you maintain correct body mechanics while lifting patients during therapy	Yes No	121 96	55.8 44.2

sessions			
Have you ever suffered from needlestick injury	Yes No	112 105	51.6 48.4
Do you take break after giving a session to a patient	Yes No	89 128	41 59
Have you ever from suffered back pain immediately after giving a session to the patient	Yes No	91 126	41.9 58.1
Do you treat patients with open wounds	Yes No	104 113	47.9 52.1
Do you treat patients while standing on a wet floor	Yes No	114 103	52.5 47.5
Do you have a proper lightening in your department	Yes No	98 119	44.7 54.8
Do you treat patients while the patient is receiving an IV solution	Yes No	87 130	40.1 59.9
Are you immunized with necessary doses for Measles, Hepatitis	Yes No	149 68	68.7 31.3

3.2. Inferential Results:

Chi-square was performed in order to investigate the association between independent and dependent variables. A statistically significant association was found between demographic characteristics of participants and main outcome variable of study i.e., knowledge with $p<0.05$. cross infection could be prevented by regular hand washing X^2 (1) =4.659, p=0.031, was statistically significant whereas knowledge of occupational

health with X^2 (1) =2.131, p=0.0144, occupational health safety as vital to the health of the physiotherapists with X^2 (1) =0.642, p=0.0423, environmental control reduces the risk to the exposure of biological agents with X^2 (1) =0.598, p=0.0439, knowledge about occupational hazards that are posed to your health with X^2 (1) =0.883, p=0.0347,exposure to the occupational health hazards be reported and documented with X^2 (1) =0.40, p=0.0841, Does Proper Maintenance of the body posture while giving therapy session is vital to prevention with X^2 (1) =1.89, p=0.0297, taking intermittent breaks between therapy session with X^2 (1) =0.73, p=0.0787 and all other variables tillimmunization against communicable disease such as Hepatitis with X^2 (1) = 0.472, P=0.0492 were statistically non-significant.

Table 4: Association between knowledge with sociodemographic factors

Variable	Options	Chi-square (Pears on ratio)	P-value
Knowledge of occupational Health	Yes No	2.131	0.0144*
Do you consider occupational health safety as vital to the health of physiotherapist	Yes No	0.642	0.0423*
Do you consider that environmental control reduces the risk to the exposure of biological agents	Yes No	0.598	0.0439*
Do you have any knowledge about occupational hazards that are posed to your health	Yes No	0.883	0.0347*
Do you think that cross infection could be prevented by	Yes No	4.659	0.031*

regular hand washing			
Should all the exposure to the occupational health hazards be reported and documented	Yes No	0.040	0.0841
Does Proper Maintenance of the body posture while giving therapy session is vital to prevention	Yes No	1.089	0.0297*
Do you consider that taking intermittent breaks between therapy session	Yes No	0.073	0.0787
Do you believe in replacing gloves with different patients while giving session	Yes No	1.221	0.0269*
Does paying extra attention to occupational hazards is an unnecessary burden on you	Yes No	0.099	0.0753
Is Training of staff and provision of personal protective equipment necessary to reduce the risk	Yes No	2.674	0.0102*
Do think that there is a need of an injury surveillance system to reduce the risk	Yes No	1.472	0.0225*
Should patient with HBV, Measles Mumps etc. be received by therapist as well	Yes No	1.433	0.0119*
Should prolonged standing be avoided by therapist to reduce the risk of	Yes No	2.131	0.0144*

onset of mechanical back ache			
Prevention of occupational health hazards is a joint responsibility of all the health care facility staff	Yes No	0.005	0.0946
Do you know about the procedures where most needlestick injuries are likely to occurred	Yes No	0.598	0.0439*
Do you consider immunization against communicable disease such as Hepatitis	Yes No	0.472	0.0492*

Chi-square was performed in order to investigate the association between independent and dependent variables (0.05% margin of error and 95% confidence interval). A statistically significant association was found between demographic characteristics of participants and main outcome variable of study i.e., Practices with $p<0.05$. Treat patients with open wounds X2 (1) =4.016, p=0.0454, was statistically significant whereas wearing gloves and ward coat while giving treatment to the patients with X2 (1) =0.90, p=0.0365 and all other variables tillimmunization with necessary doses for Measles, Hepatitis immunization against communicable disease such as Hepatitis with X2 (1) = 0.637, p=0.0525 were statistically non-significant.

Table 5: Association between practices with sociodemographic factors

Variable	Options	Chi-square (Pears on ratio)	P-value
Do you wear gloves and ward coat while giving treatment to the patients	Yes No	0.90	0.0465*
Do you wash or sanitize your hands after giving treatment to patients	Yes No	1.947	0.0363*
Do you maintain correct body posture while giving sessions to the patients	Yes No	0.160	0.0689
Do you have any body contacts with retroviral patient	Yes No	2.728	0.099
Do you maintain correct body mechanics while lifting patients during therapy sessions	Yes No	2.322	0.0128*
Have you ever suffered from needlestick injury	Yes No	0.740	0.0390*
Do you take break after giving a session to a patient	Yes No	0.044	0.0835
Have you ever from suffered back pain immediately after giving a session to the patient	Yes No	0.003	0.0957
Do you treat patients with open wounds	Yes No	4.016	0.045*

Do you treat patients while standing on a wet floor	Yes No	1.164	0.0559
Do you have a proper lightening in your department	Yes No	0.913	0.0634
Do you treat patients while the patient is receiving an IV solution	Yes No	1.419	0.0234*
Are you immunized with necessary doses for Measles, Hepatitis	Yes No	0.637	0.0425*

CHAPTER IV: DISCUSSION

Our study findings indicate adequate knowledge and practice of Occupational Health Safety. Out of 217 physiotherapist 52.5% (114) were males and 47.5% (103) were females. Approximately 43.3% (94) physiotherapist were between ages of 19-39 years and 56.7% (128) were between ages 40-59 years. High proportions of the physiotherapists demonstrated adequate specific knowledge on physical hazards (89.3%), perceived risks of work-related hazards (93.2%), which were not significantly associated with their gender, and years of practice experience ($p>0.05$). Our findings demonstrated adequate knowledge,and practice of Occupational Health Safety among the physiotherapists. The highly perceived occupational hazards in their practice suggests exigency for adequate support to ensure positive occupational environment.

The Knowledge and Practices of physiotherapists towards health promotion in Ghana are essential, if better integration into the scope of physiotherapy practice is to be promoted Although a lack of knowledge has been reported to be a possible barrier to practice, this study shows that physiotherapists have good knowledge of health promotion, which could be an opportunity for physiotherapists working in Ghana to integrate health promotion into their scope of practice (Joseph *et al*., 2011).

Some other studies showed that physiotherapists are well positioned to practiceof occupational health safety/promotion interventions and that it should form an integral part of physiotherapy. The majority of physiotherapists who participated in this study seem to engage in health safety practices at their workplace, by offering education about the prevention of occupational health and also indicated that their knowledge of exercise prescription is not the only means of health promotion. The positive responses also show that the application of ergonomic principles is crucial in health safety Ergonomics is concerned with the safety of health, productivity, safety and comfort of an individual and is practiced among physiotherapists to restore normal functional activities. Physical activity is also accepted worldwide as a public health priority (Shirley *et al*., 2010) and physiotherapists have more extensive training on exercise prescription for both the

primary and tertiary prevention of diseases and disabilitythan other health care professionals (Perreault *et al*., 2008).

This study was to determine the knowledge and practice of physiotherapists towards promotion of non-treatment physical activity for better health in patient management.It was observed that about two thirds of the respondents had a high knowledge of occupational health safety. Almost all the physiotherapist had very good practices (role perception and confidence) towards health safety. It was also observed that 60.7% of the physiotherapist identified insufficient consultation time as a barrier to the health safety. Most of the respondents considered themselves as more physically active than other Nigerians of the same age and gender. More than half of the respondents were not aware of health safety recommendation guidelines in other countries while almost all of them felt that occupational health safety recommendation guideline is necessary in Nigeria (Aweto *et al*., 2013).

In this study reported regular practicing of occupational health safety regarding hand washing, use of gloves and ward coats, body mechanics and postures. The findings are at variance with the two previous studies conducted in Nigeria and Egypt respectively. In their studies, respondents indicated poor practice of safety measures in spite of high awareness of occupational health safety. Although, it has been reported that high awareness of occupational health safety did not translate into better safety practices, the acquired knowledge and practices of the sampled physiotherapists, seem to favor their practice of occupational health safety. Accordingly, it is part of the physiotherapists‟ skills to employ various body mechanics to reduce incidence of work-related hazards (Jemima *et al*., 2021).

To the best of our knowledge, this is the first study that describes the knowledge, attitude, and practices of occupational health safety among health care workers in the main hospital in the Gaza Strip. In this study, 330 health care workers were recruited from different departments. The main results showed 54.9% of the physiotherapist were having the highest level of occupational health safety knowledge, while 66.7% of administrative careers were having the lowest percentage. Regarding occupational health safety practices, the results indicated that 47.7% of the physiotherapist were having a positive,

while 83.3% of the nurses and technicians were having a negative attitude. Moreover, the data analysis showed that 50.4% of the physiotherapist were having good practice towered occupational health safety, while 62.5% of the radiologist technicians were having poor practice. Furthermore, this study showed that the majority (80.3%) of the health care workers were not receive training courses in occupational health safety (Suliman *et al.,* 2022).

Research is needed to document the physical requirements of physiotherapist, to establish safe work practices with respect to patient workload, scheduling and work/rest ratios. These guidelines for physiotherapist practice are proposals. As such, they are untested, and will require refinement and modification as the available body of knowledge increases.

Physiotherapist, as a job, can be broadly defined. Therefore, these guidelines are qualitative in nature, and to be interpreted by individuals for specific situations. Their qualitative nature means they are responsive and flexible in a variety of situations. Suggests that such guidelines should be procedural, and address multiple criteria. They should be feasible to execute, and once implemented, their effects on work related musculoskeletal disorders (WMSDs) should be assessed. Development of guidelines should be based on existing knowledge, or be evidence. Although the existing literature is not extensive, it forms the basis for the guidelines proposed here.

CONCLUSION

The physiotherapists in this study showed adequate knowledge and practice of Occupational Health Safety among physiotherapists. The demonstrated knowledge and perception have no bearing on their sex, level of education and years of clinical practice. The perception of the occupational hazards by the physiotherapists should therefore be taken seriously at the professional association and government levels to ensure adequate support for practice.

Recommendations

As there is no policy for occupational health hazards posed to Physiotherapists working in different Health Care facilities in Pakistan, Therefore, following policies with respect to different levels can be implemented to minimize and prevent Occupational Health Hazards posed to Physiotherapists.

Government Level:

A committee comprising of specialists Physiotherapists (Neuromuscular, Cardiopulmonary, Musculoskeletal and Paeds) may be formed to define principles related to practice in different fields of Physiotherapy.

Hospital Level:

Head of Departement of Rehabilitation and Physiotherapy of the Hospital can be asked to devise a plan which states the different occupational hazards posed to the Physiotherapists working in different wards as well in the OPD of the Physiotherapy and steps to be taken to minimize and prevent these hazards. Also, it should be mandatory on the Head of the Physiotherapy department to implement the proposed steps and to place these steps on Notice Board of OPD as well as in different wards Physiotherapists are working in.

Patient/client Level:

As this study indicates that Physiotherapists have adequate knowledge and practice related to Occupational Health Hazards, therefore every senior physiotherapist can guide on identification and minimization of Occupational Health Hazards their juniors while giving demonstration on patients in OPD as well as in wards

Way Forward:

The adequate knowledge and practice with respect to occupational health hazards shown in this study regardless of sex, level of education and years of clinical practice should be taken ahead seriously at the government level as well as the organizational level.

Moreover, this knowledge should be incorporated into the syllabi of the Physiotherapy in order to achieve more good results.

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Appendix A -

Questionnaire

Knowledge and Practices of Occupational Health Safety Among Physiotherapists in Health facilities of RWP & Islamabad

Section 1 Socioeconomic Status

1. What is your gender?
    - Male
    - Female

2. What is your Marital Status?
    - Married
    - Single
    - Divorced
    - Widow

3. What is your age?
    - 19-29
    - 30-39
    - 40-49
    - 50-59
    - More than 56

4. What is your salary range?
    - Less than 25k
    - 25k-40k
    - 41k-60k
    - 61k-80k
    - 80k-99k
    - More than 100k

5. Where do you live?

- Rawalpindi
- Islamabad
- Other (please specify)

6. Define your Health care Worker category

- Doctor
- Nurse
- Physiotherapist
- Lab Technician
- Other (please specify)

7. What is your work experience?

- Less than 2 years
- 3-5 years
- 6-10 years
- More than 10 years

8. What is your level of Qualification?

- Bachelors
- Masters

9. What is your area of duty?

- OPD
- Ward
- ICU
- Laboratory

10. Are you suffering from any of the following

- Blood Pressure
- Sugar
- Any other

Section 2 Knowledge of Physiotherapists

1. Do you have any knowledge of occupational Health Safety?

- Yes
- No

2. Do you consider Occupational Health Safety as Vital to the health of Physiotherapists?

- Yes
- No

3. Do you consider that environmental control reduces the risk to the exposure of biological agents?

- Yes
- No

4. Do you have any knowledge about occupational hazards that are posed to your health in your health care facility?

- Yes
- No

5. Do you think that cross infection could be prevented by regular hand washing after each therapy session?

- Yes
- No

6. Should all the exposures to the occupational health hazards be reported and documented?

- Yes
- No

7. Does proper maintenance of the body posture while giving therapy sessions is vital to the prevention of mechanical hazard?

- Yes
- No

8. Do you consider that taking intermittent breaks between therapy sessions might be important to a therapist health?

- Yes
- No

9. Do you believe in replacing gloves with different patients while giving sessions?

- Yes
- No

10. Does Paying extra attention to occupational hazards is an unnecessary burden on you?

- Only Once
- Multiple times

11. Is training of staff and provision of personal protective equipment necessary to reduce the risk of occupational health hazard?

- Yes, only once
- Yes, Multiple times
- Not at all

12. Do think that there is a need of an injury surveillance system to reduce the risk of work-related injuries

- Yes
- No

13. Should patients with HBV, Measles Mumps etc be received by the therapists as well?

- Yes
- No

14. Should prolonged standing be avoided by therapists to reduce the risk of onset of Mechanical Back Ache?

- Yes
- No

15. Prevention of occupational health hazards is a joint responsibility of all the health care facility staff?

- Yes
- No

16. Do you know about the procedures where most needlestick injuries are likely to occur?

- Yes
- No

17. Do you consider immunization against communicable diseases such as Hepatitus, Tetanus vital for occupational health safety in a health care facility?

- Yes
- No

Section 3 Practices of Physiotherapists

1. Do you wear gloves and ward coat while giving treatment to the patients

- Yes
- No

2. Do you wash or sanitize your hands after giving treatment to patients?

- Yes
- No

3. Do you maintain correct body posture while giving sessions to the patients?

- Yes
- No

4. Do you have any body contacts with retroviral patients?

- Yes
- No

5. Do you maintain correct body mechanics while lifting patients during therapy sessions?

- Yes
- No

6. Have you ever suffered from needlestick injury?

- Yes
- No

7. Do you take break after giving a session to a patient?

- Yes
- No

8. Have you ever from suffered back pain immediately after giving a session to the patient?

- Yes
- No

9. Do you treat patients with open wounds?

- Yes
- No

10. Do you treat patients while standing on a wet floor?

- Yes
- No

11. Do you have a proper lightening in your department

- Yes
- No

12. Do you treat patients while the patient is receiving an IV solution?

- Yes
- No

13. Are you immunized with necessary doses for Measles, Hepatitis etc.?

- Yes
- No

Appendix B – Consent Form

I am Hassan Bin Ahmad, student of MSPH- Final Semester, Al-Shifa School of Public Health, Al-Shifa Eye Hospital, Rawalpindi. I am doing research on Knowledge, Attitude and Practices of Occupational Health Safety Among Physiotherapist in Health Facilities of Rawalpindi and Islamabad.

PURPOSE OF THE RESEARCH

The purpose of this study is to assessKnowledgeand Practices of Occupational Health Safety Among Physiotherapist in Health Facilities of Rawalpindi and Islamabad.

PARTICIPATION

I do not anticipate that taking this study will contain any risk or inconvenience to you. Your participation is strictly voluntary and you may withdraw your participation at any time without penalty. I request you to answer the questions as honestly as possible. It will take no longer than 20 minutes to complete a questionnaire. All information collected will be used only for research purpose and will be kept highly confidential. Your identity and your responses will not be identifiable; all data will be stored anonymously. As this is solely a student project no incentive will be provided. Once study is completed, I would be happy to share the results with you if you desire.

Thank you for agreeing to participate in this study. Your feedback is important.

Consent

I have read and understand the information sheet and agree to take part in the study.

Signature_____ Date_____

Appendix C – IRB

AL-SHIFA SCHOOL OF PUBLIC HEALTH
PAKISTAN INSTITUTE OF OPHTHALMOLOGY
AL-SHIFA TRUST, RAWALPINDI

No. MSPH-IRB/13-01
24th March, 2022

TO WHOM IT MAY CONCERN

This is to certify that **Hasan Bin Ahmed** S/O **Ahmed Shamim** is a student of Master of Science in Public Health (MSPH) final semester at Al-Shifa School of Public Health, PIO, Al-Shifa Trust Rawalpindi. He/she has to conduct a research project as part of curriculum & compulsory requirement for the award of degree by the Quaid-i-Azam University, Islamabad. His/her research topic which has already been approved by the Institutional Review Board (IRB) is **"Knowledge and Practices of occupational health safety among physiotherapists in health facilities of Rawalpindi and Islamabad".**

Please provide his/her necessary help and support in completion of the research project. Thank you.

Sincerely,

Dr. Ayesha Babar Kawish
Head
School of Public Health, PIO
Al-Shifa Trust, Rawalpindi

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Appendix D

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	37	92.5
	Excluded[a]	3	7.5
	Total	40	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.602	40