

QATAR UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

PHYSIOTHERAPISTS CHALLENGES IN QATAR AND THEIR EFFECT ON
PERFORMANCE AND RETENTION

BY

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A Project Submitted to the Faculty of
Collage of Business and Economics
In Partial Fulfillment
Of the Requirements
For the Degree of
Master of Business Administration

January, 2017

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ABSTRACT

While physiotherapists play a critical role in addressing the healthcare priorities and well-being of various populations in the rapidly changing healthcare, recent studies show that they are facing a number of challenges at their workplace, which could have an effect their performance in terms of the quality of healthcare services they provide. Studies further show that dissatisfaction at the workplace could lead to high employee turnover, which has negative health, economic and social outcomes for the employees, organization and the society at large. Thus, the purpose of this study is to examine the challenges that physiotherapists in Qatar face and how they affect their performance and retention. To achieve this, this study used a mixed method approach that involved a quantitative survey of 100 physiotherapists working in various parts of Qatar and qualitative interviews with 10 hospital staff and 25 former employees of Hamad Medical Corporation in Qatar. The findings of the study show that low pay and unfavorable employment contracts are the leading challenge that most physiotherapists face in Qatar, with many stating their willingness to leave if they got better paying and contract terms. The increasing demand for physiotherapist services were identified as yet another major challenge that physiotherapists face in Qatar. Due to the high demand, physiotherapists are forced to put in more working hours, but their pay does not increase to compensate for the extra effort that they put in. As a result, majority of the physiotherapists end up being demotivated, which not only affects their performance but also increases employee retention. In light of these findings, this study recommends better pay and contract terms alongside policy changes, organizational change, professional education, support, mentorship, and training as ways of motivating employees.

Keywords: *physiotherapists challenges; physiotherapists; performance; retention; and Qatar.*

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ACKNOWLEDGEMENTS

First, I would like to thank Allah for His mercies and grace upon me because my success clings to His presence in my life throughout the period that I was undertaking my studies. The ability and strength to carry on during the hard times of my study depicts the magnitude of blessing He has directed towards me.

Secondly, I would like to thank my supervisor, Belaid Aouni, for his guidance and support during writing my dissertation. He was extremely patient with me and I highly acknowledge him. My gratitude and thanks to him cannot be expressed by mere words.

I would like to also extend my sincere appreciation to my family members who were always behind my back. My husband, parents, brothers and sisters fully supported my study and played a crucial role in encouraging me during the difficult moments. I passionately appreciate their magnificent support throughout my academic life.

Last but not least, I thank all my colleagues especially Sara Alnaemi and all those who were close to me. Their moral and social support boosted my studying incentive in an immeasurable magnitude. Further, all key participants who contributed in my wellbeing and study at the university are sincerely appreciated.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Physiotherapists play a critical role in addressing the healthcare priorities and well-being of various populations in the rapidly changing healthcare. More specifically, physiotherapists play a significant role in supporting self-management, promoting independence and helping reduce episodes of ill health that develop into chronic conditions that require admission to the hospital (Stubbs *et al.*, 2014; Skinner *et al.*, 2015). Evidence from recent studies show that physiotherapists offer critical healthcare services in various areas including stroke, occupational health, chronic pulmonary disease (COPD), cardiovascular diseases, and musculoskeletal disorders among others (Rosenbaum *et al.*, 2014). Regardless of the role that physiotherapists play, recent studies show that physiotherapists are facing a number of challenges at their workplace, which could have an effect on the quality of healthcare services they provide.

There is a growing body of evidence showing that employment instability and high employee turnover in physiotherapy is increasing (Brannon *et al.*, 2007; Decker *et al.*, 2009). Theoretical evidence further shows that high employee turnover rates are mainly as a result of the employees' dissatisfaction with their work due to various factors such as low pay, unfavorable

contracts, family issues, long working hours, fewer benefits and poor working conditions among others (Boxall and Macky, 2009; Mittal, Rosen and Leana, 2009).

On the other hand, high employee turnover rates in a sensitive field such as physiotherapist could have a detrimental effect on the quality of the healthcare services rendered. This is because it demotivates the employees, and has been found to be one of the leading causes of stress at the workplace (Chung-Yan, 2010). Previous studies have provided strong evidence linking employee dissatisfaction to reduced quality in the healthcare services (Castle *et al.*, 2007; Siong *et al.*, 2006), which worsens the conditions of the patients. Further, Karantzas *et al.* (2011) study found that organizations with high employee turnover have high management costs because they are forced to recruit and train new employees, which reduces the productivity and stability of the organization.

1.2 Research Problem and Significance of the Study

Despite the significant role that physiotherapists play in the management of health conditions, a review of existing literature shows that less research focus has been put on the challenges that they face and how it affects employee retention. While there is a lot of evidence documenting the challenges of the general healthcare from around the world (Coovadia *et al.*, 2009; Paim *et al.*, 2011; Rosen, Waitzberg and Merker, 2015), there is very little evidence touching on physiotherapy. Further analysis has found that there is limited research focus on the research topic in Qatar. In addition, health trends show that physiotherapists' role has increasingly become more important, especially due to the increased number of the population that requires physiotherapists' services to manage their conditions. Statistics show that the population of the

aged and the number of persons diagnosed as obese and diabetic has been increasing in Qatar (Christos *et al.*, 2014), which implies an increase in the demand for physiotherapy services.

Therefore, given these recent trends and the existing research gaps in the research topic, this study is timely and significant in various ways. For instance, by carrying out a study on the challenges physiotherapists face and how it affects employee retention, this study fills the existing research gaps and creates new knowledge on the study topic. Also, given that there is no such study that has been undertaken in Qatar, this study sets precedence for future researchers who may be interested in the study topic.

The study is relevant to various entities, including the physiotherapists, hospital management, researchers and the government at large. The analysis of the challenges that physiotherapists face can help physiotherapists practicing in Qatar and beyond understand some of the pertinent issues in the field, and as such, learn how to manage them. Further, this study is useful to organizations' management as it can help them understand some of the factors that lead to high employee turnover, and thus, find an amicable solution to those challenges. To the future researchers, this study sets precedence in the research topic, and the gaps identified in this study can be explored for further studies. Lastly, the government can use the findings of this study to put measures and policies that help in the management of the challenges identified, and thus, improve the status of physiotherapy in Qatar.

1.3 Research Aims and Objectives

The purpose of this study is to examine the challenges that physiotherapists in Qatar and how they affect their performance and retention. Accordingly, the study aims and objectives are:

- To establish the various challenges physiotherapists face in Qatar.
- To determine the impact of the challenges on the physiotherapists' performance.
- To determine how the challenges affect the physiotherapists' employee retention.
- To identify the various mechanisms that can be put in place to resolve the challenges that physiotherapists face.

1.4 Research Question and Study Hypotheses

The main research question for this question is: *what are the challenges that physiotherapists in Qatar face and how do they affect their performance and employee retention?*

To answer this research question, the following hypotheses were developed and tested based on the literature review (See Appendix 4 on how the hypotheses were developed):

H1: *Stress and work burnout negatively impacts physiotherapists' performance and employee retention.*

H2: *Lack of enough education and training has a negative effect on physiotherapists' performance and employee retention.*

H3: *Complicated work ethics in physiotherapy field in Qatar reduces the performance of the physiotherapists and influences employee retention.*

H4: *Poor employment contracts, remunerations and conflicts at the workplace have a negative effect on physiotherapists' performance and employee retention.*

H5: *Changes in the physiotherapy negatively influences physiotherapists' performance and employee retention.*

1.5 Definition of Terms

The main terms in this study are challenges, physiotherapists, performance and employee retention. The term ‘challenges’ in this study is used to denote the barriers or obstacles that hinder physiotherapists from practicing effectively. Physiotherapists are defined as healthcare experts in rehabilitation and physical medicine who offer remediation services that promote function, mobility, and quality of life by examining, diagnosing, prognosis and physical therapy. The term ‘performance’ in this study denotes the job-related activities that the employees (physiotherapists) are expected to undertake and how well they execute them. Lastly, the term ‘employee retention’ denotes the ability of an organization to retain its employees.

1.6 Structure of the Study

This paper has five key chapters, namely, introduction; literature review; methodology; data and findings; and conclusions and recommendations. The introduction chapter provides a background introduction to the study, statement of the problem, significance and relevance of the study, research aims and objectives, research question and hypotheses and a definition of terms. The literature review offers an overview of previous theories and empirical studies on the topic while the methodology provides a detailed account of the research approaches used in gathering, analyzing, interpreting and presenting the data. The data and findings chapter presents the results of the study while the final chapter offers detailed conclusions and recommendations. A reference list and appendix are also provided.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Challenges at the workplace affect not only employees' performance but also the overall organizational ability to fulfill its objectives. The literature review reveals that workplace challenges are the main reason for the intention to leave and the subsequent high employee turnover in organizations (Avey *et al.* 2009; McNall *et al.* 2009; Samuel and Chipunza, 2009). However, as Mowday *et al.* (2013) note, challenges vary across different organizations and careers. Within the healthcare sector, which is one of the most challenging work environment, physiotherapists play a major role in implementing health plans and offering services that are critical for the social well-being. Physiotherapists provide primary health care by remediating disabilities and impairments, which promotes functional ability, mobility, movement potential and quality of life by examining, evaluating, diagnosing and making physical interventions (Goyal and Jandyal, 2014).

Physiotherapy is a diverse professional career that includes specializations in areas like neurology, pediatrics, sports, cardiopulmonary, wound care, orthopedic and geriatrics. Given their critical role in providing the critical rehabilitation services, Goyal and Jandyal (2014) strongly recommend for their inclusion in the implementation of the organizational objectives

within the healthcare setting. In this chapter, the existing empirical and conceptual evidence on the challenges that physiotherapists face and how they affect performance and the employee retention is reviewed with the aim of identifying the existing research gaps in the study and establishing new knowledge. The next section discusses the main challenges that physiotherapists face and how it affects their performance and retention.

2.2 The Effect of Physiotherapists Challenges on Performance and Intention

Several studies on the challenges that physiotherapists face have been extensively carried out on a global perspective, even though no specific study has focused on the Qatar geographical location. A review of empirical studies from other countries show that work burnout associated with the emotional stress that comes from working in a traumatic environment is one of the major leading challenges that physiotherapists face in their workplace (Bragard *et al.*, 2015; Khan *et al.*, 2014; Gandi *et al.*, 2011). According to Gandi *et al.* (2011), health practitioners' connection and empathy towards their patients are one of the professional requirements and core values in their career. However, in most times, it could be a cause of stress especially where the patient demonstrates high levels of suffering or the physiotherapist is exposed to a traumatic situation.

Other studies have noted the long-working hours that physiotherapists put in and the job demands as another major challenge that causes work-related stress (Khan *et al.*, 2014). In Qatar, there are deficiencies in the number of professional physiotherapists, a situation that has forced the country to outsource more practitioners from other countries to meet the current labor shortage in the physical therapy field (National Health Strategy, 2016; Oxford Business Group,

2014). In their website, the National Health Strategy notes that the country needs more well-trained, high-quality health practitioners to meet the needs of its population.

Further, they note that the Ministry of Public Health in the State of Qatar faces a major challenge in the recruitment and retention of the appropriate health workers, which has caused a shortage of qualified workforce in the country's healthcare system (National Health Strategy, 2016). As a result, the human resource shortage in Qatar's healthcare system contributes to high pressure and job demands for physiotherapists who may most likely require working for longer in order to meet the demand for physical therapy needs of their patients. According to psychiatrists, work burnout causes emotional and physical exhaustion due to the long hours of work (Gandi *et al.* 2011).

Li *et al.* (2014) undertook a cross-sectional survey involving 930 health practitioners to determine the relationship between stress and employees' motivation. The study found that participants who had high-stress level scores reported high levels of dissatisfaction with their work and higher intentions to leave their job for other careers in the fields they perceived as less stressing. Similar observations were made by Jensen *et al.* (2013) who argued that while some levels of pressure and stress at work are necessary for better organizational performance; overwhelming stress could have adverse effects on the general performance.

Jensen *et al.* (2013) arguments are in line with Nixon (1979) inverted U-model theory, an adaptation of Yerkes-Dodson Law, that states that optimum stress and pressure at work should be maintained at an optimum level because low-stress levels can lead to boredom while high-stress levels can cause dissatisfaction and high anxiety levels. This relationship can also be

understood from Maslow's Theory of Human Needs and Mayo's Theory of Human Relations which postulate that monetary benefits are not the only factors that motivate employees to perform as other factors such as their emotional and social needs also play a role in their performance.

The effect of stress and burnout on the employees' performance and job turnover has extensively been discussed in the fields of healthcare and business. One of the major cited effects of stress on performance is that stress creates discontent and high anxiety levels that affect the employee motivation and ability to work, leading to inefficiencies (Bragard *et al.* 2015). According to Avey *et al.* (2009), stress-related issues can affect the organizational reputation especially in a workplace setting such as a healthcare organization. The study found that stress was attributed to most cases of clinical and medical mistakes, which not only endangers the reputation of the health practitioner but also puts the health and life of the patient at risk (Avey *et al.* 2009).

In the context of physiotherapists, high stress levels and work burnout can cause medical mistakes such as wrong diagnosis and wrong prescription among other mistakes that can hinder the recovery process of the patient, or worse, lead to serious injuries. Therefore, this study explores stress and work burnout as one of the challenges facing physiotherapists since Avey *et al.* (2009) study identifies it as one of the main causes of medical mistakes, which is an indicator of poor performance in healthcare.

Another challenge that physiotherapists face at their workplace is the lack of educational and practical clinical experience to handle the highly-technological and ever changing health demands (Eng and Tang, 2007; Jack *et al.*, 2010). In most developed countries such as Australia,

the United Kingdom, and the United States of America, a licensed physiotherapist must hold a four-year Bachelor's Degree as well as a 2-years Master's degree in Physiotherapy. However, in most healthcare organizations in Qatar, a 4-years Bachelor's degree in Physiotherapy is regarded as the minimum qualification. This is mainly because the country has a shortage of healthcare personnel (National Health Strategy, 2016), and as such, hospitals and other healthcare organizations are likely to employ personnel who are not fully equipped with the knowledge needed to undertake their roles as physiotherapists.

The other challenge connected to education and training is the lack of the practical experience and mentorship programs that help in the enhancement of the knowledge capacities for fresh physiotherapy graduates to handle clinical roles. In most cases, job advertisements require at least two years' work experience, which could be challenging to the young graduates who have not gained the needed experience. In addition, the Ministry of Public Health in Qatar agrees that the country lacks comprehensive healthcare system to ensure that fresh graduates are integrated into the system.

However, the major education-and-training challenge for most physiotherapists in Qatar is technological changes where they are faced with new systems and equipment that they are not trained to use. According to Nicholls and Larmer (2005), healthcare systems are changing as health organizations adopt new management systems and technologies. However, as Nicholls and Larmer (2005) note, most healthcare personnel are not trained to handle these technologies, which create an inefficiency gap. In most cases, hospitals purchase new equipment or implement new systems but fail to educate the personnel on how the systems are used, making it difficult for them to deliver quality health services.

The lack of expertise and training in a sensitive field such as healthcare can have adverse effects that affect the quality of health and life of the patients. According to Jack *et al.* (2010), undertrained and unskilled employees spend more than expected time on a task especially when they are not sure how to undertake it, and in some cases, could cause injury and errors since they lack the expertise needed to handle most situations professionally. This causes inefficiency in the workplace and discontent amongst the personnel, who may opt for other easier careers whose tasks are easier to undertake (Eng and Tang, 2007).

The importance of training has been emphasized by Alnasir and Jaradat (2013) who argue that it enhances the personnel's interpersonal skills such as communication, teamwork, clinical reasoning, confidence, and other clinical skills that are necessary for efficient healthcare delivery. On the other hand, the lack of clinical practice among physiotherapists can negatively influence their confidence. This applies to experienced physiotherapists who are faced with new technologies that they lack the knowledge to operate, and have to seek for additional help in operating it, which is costly for the organization and causes inefficiency in service delivery.

Physiotherapists in Qatar are also faced with ethical issues in their workplace. According to Huston (2013), every establishment has regulations, ethics, and codes of conduct that the employees must adhere to for the integrity of the organization. In addition, some professional careers in fields such as healthcare, finance, and law have professional codes of conduct set by the respective bodies. In Qatar, the ethics and code of conduct for all health practitioners is set and implemented by the Ministry of Public Health.

Therefore, as a professional physiotherapist in Qatar, one must not only adhere to the ethics and code of conduct of the hospital or health organization that they work for, but should also adhere to the national one provided by the Ministry of Public Health in the State of Qatar. Richardson (2015) reviewed some of the ethical challenges that physiotherapists face in their workplace. The study found that physiotherapists may be forced to compromise what is best for their patients when trying to achieve the best practice standards because of some rules and regulations that may limit their practice.

One of the codes of ethics that may be challenging for physiotherapists is the one that stipulates that “physiotherapists should adhere to the professional core values and act in the best interests of the clients/patients over their interests” (Richardson, 2015, p. 119). When interpreted, this code could imply that physiotherapists should put the patients’ interest first when providing primary care. Such includes issues of billing patients/clients, which could bring some ethical dilemma on the part of the physiotherapists regarding how much to charge a client as the rule of equity may not apply since different clientele could be charged differently.

Further, the study noted that the diversity of their operation and service delivery settings such as home health, community-based care, hospitals, sports, and private office also pose a challenge to physiotherapists since each of these care settings has priorities, expected behaviors and rules that often vary (Richardson, 2015). As such, physiotherapists who work in more than one health care setting, for example, in a hospital and private office setting or home care and sports setting, may find the process of having to adapt to the rules and regulations that apply in each case.

Physiotherapists also face challenges with the ever-changing rules and regulations as they have to stay in touch with the current publications by the various bodies that govern their professional careers. Supporting this point, Jain and Roberts (2009) cite the need for physiotherapists to identify and critically appraise and interpret such regulations and codes in relation to their daily practice. However, physiotherapists may find it overwhelming to stay in touch with the current news while juggling between their busy career.

The lack of a labor union or organization to articulate the interests of the employees is yet another major challenge that professionals working as physiotherapists in Qatar face. According to Gleeson (2010), labor unions play a major role in ensuring the fair treatment of the employees as well as ensuring that employees get fair compensation for their work among other issues. However, the role of labor unions has also been criticized by some authors who argue that they are an economic burden to the society because they require the employers to pay some money to them, which could have been used in creating employment opportunities (Fossum, 2014; Portes, 2014).

In most countries, workers especially those in the service and public industries have labor unions that handle matters pertaining the personal security and safety concerns that employees may have with their employers (Chen *et al.*, 2011). In addition, labor unions ensure that the existing labor laws are favorable for the employees and that justice and fairness are maintained at the workplace. In Qatar, there are no specific labor unions or organizations that represent or articulate the concerns of the physiotherapists. Therefore, when physiotherapists are in conflict with their employers, they lack both the organizational and the labor union support in resolving the issue.

In addition, their labor issues such as better working terms and conditions and pay increase are not well-articulated. This implies that when physiotherapists have unresolved issues with their employer, they lack someone to articulate these issues on their behalf. Emphasizing on this point, Doellgast (2012) argued that lack of mechanisms for resolving workplace conflicts could lead to more stress and cause conflicts between the personnel and the employer, which are one of the sources of poor employee performance and intention to leave

The paradigm of conflict-performance nexus has been extensively discussed in the management literature. Studies show that poor management of employer-employee conflict could lead to poor communication, low motivation and lack of cooperation and teamwork, which are indicators of poor performance and inefficiency (Gilboa *et al.*, 2008; Lerner and Henke, 2008; Kelly *et al.*, 2011). Within the healthcare setting in which physiotherapists operate in, communication and teamwork are essential for the evidence-based practices. However, in a situation where conflicts exist and they are poorly managed, these channels of communication and collaboration may be sabotaged by personal feelings, cause inefficiency in service delivery.

Additionally, conflicts in the workplace tend to consume employees time and energy instead of concentrating on more productive activities, which could also have a negative effect on the employee performance (Beauregard and Henry, 2009). In most cases where conflicts escalate to high levels to an extent that they cannot be resolved amicably, employees may be forced to leave the organization, leading to high employee turnover (Bouckenoghe *et al.*, 2013). However, some studies argue that conflict can, to some extent, have a positive effect on the employee performance, especially when resolved amicably.

According to Schaufeli and Taris (2014), conflict can enhance work relations, improve the quality of decisions and stimulate employee involvement and collaboration. Baillien and De Witte (2009) added that task-related conflicts could be beneficial to an organization because they allow individuals to bring in ideas and suggestions that can be used to enhance the organizational outcomes. Further, Homan *et al.* (2012) add that when conflict is used properly, it can have a positive effect on employees' performance because it stimulates productivity and creativity. Consequently, most studies propose that organizations instate the healthy conflict management mechanisms that ensure conflict in organizations do not escalate to high levels that cause negative outcomes (Busch, 2012; Gross *et al.*, 2013; Hislop, 2013).

The healthcare system and environment in which the physiotherapists operate within has also been identified as yet another challenge by itself. Mainly, these challenges emanate from the structural changes of the health services that require the physiotherapists either to adjust their skills and knowledge or to put in longer working hours (Bispo, 2010; Ganiyu, 2009). Nicholls and Larmer (2005) undertook a study that looked at some of the challenges that physiotherapists may face in the future. These included the increase in the aged population; the increasing chronic illnesses burden; emergence of new technologies that are beyond the physiotherapists training levels; changes in the healthcare setting; changes in the demand for more physical therapy services; and other issues related to training, education, accreditation, regulation, reward, and pay (Nicholls and Larmer, 2005).

Even though all these challenges may not apply in the Qatar context, the demographic changes in the Qatar population pose a major challenge for physiotherapists. The population of persons aged 65 and above is currently at 1.5% (34,677 persons) of the total population of 2,307,241, and this

is expected to rise to 2.5% in the next five years (World Bank, 2016). The most alarming aspect of Qatar's demographics is that a majority 76.7% of the population (1,770,075 persons) are within the age bracket of 15 and 64 years of age, implying that in the next few decades, the country will have more aged persons than young persons since only 21.8% (34,667) of Qataris are aged below 15 years (World Bank, 2016). These demographical changes pose a major threat to physiotherapists since the aged populations require more physical therapy, which would cause a supply deficit causing physiotherapists.

Another demographic change that may pose a challenge to physiotherapists in Qatar is the increased number of people that have been diagnosed as obese and diabetic. The results of a recent study done by Christos *et al.* (2014) on the prevalence of obesity and diabetes in Qatar show that one in every five persons (20%) is at a high risk of developing diabetes while 12.5% of the Qataris have been diagnosed as pre-diabetic, implying that they have signs of diabetes. However, the most startling of all is that Qatar is ranked among the top five countries in the world with obese population where 55% of the country's entire population and more than 50% of the adult population have BMI levels of more than 30 (Christos *et al.*, 2014).

Further, health reports show that more than 76% of the adult population has a BMI of above 25, which implies that they are overweight (Christos *et al.*, 2014). While there are other patients whose illnesses and injuries that require the help of physiotherapists in the recovery process, these conditions are not as prevalent as diabetes and obesity. As such, these statistics point high demand for physiotherapists to offer rehabilitation care for diabetic persons.

Love *et al.* (2015) state that the process of preventing and managing obesity and diabetes calls for comprehensive and aggressive mechanism that address the multifaceted and complex issues surrounding these conditions. However, Love *et al.* (2015) note that this process has been met with confusion especially with regard to the role that physiotherapists play in preventing and managing obese and diabetic populations. They argue that the traditional role of physiotherapists has been focused on other injuries and illnesses, as obesity and overweight issues were regarded the mandate of dieticians since obesity was attributed to eating problems (Love *et al.*, 2015). However, given that the lack of physical activity has been attributed to these issues, the role of physiotherapists in preventing and managing obesity and weight-related diseases has been redefined.

Currently, there is a growing emphasis on the need for physical activity, exercise and lifestyle change as compared to the traditional mechanisms that focused on monitoring the patients' diets as a weight management issue. Therefore, physiotherapists have a critical role to play not only in the prevention and management of obesity and weight-related diseases but also in helping the population in weight loss and management. However, this would require physiotherapists to get more training on how to handle this population, and given their high numbers, the services of physiotherapists will have high demand requiring them to work for longer hours to meet the needs of the population.

Another notable challenge facing physiotherapists in Qatar is the poor payment and rigid work contracts in the country relative to other countries. Qatar is rated as one of the richest countries in the world due to its oil endowment (World Bank, 2016). However, when it comes to employees' remuneration and per hourly pay, other countries such as Switzerland, Norway, South Korea and

Canada do better. As such, most physiotherapists tend to search for jobs in these other countries where the working conditions and remuneration packages are more favorable. One of the reasons why most health practitioners in Qatar prefer to work in other countries is the flexibility of the work contracts. In Qatar, work contracts are very rigid, and the country's labor market has been described as one of the most rigid one where workers find it difficult to move from one job to another (Oxford Business Group, 2014).

While the low pay may lead to negative employee performance since it demotivates staff (Kube *et al.*, 2013), the rigid work contracts reduce employees' turnover as many employees choose to stay because of the impeding difficulties that they face when changing jobs (Campbell *et al.*, 2012). In the next section, studies that have explored the various mechanisms that can be put in place to help deal with the challenges that physiotherapists face are reviewed. These studies reveal some of the ways through which physiotherapists manage their challenges are discussed.

2.3 Managing Physiotherapists Challenges

Research studies have proposed various mechanisms that can be adopted in resolving the challenges that physiotherapists face. Organizational change has been highly recommended in almost all the studies reviewed in this study. While organizational change is a diverse concept, some of the specific solutions included creating an ample working condition for the employees through the adoption of strong organizational culture such as enhanced communication, collaboration, and teamwork. According to Cerasoli *et al.* (2014), the creation of favorable working conditions for employees not only helps in employees' satisfaction but also increases the organizational efficiency and performance. Nicholls and Larmer (2005) also called for a change in the healthcare system in terms of developing the educational and practical experiences

of the physiotherapists that equip them with the needed skills to manage through the challenges identified.

Employee development has also been widely cited by other studies (such as Gallie *et al.*, 2012; Hancock *et al.*, 2013; Noe *et al.* 2014). According to Gallie *et al.* (2012), developing the skills of employees equips them with the needed knowledge to deal with the ever changing needs of the patients. Creswell and Sheikh (2013) add that the adoption of the technology has changed the global healthcare system in terms of service delivery. As such, physiotherapists require seasonal trainings to eliminate the knowledge gap and to enable them to easily deal with issues pertaining to technological advancements that could pose a challenge to their daily work if they are not trained to deal with the new technologies.

In their official website, the National Health Strategy (2016) recommends four solutions for human resource managing the shortages experienced in the country. These include workforce planning, enhancing recruitment and retention levels, better professional education and optimization of skills. According to the National Health Strategy (2016), State of Qatar's Ministry of Public Health needs to come up with both short- and long-term plans on how to maintain sustainable skilled personnel in the country.

Also, the National Health Strategy (2016) proposes the need for law reviews that aim to reduce the current barriers that discourage Qataris and expatriates alike, from joining the healthcare system. The need of personnel motivation strategies such as better professional development and training opportunities has also been cited. Other studies that examined the challenges faced by

physiotherapists also identified the importance of enhancing the educational and training levels for physiotherapists (Bragard *et al.*, 2015; Nicholls and Larmer, 2005).

With regard to the ethical challenges that physiotherapists face in their career, Jain and Roberts (2009) recommend that physiotherapists pay more attention to their professional obligations by adopting several mechanisms of enhancing their ethical competency through a constant evaluation of their behaviors and attitudes as well as those of their patients. As such, Jain and Roberts (2009) propose that physiotherapists engage their patients in a dialogue while striving to enhance their expertise with regard to ethical issues.

Moreover, physiotherapists are advised to have a strong hold of the relevant and current grasp of the most recently published regulations and codes of conduct and also stay open to consultations amongst their peers and colleagues as well as exposing their academic work to peer review for feedback and improvement (Jain and Roberts, 2009). In addition, health organizations should review their compensation rates and employment terms as a way of motivating and retaining physiotherapists. In the next sub-section, the main findings of this literature review are reviewed and how they link to the research objectives.

2.4 Summary

This section has reviewed the existing empirical and theoretical evidence on the challenges that physiotherapists face and how it affects performance and the employee retention. As such, key challenges such as burnout and stress, have been identified as the major challenges facing physiotherapists in Qatar. The studies show that these challenges create unfavorable environment at the workplace, causing inefficiencies and low performance on one hand and high employee

turnover in the healthcare system on the other hand. These findings create a basic foundation of investigating the main challenges that physiotherapists face and how to it affects their performance and employee retention.

Further, the review has identified the sensitive nature of the healthcare service delivery in which physiotherapists operate in, and the adverse effect that inefficiencies can cause in relation to human health and life. As such, various recommendations made by previous studies are retaliated. These include policy changes, organizational change, professional education, support, mentorship, and training among other employee motivation strategies. These findings are critical to answering the question with regard to some of the mechanisms that can be adopted to resolve the challenges faced by physiotherapists and how to improve work performance. In the next chapter, the methods used in collecting and analyzing primary data to fulfill the identified research gaps are discussed.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

The methodology section is considered one of the important chapters in a research study, mainly because it guides the researcher on how to gather data, analyze and present information from

different sources so as to test the hypotheses or respond to the research questions (Bryman, 2015; Gill and Johnson, 2010). Accordingly, the significance of accuracy, thoroughness, credibility and the dependability of the research methods chosen is highly retaliated by various research methodology scholars such as Creswell (2013), Bryman (2015) and Taylor, Bogdan and DeVault (2015) amongst others. Therefore, researchers are advised to select the research methods with a lot of caution because their appropriateness determines the outcome of the study. It is with this regard that Saunders, Lewis and Thornhill (2009) published a book that acts as a guideline for researchers, especially those who lack the experience and skills in carrying out research studies. In this book, Saunders *et al.* (2009) likened the research process to ‘peeling an onion,’ and consequently, developed a criterion that researchers can follow when choosing the research methods to use, in what they called a ‘research onion’ as shown in Appendix A.

In this chapter, the research methods employed in collecting, interpreting and presenting primary data on the challenges that physiotherapists face in Qatar, and how they affect their performance and the employee retention, are presented.

3.2 Research design

The research strategies, choices and the time horizon form the research design (Saunders *et al.*, 2009). Mertens (2014) defines research design as the practices and processes of transforming the study questions or hypotheses into the research project. Therefore, the purpose of the study and the research questions are critical in the determination of the research design that is chosen. In her article, Lewis (2015) argues that a study can either be descriptive, exploratory, or

explanatory based on the purpose of the study. Robson (2011) describes exploratory studies as a research design that aim at determining “what is happening, pursuing new insights, making inquiries, and evaluating the research phenomena from a new perspective” (p. 59). As such, descriptive studies are mainly applied in studies where the researcher needs further clarifications on the research issue because they are not certain about the nature and scope of the study. Conversely, explanatory studies are defined as those that seek to establish a causal link between two or more variables, and commonly used with deductive quantitative studies (Robson, 2011, p. 59).

Lastly, descriptive studies are defined as those whose aim is to offer a detailed account or profile of the research phenomenon (Robson, 2011, p.59). Given the lack of research in the research, this study adopted the exploratory design. In addition, the exploratory design was most preferred because it allowed the research to give a detailed account of the challenges that affect physiotherapist in Qatar, and explore deeper into how they affect the physiotherapists’ performance and employee retention. In addition, descriptive studies are compatible with various research designs, and as such, their flexibility makes them preferable to use in most studies. More importantly, Saunders *et al.* (2009) state that descriptive studies allow for deeper analysis of the research outcome, allow the researcher to make inferences, and treat the research process as a means rather than an end.

The ‘research onion’ outlines seven research strategies that can possibly be adopted in a study. They include ethnography, case study, experiment, grounded-theory, archival research, action-research, and survey. In most cases, ethnographies, archival-research and grounded-theory tend to be limited to qualitative studies, and are more applicable to studies that are contextual in

nature (Zikmund *et al.*, 2012). On the other hand, experiments are mostly applied in natural sciences and focus on making a causal link between variables, and are purely quantitative (Bryman and Bell, 2015). In addition, experiments require comparisons between the study group and a control group. Case studies tend to focus on specific research issues and studying it in its natural setting (Yin, 2013). Coghlan and Brannick (2014) add that case studies are mostly used when the focus is on specific entities such as organizations, and tend to be qualitative in nature. Also, action-research studies focus on the cycles and processes within an organization with the aim of identifying an ‘action’ that would lead to organizational change (Nolan and Putten, 2007).

Surveys are considered as one of the most commonly used research strategy in business and management studies, mostly because of their robustness in collecting extensive data that is either qualitative or quantitative in nature (Zikmund *et al.*, 2012). Accordingly, this study adopted a survey design for several reasons. According to Schutt (2011), surveys are highly flexible, they are easy to design and implement, they can be used to obtain data from diverse sources, and they are effective in terms of time and money. Moreover, the data acquired from surveys tend to be highly generalizable and versatile. However, surveys face some reliability and validity threats such as instrument bias, researcher bias (where the researcher imposes their language and perceptions on the subjects by limiting them to specific answers), and tend to use closed-ended questions that limit further probing (Saunders *et al.*, 2009).

Having noted these weaknesses, this study took some measures to eliminate these validity and reliability threats by ensuring that the research instrument was designed as per the literature review outcomes, and not the researcher’s opinion. Also, the researcher used both open and closed questions to allow for deeper exploration. The survey was designed in a manner that

sensitive or personal questions that may be against the ethical requirements or that may limit the participants from partaking in the study. Most importantly, precision was adhered to during the designing of the survey to ensure that the possible biases were eliminated and that only the desired data was obtained.

The research onion outlines the research choices as the next step to consider after identifying the research strategy, and states that a research can choose among mixed methods, multi-method, or mono-method (Saunders *et al.*, 2009). A mono-method entails picking only one research technique to obtain and analyze the data. This implies that a researcher uses only one technique, and more often, lacks the robustness required to yield the desired outcomes. The multi-method approach differs from the mixed-method approach in that the former involves the use of two or more techniques of that are within same classification of either quantitative or qualitative while mixed-methods involves the use of data techniques from both qualitative and quantitative classifications (Teddlie and Tashakkori, 2009).

Expanding this definition further with examples, Saunders *et al.* (2009) clarified that mixed-methods can involve the combination of a quantitative data technique like structured questionnaires and a qualitative approach like expert interviews while multi-methods would involve a combination of two qualitative methods such as observations and focus group discussions or quantitative techniques such as clinical trials and structured questionnaires. In this study, a mixed-method approach that combines a quantitative questionnaire administered on physiotherapists with qualitative expert interviews with hospitals' management was used. In addition, tools of both the qualitative and quantitative techniques of analyzing data were used in the data processing and interpretation.

Lastly, given that a survey research design was used, this study adopted a cross-sectional time horizon as opposed to the longitudinal time-horizon. Rindfleisch *et al.* (2008) defines cross-sectional time horizon as studies that are carried out at a particular and defined point in time while longitudinal studies are those that are undertaken over an extended timeline. Given this study was undertaken once without follow-ups on the respondents, the study adopted a cross-sectional design.

3.3 Data collection techniques

3.3.1 Data and sources

Primary and secondary data sources were used in this study. For primary data, this study relied on primary data collected from persons working as physiotherapists in Qatar and the management team in hospitals or health organizations that offer physiotherapist services in the country. Therefore, the study focused on individuals who are already working as physiotherapists in the country, but excluded those that have retired and those that are still in colleges but not yet started working as physiotherapists. However, persons working as trainees or interns in the field of physiotherapy were included in the study. The study aimed at capturing the current challenges that physiotherapists face based on their experiences, and as such, those working as physiotherapists were found to be most suited to give that information.

Given that it takes a minimum of four years to graduate and start working as a physiotherapist, it was expected that the minimum age of this study would be 22 years and above, and the maximum was 60 years (retirement age in Qatar). The study also relied on secondary data, mainly official reports, resignation letters, dismissal letters, statistics, and other employee-related documents from health organizations that offer physiotherapist services. These secondary data

sources were audited to identify some of the challenges that physiotherapists face and the reasons cited as to why most employees left their employment. According to Wilson (2011), combining different data sources, also known as triangulation, enhances the credibility and dependability of the research outcome since the strengths and weaknesses of using each data source complement each other.

3.3.2 Sampling

Since the study relied on data from various sources, multiple sampling techniques were adopted. In the quantitative survey with physiotherapists, simple random sampling was used, mainly because it is highly representative and gives each population's element or member an equivalent chance of being selected as a sample (Ritchie *et al.*, 2013). Leary (2011) adds that using random sampling technique reduces researcher bias and makes the study more credible and generalizable. As a result, any person working as a physiotherapist in Qatar, aged between 22 and 60, was eligible to be selected. For the expert interviews with the management team, purposive sampling that entails selecting a small number of respondents based on their ability to offer the required information and their availability was used (Ritchie *et al.*, 2013).

A sample size of 100 physiotherapists was identified as the most appropriate for the quantitative study. However, Baruch and Holtom (2008) cautioned that surveys never attain the 100% response rate. Therefore, to avoid having less-than-target sample, a higher number of about 150 physiotherapists were recruited in the study, and the surveys were undertaken until the 100th fully-filled questionnaire was attained. For expert interviews, Hamad Medical Corporation located at Hamad, which is a hospital that have a fully-operational physiotherapy department, was chosen for this study. Further, ten (10) officials working as the management team in Hamad

Medical Corporation, including the department head, supervisors and top management in the hospital were included in the interviews.

3.3.3 Research instrument

This study used an online survey that used a structured questionnaire as the research instrument. The questionnaire (refer to appendix D) covered the various challenges that physiotherapists face in Qatar as identified in the literature review. The challenges, which included stress, worker burnout, education and training, remuneration, and organizational support, were identified as the independent/predictor variables while the employee retention and the employee performance were identified as the dependent/outcome variables. The questionnaire had three sections, the first section contained general demographic questions of age, years of experience, etc. The second section contained closed-ended questions that were measured in a 5-Likert scale.

According to Sauro and Dumas (2009), Likert-scaled questionnaires are easy to analyze even though their close-ended nature limits the amount of data that can be collected. Therefore, this study used specific, clear, and purposive questions as a way of improving the reliability and validity of the study. The final section contained open-ended questions that gave the interviewees the opportunity to provide their views on the challenges they face as physiotherapists and how they influence their performance and employee retention. A semi-structured questionnaire with open-ended questions on the challenges that physiotherapists in Qatar face and how they affect performance and employee retention was used to carry out the qualitative interviews.

3.3.4 Research process/Collecting data

The research process was done in three phases. The first phase involved an online survey where the designed questionnaire was uploaded in SurveyMonkey online program that allows people to undertake a study online, and the recruited physiotherapists were given the link to the survey. According to Hunter (2012), e-questionnaires tend to have high response rate and are the most efficient in terms of time and cost especially when a large sample is involved. Different recruitment techniques were used, including social media, personal invites, and recommendations. The second phase involved the expert interviews, and the researcher visited the physiotherapy department at the Hamad Medical Corporation, and requested for the staff's permission to carry out the study. The interviews were face-to-face, they were recorded and notes were also taken. Each interview lasted about 45 minutes. The final phase was audited the hospital's documents to identify the reported challenges. Prior permission was sought prior to the document analysis due to their sensitivity, and they were availed by the human resource personnel.

3.4 Reliability and Validity of the research instrument

The questionnaire was adjusted for validity and reliability to ensure that it was effective in collecting all the information needed for the study. The questionnaire was subjected to a pilot test prior to the actual study in a bid to determine its usability and appropriateness to the purpose as recommended by Gustafsson, Herrmann and Huber (2013). After the pilot study, the results were used to make some adjustments on the questionnaire. In order to increase reliability, content and construct tests were done prior to the actual implementation of the questionnaire. This was done to ensure that the questionnaire was effective in terms of its construction and formulation to collect the required data. As such, the researcher used Cronbach's Alpha Coefficient to estimate

the coefficient score of the split-half reliability, which according to Eisinga, Grotenhuis and Pelzer (2013), informs the researcher on the usability and appropriateness of the research questionnaire. The results of this analysis are presented in Section 4.2.1 in the data analysis chapter.

3.5 Research ethics observed

The research ethics were taken into account, and this included getting all the respondents sign a consent form that was mailed to them explaining their role, the purpose of the study, its significance and how the outcomes shall be disseminated. The consent form (refer to Appendix B) also explained how the participant confidentiality shall be maintained and their rights and freedoms as outlined by Babbie (2015). All permissions, including that of the research ethics committee, were sought. A copy of the consent form is attached in Appendix B.

3.6 Data Analysis

The data analysis was done in two phases. The first phase involved transcribing the interview results and then coding them and developing themes. This process, also known as thematic analysis of qualitative data, was done to convert the qualitative data into quantitative data for analysis. In this phase, the data collected from the document analysis of the hospital's documents was also incorporated since most of it was qualitative. In the second phase, all the data from the three sources was combined and analyzed statistically using SPSS data analysis software. The use of mixed methods in data analysis as well as the use of statistical data analysis techniques enhanced the study's rigor and vigor because data analysis software and programs have high levels of accuracy (Creswell, 2007).

3.7 Summary of the chapter

The research methods used in this study have been outlined. The study adopted a pragmatism philosophy and a deductive approach. Further, a cross-sectional and exploratory survey design was used. Data was collected from 100 physiotherapists using an online structured survey and ten (10) members of the management team in the hospital. Human resource documents were also audited. Thematic analysis and statistical data analysis methods were used in analyzing the data and various ethics measures were taken into account.

CHAPTER 4: DATA AND FINDINGS

4.1 Introduction

As shown in the methodology chapter, this study relied on a mixed-method approach that combines a quantitative questionnaire administered on physiotherapists with qualitative expert interviews with hospitals' management. The quantitative study involved 100 participants while the qualitative study involved 10 interviews with the hospitals' management and a review of 25 former physiotherapists of Hamad Medical Corporation. Thus, the sample size was 100 for the quantitative survey and 35 for the qualitative study. In this chapter, quantitative data is presented statistically based on the study objectives and the hypotheses of the study while the qualitative data is presented using excerpts and quotes as well as statistical tools. Further, a general discussion of the results based on the findings of the literature review is presented.

4.2 Presentation of the Results of the Quantitative Study

4.2.1 Introduction to Quantitative Data and Analysis

Prior to the data analysis, content validity and contrast validity test were carried out to determine the appropriateness of the research instrument. With regard to the content validity, the survey was first prepared by the researcher and then sent to Ethics Committee to give their comments on

the content validity of the survey and to suggest any deletions, additions, or modifications in the survey. The researcher made the necessary changes to the survey based on their comments.

On the construct validity, the researcher calculated the correlation between each of the items against the whole scale of the factor and the whole scale of the survey to insure the significant correlations at $p < 0.05$ based on the data collected from the survey. As shown in the Table (1), it was found significant correlations between all items with the whole scale of their factors and the whole scale of the survey. The correlations of the items of Stress factor with the whole scale of the factor are between 0.775 and 0.884, and between 0.644 and 0.792 for the whole scale of the survey.

For Items related to Education and Training, the correlation of the items to the entire scale of the factor was found to be between 0.610 and 0.899, and the correlation of the items to the entire scale of the survey is between 0.627 and 0.845. For Items related to Work Ethics, the item “would prefer to work for an organization with less ethics” was deleted since it had a correlation of less than 0.3. The rest of items had significant correlations with the factor and with the scale as a whole. The correlation of the items with the whole scale of the factor was between 0.837 and 0.917, and between 0.722 and 0.878. For items related to Contracts, Remuneration and Conflicts, the correlation of the items with the whole scale of the factor is between 0.606 and 0.820, and between 0.533 and 0.765 for the whole scale of the survey. Finally, the correlations of the items of Changes in the Physiotherapy factor with the whole scale of the factor were between 0.721 and 0.792, and between 0.482 and 0.608 for the whole scale of the survey. These correlation values imply that the survey has good validity.

Further, the reliability of the survey was calculated using Cronbach's Alpha Coefficient of internal consistency for the survey. Cronbach's Alpha Coefficient was calculated and the analyses produced a 0.945 alpha coefficient value for the whole survey. Based on the Cronbach's Alpha Coefficient, the survey has excellent reliability.

Table 1: Correlations between items with the whole scale of their factors and with the whole scale of the survey

	Item Correlation with its factors	Item correlation with the Total	Cronbach's Alpha if Item Deleted
Stress			
1.1 Connection and empathy towards my patients cause me stress	.875**	.792	.941
1.2 Long working hours is stressful	.775**	.644	.943
1.3 Work-related and family stress affects my ability to perform	.884**	.769	.941
1.4 I would leave my current job for a less-stressful job	.855**	.767	.941
1.5 Stress does not affect my performance at work	.835**	.760	.941
Education and Training Challenges			
2.1 I have received enough training	-.610**	-.757	.960
2.2 I need more training and practical experience to enhance my performance	.731**	.651	.943
2.3 I find the new technologies and systems at my workplace very challenging and time wasting	.827**	.755	.941
2.4 I lack the confidence to carry out my job	.798**	.627	.943
2.5 I am always afraid of making medical errors when treating my patients	.899**	.780	.941
2.6 There are tasks I am afraid of undertaking because I feel that I lack the training and expertise	.865**	.845	.940
Work Ethics			
3.1 The ethics and code of conduct of the organization that I work for are favorable	.903**	.836	.940
3.2 The national ethics provided by Ministry of Public Health in the State of Qatar are in line with my organizational ethics	.917**	.872	.940
3.3 I do not know how to handle some ethical issues	.882**	.825	.940
3.4 Sometimes, I am forced to compromise what is best for my patients when trying to achieve the best practice standards	.837**	.772	.941
3.5 Ethical dilemmas affect my work performance	.916**	.878	.940
Contracts, Remuneration and Conflicts			
4.1 I am not happy with my current employment terms and/or salary	.745**	.555	.944
4.2 I am a member of a labor union that articulates my rights as an employee	.606**	.533	.944
4.3 Conflicts at the work-place affect my performance	.820**	.765	.941
4.5 I would leave my current job if I got another job where there is less internal conflicts and/or better pay	.781**	.657	.943

4.6 My organization has put string measures on conflict management and resolution	.751**	.715	.942
Changes in the Physiotherapy			
5.1 Physiotherapy has become more demanding	.721**	.482	.945
5.2 The number the patients I attend to is increasing	.790**	.501	.945
5.3 I lack the knowledge to handle specific population of patients such as those diagnosed as diabetic	.792**	.608	.943

.**Correlation is significant at the 0.01 level (2-tailed).

4.2.2 Description of the Sample

As demonstrated by the descriptive statistics on the demographic variables results in Table (2) and Figure (1), 100 respondents completed the 24-item survey. Out of these 100 participants, 48% were male while 52% were female. Further, the descriptive statistics show that the largest category in terms of age was within the 31- 40 years old (56%), followed by 20-30 years old age range (28%) and lastly, the age range of greater than 40 who were the minority at 16%. With regard to the education levels, the majority of the respondents (70%) had university degrees, 18% were postgraduates and 10% had college education level.

With regard to whether they have taken additional courses, 59% of the sample responded that they did not take additional course while 41% reported that they have taken additional course as professional development. Regarding the work experience, more than half of the participants (52%) answered that were very experienced, 32% were just experience while 16% regarded themselves as inexperienced. Still on the work experience, a majority 51% of the respondents reported to have worked for more than 15 years in Qatar followed by 19% of the respondents who reported to have worked in Qatar for 5-10 years, then 16% for less than 5 years and lastly 14% who reported to have work experience in Qatar of between 10 and 15 years.

Further, the results show that more than half of the sample (54%) was paid less than QR15, 000, 36% were paid QR 15,001≤35,000 and only 10% were paid within the highest range of between QR 35,000 and 50,000. These results show that the majority of the respondents are underpaid as they belong to the lowest pay range. On the other hand, 58% of the sample reported to work for within the range of 40– 48 hours, 23% worked less than 39 hours while 19% reported to work more than 48 hours. These results show that the majority 77% worked above the normal 40-hour per week working schedule, which is an indicator of long working hours.

Table 2: Descriptive statistics of the study sample

		N	%
Total	Total	100	100.0%
Gender	Male	48	48%
	Female	52	52%
Educational level	College	10	10%
	University degree	70	70%
	Postgraduate	18	18%
	Others	2	2%
Taken additional Courses	Yes	41	41%
	No	59	59%
Age	20-30 years	28	28%
	31-40 years	56	56%
	above 40 years	16	16%
Years of work in Qatar	Less than 5 years	16	16%
	5-10 years	19	19%
	10-15 years	14	14%
	over 15 years	51	51%
Experience	Inexperienced	16	16%
	Just experienced	32	32%
	Very experienced	52	52%
Income	0≤15,000	54	54%
	15,001≤35,000	36	36%
	35,001≤50,000	10	10%
Hours of Work	0≤39 hours	23	23%
	40≤48 hours	58	58%
	More than 48 hours	19	19%

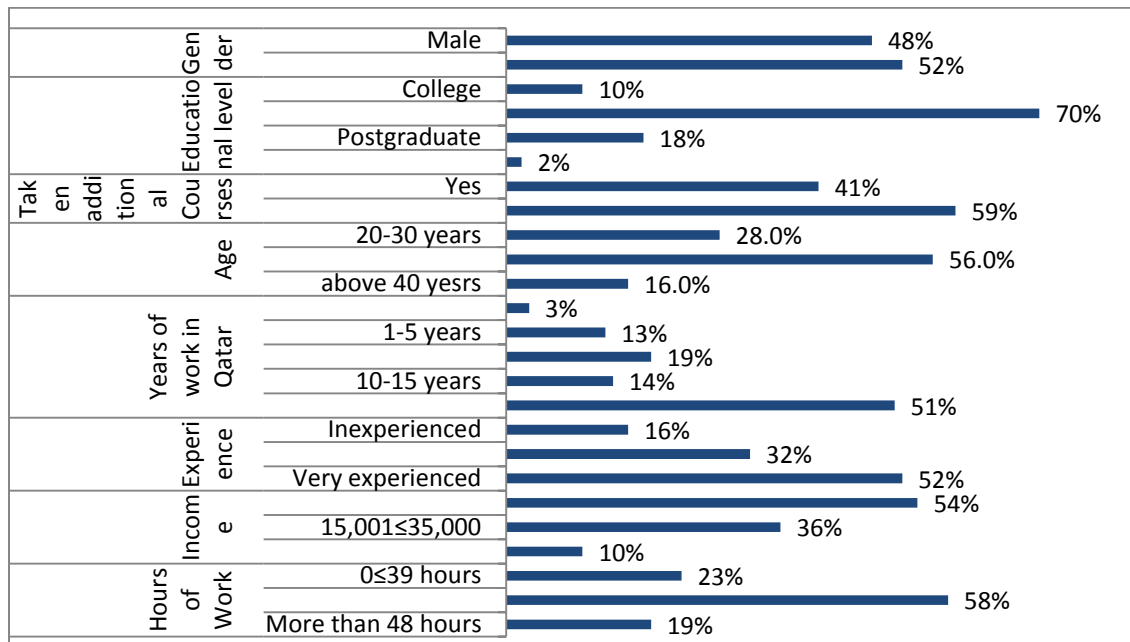


Figure 1: Chart showing descriptive statistics of the study sample

4.2.3 Summary of the Quantitative Results

The data collected were analyzed using the well-known software, Statistical Package for Social Sciences (SPSS) computer program version 23.0. The researcher used the followings descriptive and inferential statistical techniques, that is, descriptive statistics (frequencies, percentages, means and stander deviations) and inferential statistics: Chi square for ordinal responses, t-test for comparing the results by variables between two groups (gender: male female and taking additional courses: yes and no), and One Way ANOVA for comparing the mean among more than two groups. Follow-up procedures for multiple comparisons in the overall ANCOVA results were used. The post hoc pair wise comparison technique using the LSD command was used to identify where the differences in adjusted means resided.

In order to identify the challenges that physiotherapists face, mean and standard deviation for each item were calculated. Based on the survey scale, the mean was interpreted according to the following criteria:

Table 3: Interpretation of the mean based on the survey scale

Mean	Satisfaction Criteria
1.00- 1.80	Strongly Disagree (SD)
1.81- 2.60	Disagree (Di)
2.61- 3.40	Neutral (Ne)
3.41-4.20	Agree (Ag)
4.21-5.00	Strongly Agree (SA)

The results tabled in Table (4) and Figure (2) show that physiotherapists face some challenges in terms of changes in the physiotherapy, contracts, remuneration and conflicts; stress and work ethics respectively (weighted mean greater than 3.4/5 each). However, there are only few challenges in terms of education and training challenges (weighted mean less than 3.4).

Table 4: Weighted mean and standard deviation for each factor in ascending order

Challenge	Minimum	Maximum	Mean	Std. Deviation	Decision based on Weighted Mean
V: Changes in the Physiotherapy	1.67	5.00	3.85	.74215	Ag
Iv: Contracts, Remuneration and Conflicts	1.80	5.00	3.78	.93164	Ag
I: Stress	1.40	5.00	3.63	1.14403	Ag
III: Work Ethics	1.67	5.00	3.46	1.05552	Ag
II: Education and Training Challenges	1.50	4.33	3.06	.81367	Ne

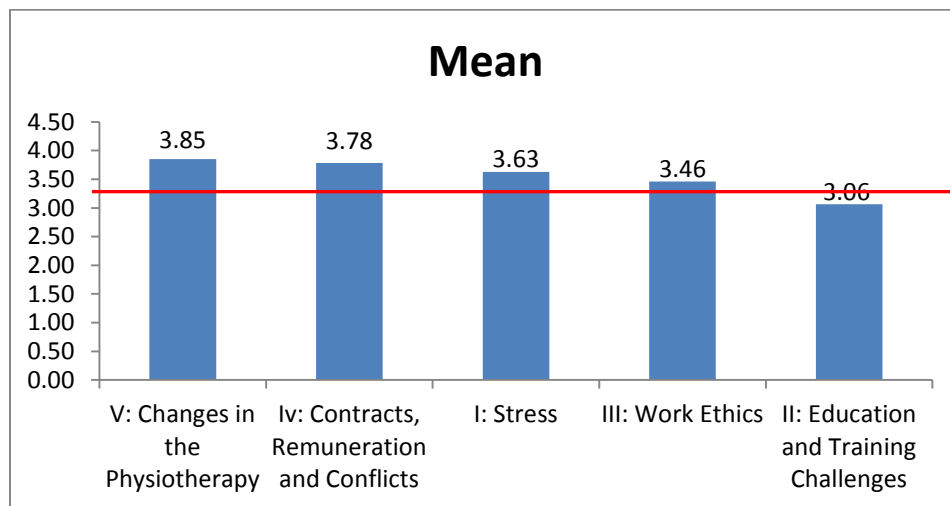


Figure 2: Weighted mean and standard deviation for each factor in ascending order

Further, Table (5) summarizes the quantitative results obtained from the survey, including the Chi-Square decisions.

Table 5: Challenges in details (By items) including Chi square

	Strongly agree		agree		Neutral		Disagree		Strongly Disagree		Chi2	Sig	Decision based on Chi2
	n	%	n	%	n	%	n	%	n	%			
I: STRESS													
1.1 Connection and empathy towards my patients cause me stress	36	36.0%	16	16.0%	17	17.0%	20	20.0%	11	11.0%	18.1	.001	SA
1.2 Long working hours is stressful	46	46.0%	20	20.0%	16	16.0%	17	17.0%	1	1.0%	53.1	.000	SA
1.3 Work-related and family stress affects my ability to perform	41	41.0%	16	16.0%	21	21.0%	18	18.0%	4	4.0%	35.9	.000	SA
1.4 I would leave my current job for a less-stressful job	41	41.0%	6	6.0%	17	17.0%	23	23.0%	13	13.0%	35.2	.000	SA
1.5 Stress does not affect my performance at work (+)	6	6.0%	20	20.0%	18	18.0%	17	17.0%	39	39.0%	28.5	.000	SD
II: EDUCATION AND TRAINING CHALLENGES													
2.1 I have received enough training in college/university or my work	13	13.0%	22	22.0%	17	17.0%	16	16.0%	32	32.0%	11.1	.025	SD
2.2 I need more training and practical experience to enhance my performance	42	42.0%	33	33.0%	15	15.0%	5	5.0%	5	5.0%	56.4	.000	SA
2.3 I find the new technologies and systems at my workplace very challenging and time wasting	25	25.0%	19	19.0%	20	20.0%	25	25.0%	11	11.0%	6.6	.159	Not significant
2.4 I lack the confidence to carry out my job	14	14.0%	10	10.0%	8	8.0%	33	33.0%	35	35.0%	33.7	.000	SD
2.5 I am always afraid of making medical errors when treating my patients	28	28.0%	12	12.0%	15	15.0%	29	29.0%	16	16.0%	12.5	.014	Di
2.6 There are tasks I am afraid of undertaking because I feel that I lack the training and expertise	32	32.0%	8	8.0%	15	15.0%	22	22.0%	23	23.0%	16.3	.003	SA
III: WORK ETHICS													
3.1 The ethics and code of conduct of the organization that I work for are favorable (+)	8	8.0%	29	29.0%	25	25.0%	4	4.0%	34	34.0%	35.1	.000	SD
3.2 The national ethics provided by Ministry of Public Health in the State of Qatar are in line with my organizational ethics (+)	9	9.0%	36	36.0%	21	21.0%	5	5.0%	29	29.0%	34.2	.000	Ag
3.3 I do not know how to handle some ethical issues	30	30.0%	9	9.0%	15	15.0%	35	35.0%	11	11.0%	27.6	.000	Di
3.4 Sometimes, I am forced to compromise what is best for my patients when trying to achieve the best practice standards	36	36.0%	22	22.0%	21	21.0%	16	16.0%	5	5.0%	25.1	.000	SA
3.5 Ethical dilemmas affect my work performance	32	32.0%	15	15.0%	23	23.0%	20	20.0%	10	10.0%	13.9	.008	SA
IV: CONTRACTS, REMUNERATION AND CONFLICTS													
4.1 I am not happy with my current employment terms and/or salary	43	43.0%	14	14.0%	19	19.0%	16	16.0%	8	8.0%	36.3	.000	SA
4.2 I am a member of a labor union that articulates my rights as an employee (+)	1	1.0%	10	10.0%	20	20.0%	20	20.0%	49	49.0%	65.1	.000	SD
4.3 Conflicts at the work-place affect my performance	37	37.0%	23	23.0%	15	15.0%	19	19.0%	6	6.0%	26	.000	SA
4.5 I would leave my current job if I got another job where there is less internal conflicts and/or better pay	50	50.0%	16	16.0%	17	17.0%	10	10.0%	7	7.0%	59.7	.000	SA
4.6 My organization has put string measures on conflict management and resolution (+)	2	2.0%	16	16.0%	36	36.0%	13	13.0%	33	33.0%	40.7	.000	SD

	Strongly agree		agree		Neutral		Disagree		Strongly Disagree		Chi2	Sig	Decision based on Chi2
	n	%	n	%	n	%	n	%	n	%			
V: CHANGES IN THE PHYSIOTHERAPY													
5.1 Physiotherapy has become more demanding	58	58.0%	31	31.0%	9	9.0%	2	2.0%	0	0.0%	76.4	.000	SA
5.2 The number the patients I attend to is increasing	58	58.0%	30	30.0%	10	10.0%	1	1.0%	1	1.0%	118.3	.000	SA
5.3 I lack the knowledge to handle specific population of patients such as those diagnosed as diabetic	15	15.0%	14	14.0%	13	13.0%	39	39.0%	19	19.0%	23.6	.000	Di

Based on the chi-square value for the survey item and the percentage of responses in Table (5), physiotherapists challenges can be summed as follows. In relation to *stress*, all items considered as challenges that physiotherapist face. This items are: "Work-related and family stress affects my ability to perform" (41%); "would leave my current job for a less-stressful job" (41%), "Connection and empathy towards my patients cause me stress" (36%) and "Long working hours is stressful" (46%); More over one positive item also had the higher percentage for the response strongly disagree. This item is "stress does not affect my performance at work" (39%).

For the *education and training challenges*, the challenges were: "There are tasks I am afraid of undertaking because I feel that I lack the training and expertise" (32%), "I need more training and practical experience to enhance my performance" (42%), and "I have received enough training in college/university or my work" (32%). Regarding the *Work Ethics*, the items that were consider as challenges that physiotherapist face were: "Sometimes, I am forced to compromise what is best for my patients when trying to achieve the best practice standards" (36%); and "Ethical dilemmas affect my work performance" (32.0%).

For the *Contracts, Remuneration and Conflicts* factor, the three challenges physiotherapist face were, "I am not happy with my current employment terms and/or salary" (43% strongly agreed); followed by "Conflicts at the work-place affect my performance" (37% strongly agreed) and "I would leave my current job if I got another job where there are less internal conflicts and/or better pay" (50% strongly agreed). Moreover, two items had higher percentages of respondents who strongly disagreed. These items are "I am a member of a labor union that articulates my rights as an employee" (49%) and "my organization has put strict measures on conflict management and resolution" (33%).

Under the factor "*Changes in The Physiotherapy*" there are two items considered challenges for the physiotherapist. These items are: Physiotherapy has become more demanding (58%) and "The number the patients I attend to is increasing" (58 %). In addition, there was one item considered as challenge with significant level at ($p < 0.05$) with high percentage response of "strongly disagree," which was, "I lack the knowledge to handle specific population of patients such as those diagnosed as diabetic" (39%).

The results were further analyzed using T-test and ANOVA as the basis for determining the statistically significant differences between different groups. A summary of the findings is presented in Table (6). The t-test results in Table 6 shows that there were significant differences between the male and female responses with regard to the physiotherapy challenges they face. The results show that the females had higher means than males for stress, education and training, contracts, remuneration and conflicts, and changes in the physiotherapy while there were no significant differences between genders for work ethics as a challenge. Further, in terms of gender, stress was identified as the main challenge with females scoring a mean of 3.77 and

males 3.47 followed by education and training with means of 3.14 for females and 2.98 for males.

Also, the results did not find any significant differences between the group that take a courses as professional development and the group that did not take any courses in the means of all challenges factors. Regarding the *age*, there was a significant difference in the means of factors, between the different ranges of sample age. There for, a post-hoc analysis (pairwise comparison using the LSD test) was performed, in order to check the comparison between the different pairs. The results showed that there were significant differences between the group of sample under 31 years old and the group above 40 years old ($p < 0.05$) for all factors. The group with age less than 31 face challenges more than the group of age above 40 in the factors; stress, education and training challenges and changes in the physiotherapy, whoever, the group of age above 40 has more challenges on the other factors (work ethics and contracts, remuneration and conflicts).

Table 6: Summary of ANOVA Results for Demographic variables

		i: stress	ii: education and training challenges	iii: work ethics	iv: contracts, remuneration and conflicts	v: changes in the physiotherapy
		Mean	Mean	Mean	Mean	Mean
Gender	Male	3.47	2.98	2.90	2.82	2.77

	Female	3.77 ^{NS}	3.14 ^{NS}	2.90 ^{NS}	2.88 ^{NS}	2.99*
Taken Additional Courses	Yes	3.37	2.88	3.00	2.88	2.79
	No	3.80 ^{NS}	3.19 ^{NS}	2.83 ^{NS}	2.83 ^{NS}	2.95 ^{NS}
Age	20-30 years	4.56	3.89	2.61	2.74	3.30
	31-40 years	3.44	2.80	2.96	2.87	2.74
	above 40 years	2.66*	2.54*	3.18*	2.99*	2.67*
Educational Level	College	3.52	2.93	2.85	2.68	2.57
	University degree	3.75	3.20	2.85	2.88	2.97
	Postgraduate	3.26 ^{NS}	2.68*	3.07 ^{NS}	2.80 ^{NS}	2.76 ^{NS}
Years of work in Qatar	less than 5 years	3.14	3.03	2.77	2.85	2.77
	5-10 years	3.85	3.35	2.91	2.95	3.02
	10-15 years	4.56	3.74	2.60	2.60	3.17
	over 15 years	3.44*	2.78*	3.02*	2.88*	2.79*
Experience	Inexperienced	4.50	4.08	2.58	2.65	3.48
	Just experienced	3.93	3.19	2.95	2.91	3.03
	Very experienced	3.17*	2.67*	2.96*	2.88*	2.61*
Income	0≤15,000	3.94	3.41	2.74	2.85	2.99
	15,001≤35,000	3.14	2.64	3.09	2.87	2.69
	35,001≤50,000	3.66*	2.72*	3.05*	2.76*	2.97*
Hours of Work	0≤39 hours	3.06	2.91	2.93	2.88	2.78
	40≤48 hours	3.48	2.89	2.98	2.88	2.83
	More than 48 hours	4.77*	3.79*	2.60*	2.74*	3.18*

For the *educational level*, ANOVA test also shows significant differences between groups based on educational levels ($p < 0.05$). There for, a post-hoc analysis (pairwise comparison using the LSD

test) was performed to check the comparison between the different pairs. The results showed that only group with postgraduate have less education and training challenges than the group with university degree ($p < 0.05$). ANOVA test also shows significant differences between groups based on *years of work in Qatar* in all factors ($p < 0.05$). Based on the post-hoc analysis (pairwise comparison using the LSD tests), it was found significant differences between group

with 10-15 years of work in Qatar and the group with less than 5 years. The group with 10-15 years of work in Qatar face challenges more than the group with less than 5 years in the factors; stress, education and training challenges and changes in the physiotherapy, whoever, the group that work in Qatar for less than 5 years has more challenges on the work ethics and contracts, remuneration and conflicts factors ($p < 0.05$).

With regard to the *experience* variable, the results show that there are significant differences in the mean of all factors between the different groups in terms of years of work experience. For this reason, a post-hoc analysis was performed. The results also showed that there were significant differences between the group with very experienced and those with inexperienced ($p < 0.05$). The inexperienced group face challenges more than the very experienced group in the factors: stress, education and training challenges and changes in the physiotherapy, whoever, the very experienced group has more challenges on the other factors (work ethics and contracts, remuneration and conflicts).

The ANOVA and post-hoc tests for the *income* variable, there are significant differences between group with income less than QR 15,000 and the group with the range between QR 15,000 and 35,000. The group within income less than QR 15,000 has higher challenges on the terms of stress, education and training challenges; contracts, remuneration and conflicts and changes in the physiotherapy. Whoever, the opposite is true within the term of work ethics.

Finally, with regard to the *hours of work*, the results showed that there are significant differences in the mean of all factor between the different groups in terms of hours of work. For this reason, a post-hoc analysis was performed. The results showed the group that work for more than 48

hours face challenges more than the group that work less than 39 hours ($p < 0.05$) for the factors: stress, education and training challenges and changes in the physiotherapy, however, the group that work for less than 39 hours face challenges more than the group that work more than 48 hours in the factors: work ethics and contracts, remuneration and conflicts ($p < 0.05$). Detailed results based on demographics are provided in Appendix E.

4.3 Presentation of Qualitative Data

4.3.1 Introduction: The Study Design and the Interviewees

The qualitative study involved face-to-face interviews with 10 hospital staff and telephone interviews with 25 former employees of Hamad Medical Corporation in Qatar. The results of these interviews are presented in this section.

4.3.2 Findings of the Qualitative Interviews with Hospital Management (N=10)

The interviews with the hospital management were carried using face to face interviews, and involved six questions (See Appendix D for the list of the interview questions). The first research question being studied was “What are some of the challenges that physiotherapists face?” Various challenges already covered in the quantitative survey were noted. However, the interviewee also noted some challenges that had not been noted in the study, and created a further insight into the causes of these challenges and how it affects the performance and employee turnover of physiotherapists.

For instance, two respondents noted cultural issues as one of the major challenges facing physiotherapists. Expounding on this point, the respondent explained that some patients prefer to be treated by a physiotherapist of a specific ethnicity or nationality, which creates a work load

for those physiotherapists that are preferred by the patient. Still on the cultural issues, the gender aspect was also identified another interviewee noted that the culture of segregating women and men in public facilities within the Arabic culture posed a challenge to physiotherapists. This is because female physiotherapists were only allowed to offer treatment to female patients while male physiotherapists can only treat male patients. Therefore, when there are instances where the patients of one gender are more than the other, the physiotherapists of that gender end up being overloaded with work while the other physiotherapists are free.

Another point noted was the lack of competition at the workplace, with nine interviewees noting that when physiotherapists are employed, they tend to feel secure and safe, and as a result, lack the motivation to work and improve their performance, and thus, become less innovative. The lack of recognition for the physiotherapy profession within the Qatari society was also noted by eight respondents as another challenge that is common in the country. This is because the patients, and the society at large, are not aware of the roles that physiotherapists play in the healthcare system. Putting the challenge into context, the interviewees noted that physiotherapists are treated with contempt and less respect because of the social perception that physiotherapy is a lowly-paid profession. Therefore, the society tends to perceive physiotherapists as less useful in the healthcare, a stereotype that is based on their pay.

The lack of coordination and communication at the workplace was also noted as yet another challenge facing physiotherapists in Qatar. Six interviewees noted that most physiotherapists tend to work independent of physicians, regardless of the importance of them working together as a team. The interviewees also noted that there are high instances of poor coordination between the specialists and the physiotherapists, which hinders the efficiency of care delivery.

Another challenge noted by three respondents, which is more organizational rather than career-related, was that most physiotherapists in Qatar are expatriates and tend to come to Qatar for experience, when they attain it, they leave the organization which affects its reputation. This is because the organization uses a lot of resources to enhance the technical capacities of the employees, whose proceeds are not realized.

Seven interviewees identified the referral system as another challenge that physiotherapists face in Qatar especially because the physician has to see the patient after which the patient gets a reference to see the physiotherapist. This puts more financial strain to the patients and also wastes time that could have been saved if the patient went directly to the physiotherapist. This is unlike other countries such as the U.S. and Australia where patients go to see the therapists directly. Family issue was also noted by two interviewees noting that some physiotherapists in Qatar leave the organization because they want to take their children abroad for further studies.

Also, the participants were asked whether they think the education and training that most physiotherapists receive in Qatar is sufficient. The findings show that most of the interviewees answered the education and training that most physiotherapists receive in Qatar is not sufficient. Most of the interviewees said that they did not think the training offered to physiotherapists in Qatar is sufficient. For instance, four of the interviewee argued that in Qatar some specialties like orthopedic physiotherapy they are able to organize courses every year, but most of the staff do not attend because of limited seats, family responsibilities and financial reasons. Another respondent argued that the education is not sufficient because and that the organizational internal programs management should try to push for quality of education and training courses.

Nine interviewees noted the need for changing the career framework for physiotherapy to establish intensive educational program to meet the educational and training needs in the field. The lack of a physiotherapy college in Qatar as well as a physiotherapy association that ensures the continuity in the field was also noted, and as a result, physiotherapists in Qatar end up depending on their own knowledge and skills. This point was reiterated by nine interviewees who noted that Qatar lacked a physiotherapy association or college to control and regulate the training and courses.

On the brighter side, seven interviewees noted that training has improved as some staff organizes trainings where they bring experts from Canada, UK, US and Australia to do courses. However, the interviewee noted that the major problem is that the problem is that HMC has long process to give approval for one course also number of courses and allocated budget are limited, and as such, staff should pay part of fees and sometimes staffs pay all fees.

Further, the interviewees were asked about the measures that the organization has put in place to ensure that these challenges are handled. Seven interviewees noted that good communication between all care providers through multidisciplinary team to improve physiotherapist performance. Another one noted the need for the management to work as a team to overcome obstacles and provide good support on facility level for some hospital staff.

With regard to the poor training and education, nine interviewees noted the need for a new physiotherapy college in Qatar University that will ensure flow of new graduate, especially Qatari workforce. The interviewees added that this college will increase competition among physiotherapist and they will work more to develop their knowledge and skills and work together

towards innovation and change old mentality. Also, the interviewees felt that this will solve shortage of staff and will ensure continues professional development because there will be continuous flow of new Qatari and non-Qatari graduate as well as exchange expertise from both hospital and university train the student in governmental hospitals under supervision of physiotherapist and continuous educational program will be more easy and available to all physiotherapist. The need for recognition and awareness creation on the role of physiotherapists was also noted by five respondents.

When the interviewees were asked to give their general opinion on the challenges that physiotherapists face and how they affect their performance and employee retention, most of the interviewees said that the challenges noted do have an effect on their performance and employee retention. However, four of the interviewees noted that if physiotherapists are aware of these challenges, then they can work more on themselves and help use to improve it. Another one added that physiotherapist should work on community awareness and we need to create physiotherapy association to regulate physiotherapy practice in Qatar. Two interviewees noted that physiotherapists have to understand patients' needs and they should practice the knowledge they learned. The need for conflict resolution was noted with one of the interviewee noting that some employees will stay if the work environment is good and there are no conflicts with their managers. This is because if there is a conflict with direct manager the employee will leave the work, but if payment is less than other places most employees stay and hope in the future payment may improve.

The need to create better opportunity for change was noted with three interviewees noting that change should come first from staff himself to change mentality and to invest on himself. The

need for open communication from organization level to department head to supervisors and finally to the staff was noted. However, one of the interviewee felt that the effects of the challenges that physiotherapists face should not affect the quality of care they deliver to the patients, which implies that he disagreed with the challenges affecting their performance.

4.3.3 Findings of Telephone Interviews with Resigned Physiotherapists (N=25)

The researcher approached Hamad Medical Corporation HR department who provided a list of resigned physiotherapist's names from 2006 till 2016 after which the researcher requested the supervisor to contact some of the physiotherapists who had left the organization. The aim of this study was to establish the main reasons why the physiotherapists left. Out of the 25 physiotherapists contacted, a majority 80% (20 respondents) cited low pay as the main reason why they left the organization, mainly because they found better payment. The second reported reason as to why the physiotherapists left their former organization was lack of better contracts, which was cited by 76% (19 out of 25) interviewees. The third main reason was the long working hours, which was pointed out by 40% (10 out of 25) respondents.

Following closely in the fourth place was further training and education, where 36% (9 out of 25) of the interviewees reported that they resigned from their jobs because they needed to further their education. Stress was also noted as another major cause of employees leaving their organizations, with 32% (8 out of 25) noting that they resigned because they had found less stressing jobs. Further, 24% (6 out of 25) cited burnout and work load as the main reason they left as they had found jobs with less work load. Family issues were also cited by 20% (5 out of 25) respondents while less conflict and more ethics were cited by 12% (3 interviewees) and 4% (one participant) respectively as shown in the Figure 3 and Table 7 (in the Appendix E).



Figure 3: Reasons why former employees resigned

4.4 Details of the Analysis based on both Qualitative and Quantitative Results

Having established the main challenges that physiotherapists face and the correlations between different variables (such as education, age, gender and education level), the researcher used the findings from both the qualitative and quantitative study to test the hypotheses of the study. An alpha level of 0.05 was used to test the significant level for each of the research hypothesis.

H1: *Stress and work burnout negatively impacts physiotherapists' performance and employee retentio.*

To test H1, Chi square was used as seen in Table (5). All negative items under the *stress* had higher percentage for the response strongly agree (value of χ^2 are between 18.1 to 53.1) with significant level at $p < 0.05$. These items are: "Work-related and family stress affects my ability to perform" (41%); "would leave my current job for a less-stressful job" (41%), "Connection and empathy towards my patients cause me stress" (36%) and "Long working hours is stressful" (46%); Moreover one positive item also had the higher percentage for the response strongly disagree (value of $\chi^2 = 28.5$, $p < 0.05$). This item "stress does not affect my performance at work" (39%).

Since the Chi square values are significant for the percentage of responses strongly disagree for the negative items and for the percentage of response strongly agree for the positive items (highest percentage), the H1: *Stress and work burnout negatively impacts physiotherapists' performance and employee retention* is accepted. This means that the stress has a negative impact on the physiotherapist performance and retention.

This previous quantitative result is supported by the qualitative results collected from the interviewees. Most of the interviewees mentioned that the challenges they noted previously are demotivating employees and affect their performance and if they have better opportunity they may leave their jobs". Majority of the interviewees said that physiotherapy is mentally exhausting and physically exhausting profession for long term. Shortage of staff leads to an increase in work load, this is due to budget limitations and the Qatar labor market is less attractive than other Gulf countries like KSA and UAE (payment package offer). Further, majority of the interviewees noted that stress came from disabled patients' therapists give a lot for small changes, disability is a burden. Finally, interviewees think that to avoid the stress impact on the

performance and retention they suggested that less working hours and reducing the workload could help reduce stress. From resigned employee telephone interview stress was noted as another major cause of employees leaving their organizations, with 32% (8 out of 25) employee resigned because they had found less stressing jobs

These results from both qualitative and quantitative study support the hypothesis that stress and work burnout negatively impacts physiotherapists' performance and employee retention.

H2: Lack of enough education and training has a negative effect on physiotherapists' performance and employee retention.

Finally, there are two items are considered as challenges faced by the physiotherapist in terms of *education and training challenges*. To test H2, Chi square also was used as seen in table (5). Two negative items related to education and training had higher percentage for the response strongly agree (value of χ^2 are between 16.3 to 56.4) with significant level at $p < 0.05$. This items are: "There are tasks I am afraid of undertaking because I feel that I lack the training and expertise" (32%), and "I need more training and practical experience to enhance my performance" (42%). One positive item also had the higher percentage for the response strongly disagree (value of $\chi^2 = 11.1$, $p < 0.05$). This item "I have received enough training in college/university or my work" (32%). However, the other three items related to education and training have not consider by physiotherapist as challenges.

Since the items related directly to education and training have Chi square values with significant level for the percentage of strongly disagree responses for the negative items and for the percentage of strongly agree responses for the positive items (highest percentage), the H2: *Lack*

of enough education and training has a negative effect on physiotherapists' performance and employee retention” is accepted. This means that the lack of enough education and training has a negative effect on physiotherapists' performance and employee retention.

This hypothesis was also supported by the data collected from the interviewees. Most of the interviewees felt that the need to further education is mandatory even though some staff face some challenges such as financial restraints and new technology that may hinder their resolve to further their careers. They further added that Qatar has no physiotherapy educational program or college to train and develop physiotherapists to ensure continuous development. However, they noted that most health organizations have professional development for Qatari staff where they can take sponsorship from their organization to study abroad even though the number of Qatari staff is very low. Some physiotherapists mentally resist change and they do not improve themselves through education, some of them attend training courses but they didn't use the skills they learned from the course. From telephone interviews with resigned physiotherapists, training and education came in fourth place, where 36% (9 out of 25) of the interviewees reported that they resigned from their jobs because they needed to continue their education.

These results from both the qualitative and quantitative study show that the lack of enough education and training has a negative effect on physiotherapists' performance and employee retention, which supports H2.

H3: Complicated work ethics in physiotherapy field in Qatar reduces the performance of the physiotherapists and influence employee retention.

To test H3, Chi square was also used (Table 5). There are two items located under the ethics factor in the survey and related to the performance had higher percentage for the response strongly agree (value of Chi² are 13.8 and 25.1) with significant level at $p < 0.05$). These items are: "Sometimes, I am forced to compromise what is best for my patients when trying to achieve the best practice standards" (36 %); "Ethical dilemmas affect my work performance" (32.0%).

Since the Chi square values are significant for the percentage of responses strongly disagree for the negative items (higher percentage), the H3: *Complicated work ethics in physiotherapy field in Qatar reduces the performance of the physiotherapists and influence employee retention* is accepted.

This previous quantitative result is supported by the qualitative results collected from the interviewees who noted ethics as one of the main challenges noting that some managers have low ethics and it affects work flow like departments budgets and promotions as they tend to take issues personally, which affect employee's performance. Also, the interviewees noted that ethics differ across specialties and affect organization, employee rights and patient rights, and that ethical issues in government hospital some therapists take bribes from patients to treat them well and give them the priority in appointments and treatment. The interviewees also noted that work environment if it is not comfortable then staff will choose to leave and opposite if it is. Also, from telephone interview with resigned physiotherapists ethics was cited as one of employee reasons to leave their organizations by 12% (3 interviewees).

Thus, both the qualitative and quantitative data supports the hypothesis that complicated work ethics in physiotherapy field in Qatar reduces the performance of the physiotherapists and influences employee retention

H4: *Poor employment contracts, remunerations and conflicts at the workplace have a negative effect on physiotherapists' performance and employee retention.*

To test H4, Chi square was used as seen in Table (5). All negative items under the factor “*employment contracts, remunerations and conflicts*” had higher percentage for the response strongly agree (value of Chi^2 are between 26 to 59.7) with significant level at $p < 0.05$. This items are: "I am not happy with my current employment terms and/or salary" (43% strongly agree); followed by "Conflicts at the work-place affect my performance" (37% strongly agree) and "I would leave my current job if I got another job where there are less internal conflicts and/or better pay" (50 %). More over two positive item had the highest percentage for the response strongly disagree among the other responses (values of $\text{Chi}^2 = 40.7$ and 65.1 , $p < 0.05$). These items are "I am a member of a labor union that articulates my rights as an employee" (49%) and "My organization has put string measures on conflict management and resolution" (33%).

Since the Chi square values is significant for the percentage of responses strongly disses agree for the negative items and for the percentage of response strongly agree for the positive items (the highest percentage), the H4: *Poor employment contracts, remunerations and conflicts at the workplace have a negative effect on physiotherapists' performance and employee retention*” is accepted.

H4 also supports by the qualitative results collected from the interviewees, where most of interviewees felt that better payment offers and financial reasons as well as better working conditions are some of the main reasons why physiotherapists leave because of high living cost in Qatar.

The interviewees added that there is lack of consistency in the payment as some physiotherapists working at the same grade are paid more than others, which is a source of demotivation. The interviewees also noted that the labor market in Qatar is very rigid and lacks reward for employees, which is also demotivating. Also, the country has different contracts for Qataris and non-Qataris, where the expatriates are not given housing allowance and other benefits. Organizational structure (centralization) and contracts still fixed and not changing, also career pathway is not clear for therapists. From telephone interview with resigned physiotherapists a majority 80% (20 respondents) cited low pay as the main reason why they left the organization and the second reported reason as to why the physiotherapists left their organization was lack of better contracts, which was cited by 76% (19 out of 25) interviewees.

These results from the survey and the qualitative interviews as well as the HR department support the hypothesis that poor employment contracts, remunerations and conflicts at the workplace have a negative effect on physiotherapists' performance and employee retention.

H5: Changes in the physiotherapy negatively influences physiotherapists' performance and employee retention.

Under the factor "*Changes in The physiotherapy*" there are two negative items considered as challenges with significant level at $p < 0.05$) for the Chi square values (table 5) for the percentage

of the response “strongly agree”. These items are: "Physiotherapy has become more demanding" (58%)”and "The number the patients I attend to is increasing" (58 %). In addition, one positive item considered as challenge with significant level at $p < 0.05$) for the Chi square values for the percentage of the response “strongly disagree” with "I lack the knowledge to handle specific population of patients such as those diagnosed as diabetic" (39%).

Since the Chi square values is significant for the percentage of responses strongly disses agree for the negative items and for the percentage of response strongly agree for the positive item (highest percentage), the H5: *Changes in the physiotherapy negatively influences physiotherapists’ performance and employee retention”* is accepted. Moreover, the interviewees mentioned that physiotherapy is becoming more demanding due to the demographic changes, which has increased the demand for physiotherapy services and the workload for physiotherapists and 24% (6 out of 25) of resigned physiotherapist cited work load as one of the reasons they left their organizations. These results from both the survey and the interview imply that changes in the physiotherapy negatively influence physiotherapists’ performance and employee retention.

4.5 Discussion

This section discusses the results of both the qualitative and quantitative study in relation to the literature and based on the research aims and objectives, that is to establish the various challenges that physiotherapists face in Qatar; to determine the impact of the challenges on the physiotherapists’ performance; and to determine how the challenges affect the physiotherapists’ employee retention. The results from the survey show that “I would leave my current job if I got another job where there are less internal conflicts and/or better pay” (50 %); “I am a member of a

labor union that articulates my rights as an employee" (49%); "Physiotherapy has become more demanding" (58%); and "The number the patients I attend to is increasing" (58 %) are the main leading challenges that had high percentages of score above 49% included.

These results imply that majority of the physiotherapists feel overwhelmed by their jobs, which explains why they feel their careers are becoming more demanding and the patient population is increasing. These two responses show a consistency in the study because as the number of patients increase, so would be the demand for physiotherapy services, which would make the career more demanding. These results have been supported by the findings of the literature review where this analysis established that the demographic changes in the Qatar population pose a major challenge for physiotherapists as the population of persons aged 65 and above, which is currently at 1.5% (34,677 persons) of the total population of 2,307,241, is expected to rise to 2.5% in the next five years (World Bank, 2016). The perceptions and opinions of the respondents presented in this study imply that physiotherapists in Qatar have started experiencing the effect of these demographical changes.

Another reason that could explain the perceived increase in the demand in physiotherapy and the increasing number of patients requiring physiotherapist services is the increase in the number of persons who are diagnosed as diabetes and obese. Trends and statistics on the prevalence of obesity and diabetes in Qatar show that one in every five persons (20%) is at a high risk of developing diabetes while 12.5% of the Qataris have been diagnosed as pre-diabetic, implying that they have signs of diabetes. The statistics reviewed in the literature review also show that the number of the aged population is increasing. These statistics point high demand for physiotherapists to offer rehabilitation care for diabetic persons.

The other main challenge, noted by the majority of the respondents and the resigned physiotherapists, was the low pay. Further the findings showed that more than half of the sample (54%) was paid less than QR15, 000, 36% were paid QR 15,001≤35,000 and only 10% were paid within the highest range of between QR 35,000 and 50,000. On the other hand, the results show that 58% of the sample reported to work for within the range of 40– 48 hours, 23% worked less than 39 hours while 19% reported to work more than 48 hours. These results imply that the majority 77% worked above the normal 40-hour per week working schedule, which is an indicator of long working hours. These results can further be interpreted that majority of the physiotherapists are underpaid as they have to put in more working hours but still get little pay and work under unfavorable working conditions.

The findings of the literature review show that regardless of Qatar being rated as one of the richest countries in the world due to its oil endowment, it performs poorly when it comes to employees' remuneration and per hourly pay (World Bank, 2016). Further, the results of this study are in line with the literature findings show that the work contracts are very rigid in Qatar, with the country's labor market described as one of the most rigid one where workers find it difficult to move from one job to another (Oxford Business Group, 2014). Thee literature also showed that low pay not only has a negative effect on employee performance but also demotivates staff (Kube *et al.*, 2013). Also the rigid work contracts reduce employees' turnover as many employees choose to stay because of the impeding difficulties that they face when changing jobs (Campbell *et al.*, 2012).

The study has also identified new challenges as reported by the interviewees. These include lack of communication and coordination among staff, cultural issues, lack of the motivation to work

and improve their performance and the referral system. There was an agreement among the interviewees that these challenges affect the performance of the physiotherapists and employee retention.

With regard to demographics, the study has also identified that female physiotherapists have more challenges than their male counterpart. While this is not implied in the study, this study contends that the cultural issues in Qatar as noted by interviewees have contributed to such findings. This is because the Arabic culture has some gender issues that tend to affect women negatively.

Also, the study established that younger employee with less experience have more challenges than older. The young physiotherapists face challenges in terms of stress, education and training challenges and changes in the physiotherapy as compared to older physiotherapists who mainly face challenges on the work ethics and contracts, remuneration and conflicts factors. These findings can be explained from the fact that younger physiotherapists lack the work experience, and most organizations would not want to employ young employees because, as one of the interviewee noted, they tend to leave the organization after they gain work experience.

Further, this study tested all the five hypotheses of the study, and based on the results from the quantitative survey, qualitative interview and the data from the HR department, all the hypotheses are supported. The results show that both qualitative and quantitative study support the hypothesis that stress and work burnout negatively impacts physiotherapists' performance and employee retention. These results from both the qualitative and quantitative study show that the lack of enough education and training has a negative effect on physiotherapists' performance

and employee retention; complicated work ethics in physiotherapy field in Qatar reduces the performance of the physiotherapists and influences employee retention; poor employment contracts, remunerations and conflicts at the workplace have a negative effect on physiotherapists' performance and employee retention; and that changes in the physiotherapy negatively influences physiotherapists' performance and employee retention.

4.6 Summary of the Chapter

The main challenges that physiotherapists in Qatar face are the changes in physiotherapy that make the profession more demanding and low pay and unfavorable contracts. The study has also identified the increasing demand for physiotherapist services as yet another major challenge that physiotherapists face in Qatar. Due to the high demand, physiotherapists are forced to put in more working hours but their pay does not increase to compensate for the extra effort that they put in. As a result, majority of the physiotherapists end up being demotivated, which not only affects their performance, but also influence employee retention.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Contribution of the Study

This study contributes to the existing literature on the challenges that physiotherapists face and how they influence the performance and employee retention. As earlier mentioned, a review of existing literature revealed that no such study has been attempted in Qatar, and that most of the previous studies have focused on the general challenges faced in the general healthcare system or other fields of practice. Therefore, the focus on the physiotherapy field, which has been neglected by previous studies, makes a great research contribution. This study also makes a special contribution in the research subject in that it goes beyond the challenges and finds the correlation between the challenges and how they affect the employees' performance and the employee retention, which has not been attempted in the field of physiotherapy.

In addition, the focus on Qatar, an emerging market. Most of the studies that have analyzed challenges faced in the health care sector have mainly been done in developing economies such as the U.S., UK, Canada and other developed countries. On the other hand, there has been little research within the developing economies context. Therefore, the focus on a developing country makes a momentous contribution to healthcare research, as it helps establish the varying

differences across the globe. For instance, this study established unfavorable contracts and bad pay as the main challenges that physiotherapists face in Qatar. Such results are not expected in developed countries such as Sweden and Australia where the employment contract and employee payment policies have been nationalized.

5.2 Limitations of the Study and Future Research Areas

This study has several conceptual and methodological limitations that can be resolved through future research on the area. Conceptually, this study focused on the challenges faced by physiotherapists in Qatar face and how they affect their performance and employee retention. Given the cross-national differences in work policies and other factors, this implies that the results of this study cannot be further generalized to other countries, especially if they do not share similar demographic characteristics. As a result, this study calls upon future researchers to extend the research geographical boundaries beyond Qatar. It would be interesting for future researchers to carry out a comparative study involving two countries; mainly a developed and a developing country, to help determine whether the challenges are similar or they vary extensively. Also, future researchers could compare the challenges faced by physiotherapists against those faced by another group of health practitioners, such as dentists or nurses or orthopedists.

Methodologically, this study used a relatively large sample of 100 physiotherapists, 10 hospital management officials and 25 resigned physiotherapists. While this sample is large enough, it would be interesting to undertake similar study by increasing the number of study sample to help determine whether the results would change. Further, this study adopted a cross-sectional research, which has time limitations. As a result, this study recommends that future researchers

adopt a longitudinal study of about 10 to 15 years, as this would help determine how the challenges shape performance and the employee retention. This study contends that carrying out a longitudinal study would help determine the changes in the physiotherapists' attitudes and perceptions towards various aspects.

5.3 Implications and Recommendations

The results show that low pay and unfavorable contract terms are perceived as the main challenge that physiotherapists in Qatar face. The literature shows that low pay and employee motivation are negatively correlated, and influences one to seek better employment terms and pays. Therefore, to avoid the recruitment costs that come with replacing employees, this study recommends that organizations in Qatar review their employment contracts and salaries that they offer physiotherapists. This would help reduce the socio-economic costs that emanate from low pay. Also, this study recommends that employees form a trade union that would negotiate better terms on their behalf.

There is also a need for the government to regulate salaries in the physiotherapy field, as this would help deal with the challenge of low salaries and unfavorable terms. Other mechanisms that can be adopted to deal with the other challenges identified include organizational change, professional education, support, mentorship, and training. This study contends that these mechanisms can be used to motivate employees, which would enhance their performance (which translates to quality of health care and better human life) and reduce the high employee turnover rates in healthcare organizations (which translates to efficiency and productivity).

The findings also showed that physiotherapy has become more demanding in Qatar, mainly because of the increasing trends on the prevalence of the population that is aged, diabetic and obese persons. As a result, this study recommends for more sensitization campaigns on the importance of healthy eating, physical activity and lifestyle change, which would help reduce the number of obese persons and help manage the levels of diabetes diagnosis in the country. In general, the challenges that physiotherapists face in Qatar are varied, and can only be solved through collective effort for better health and economic outcomes.

New challenges such as lack of communication and coordination among staff, cultural issues, lack the motivation to work and improve their performance and the referral systems were noted in this study. As such, this study recommends for measures such as increased coordination and communication, change in the social perceptions, increasing competition, having a physiotherapy college and association for further studies and enhancing the referral system as some of the mechanisms that organizations and the Qatar government can put in place to enhance the status of physiotherapy in the country.

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Appendices

Appendix A: Research Onion

Appendix B: Consent Form

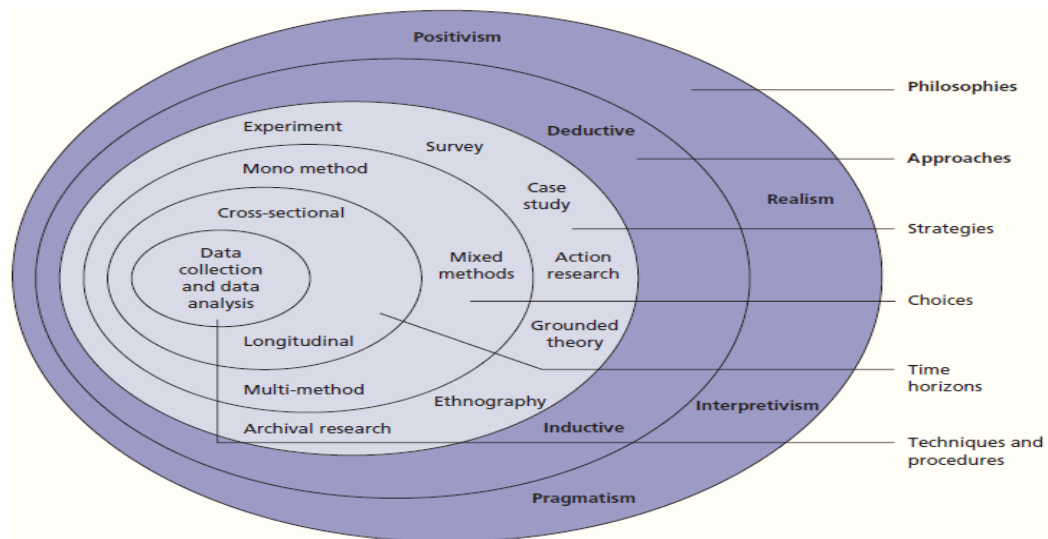
Appendix C: Research Questionnaire

Appendix D: Interview Questions

Appendix E: Detailed results from analysis

Appendix F: Research Hypothesis Development

Appendix A: Research Onion



Source: Saunders, Lewis and Thornhill, 2009, p. 138.

Appendix B: Consent Form

Consent to Participate

The aim of this study is to identify the challenges that physiotherapists face in Qatar, and how they affect their performance and the intention to leave. The researcher contends that physiotherapists in Qatar face a myriad of challenges that hinder their performance and intention to work, and as such, the study outcomes can be used to enhance the status of physiotherapists in the country. Therefore, your participation will be of great importance. Kindly note the following:

- All the information provided will be kept highly confidential.
- Do not include any personal information such as name, phone number, employee ID number, address or any other information that can be traced back to you. Your confidentiality and anonymity is the important.
- The results of this study will be presented anonymous and as views of a group not individual views.
- You have the right to ask questions.
- You reserve all the rights to, or not to, partake in the study.
- You may stop in the middle of the study or skip questions you do not feel comfortable answering, and there will be no penalty for that.
- Finally, participating in this study has a low risk comparable to that of routine every day activities.

I, _____ have received, read and understand a copy of this document describing the procedures, risks and benefits of participating in this study. I understand that by signing this document I consent to participate in this study. I also understand that I may choose to withdraw at any time from the activities if I choose.

Participant signature

Date

Appendix C: Research Questionnaire

Research questionnaire

The purpose of this study is identify the challenges that physiotherapists face in Qatar, and how they affect their performance and the intention to leave. Your contributions and input in thus study are highly appreciated. All your responses shall be strictly confidential and will only be used for research purposes. The survey can only be filled by a physiotherapist working in Qatar.

Section A: Demographic information (Please tick appropriately).

1. Age:

20 - 30 30-40 40-50 Above 50

2. Gender: Male Female

3. Highest education level

College University degree Post-Graduate Others _____

4. Did you take an additional course in physiotherapy when in College or University?

Yes No

5. If answered yes in number 4 above, state the number of years for which you studied the extra course when in College of Education and /or University.

Less than 1 year 1-2 years 3-4 years 5 years over 5 years

6. How many years have you been working in Qatar as a physiotherapist?

Less than 1 year 1-5 years 5-10 years 10-15 years over 15 years

7. How can you rank your expertise in the profession?

Inexperienced [] Just experienced [] Very experienced [] Very experienced []

8. How much income do you earn per month in Qatar Riyal?

0≤15,000 15,001≤35,000 35,001≤50,000 More than QR50,000

9. How many hours do you work per week.

0≤20 hours 20≤39 hours 40≤48 hours More than 48 hours

Section B:

In this section, you will encounter statements describing some of the challenges that physiotherapists face in Qatar. Please circle O ticking [√] or put an X against the statement based on how your agreeability with the statement.

		Strongly Disagree	Disagree	Neither Agree/ Disagree	Agree	Strongly Agree
	I: STRESS					
1	Connection and empathy towards my patients cause me stress (Gandi <i>et al.</i> , 2011)					
2	Long working hours is stressful (Khan <i>et al.</i> 2014).					
3	Work-related and family stress affects my ability to perform (Doellgast, 2012).					
4	I would leave my current job for a less-stressful job (Li <i>et al.</i> 2014).					
5	Stress does not affect my performance at work (Jensen, Patel and Messersmith, 2013).					
	II: EDUCATION AND TRAINING CHALLENGES					
1	I have received enough training in college/university (National Health Strategy, 2016).					
2	I need more training and practical experience to enhance my performance (Gallie <i>et al.</i> 2012; Creswell & Sheikh (2013).					
3	I find the new technologies and systems at my workplace very challenging and time wasting					
4	I lack the confidence to carry out my job (Alnasir & Jaradat, 2013).					
5	I am always afraid of making medical errors when treating my patients (Jack <i>et al.</i> , 2010).					
6	There are tasks I am afraid of undertaking because I feel that I lack the training and expertise (Nicholls & Larmer, 2005).					
	III: WORK ETHICS					
1	The ethics and code of conduct of the organization that I work for are favorable (Huston, 2013).					
2	The national ethics provided by Ministry of Public Health in the State of Qatar are in line with my organizational ethics					
3	I do not know how to handle some ethical issues (Richardson, 2015).					
4	Sometimes, I am forced to compromise what is best for my patients when trying to achieve the best practice standards (Richardson, 2015).					
5	Ethical dilemmas affect my work performance (Jain & Roberts, 2009).					
6	I would prefer to work for an organization with less ethics (Houston, 2013).					

	IV: CONTRACTS, REMUNERATION AND CONFLICTS					
1	I am not happy with my current employment terms and/or salary (Kube <i>et al.</i> , 2013; Campbell <i>et al.</i> , 2012)					
2	I am a member of a labor union that articulates my rights as an employee (Gleeson, 2010).					
3	Conflicts at the work-place affect my performance (Gilboa <i>et al.</i> , 2008; Lerner & Henke, 2008; Kelly <i>et al.</i> , 2011).					
4	I would leave my current job if I got another job where there are less internal conflicts and/or better pay (Bouckennooghe, Raja & Butt, 2013).					
5	My organization has put string measures on conflict management and resolution (Beauregard & Henry, 2009).					
	V: CHANGES IN THE PHYSIOTHERAPY					
1	Physiotherapy has become more demanding (Christos, 2014; Love <i>et al.</i> , 2015).					
2	The number the patients I attend to is increasing (Christos, 2014).					
3	I lack the knowledge to handle specific population of patients such as those diagnosed as diabetic (Love <i>et al.</i> , 2015).					

Section C:

- State any other challenge you face that has not been addressed in this questionnaire, and how it affects your performance and intention to change jobs.

THE END! Thank you very much.

Appendix D: Interview Questions

1. What are some of the challenges that physiotherapists face?
2. How do you think these challenges affect the employees' performance?
3. What do you think is the main reasons why most physiotherapists working in this department choose to leave to other organizations or countries?
4. Do you think the education and training that most physiotherapists receive in Qatar is sufficient? Explain your answers.
5. What measures has the organization put in place to ensure that these challenges are handled?
6. What is your general opinion on the challenges that physiotherapists face and how they affect their performance and intention to leave?

Appendix E: Detailed results from analysis

Table 7: Results of qualitative study with former employees who resigned

Number	Nationality	Gender	Reason
1	Qatari	Female	Better contract and payment, less working hours, more training and education program
2	Q	F	Better contract, payment and less conflict, less stress job, more ethics
3	Q	F	Less stress, less work load and less working hours
4	Q	F	Less stress, less work load, less working hours, better contract and payment
5	Q	F	Less stress, less work load, less working hours, better contract and payment
6	Q	F	Better contract and payment, less working hours, more training and education program
7	Q	F	Family issues
8	Q	F	Family issues
9	Q	F	Family issues
10	Q	F	Working hours, payment and contract
11	Non-Qatari	F	Family issues, stress in work, long working hours, conflict and low payment
12	Non-Qatari	F	Better payment and contract
13	Non-Qatari	F	Better payment and contract
14	Non-Qatari	F	Better payment and contract
15	Non-Qatari	F	Better payment and contract
16	Non-Qatari	F	Less stress less work load, less working hours, better contract and payment
17	Non-Qatari	F	Family issues, conflict and wants more training and education
18	Non-Qatari	M	Better contract, payment and more education and training
19	Non-Qatari	M	Better contract, payment and more education and training
20	Non-Qatari	M	Better contract, payment, education, less working hours, work load and stress
21	Non-Qatari	M	Better contract, payment, less working hours, work load and stress
22	Non-Qatari	M	Better payment and contract
23	Non-Qatari	M	Better payment, contract and education
24	Non-Qatari	M	Better payment, contract and education
25	Non-Qatari	M	Better payment, contract and education

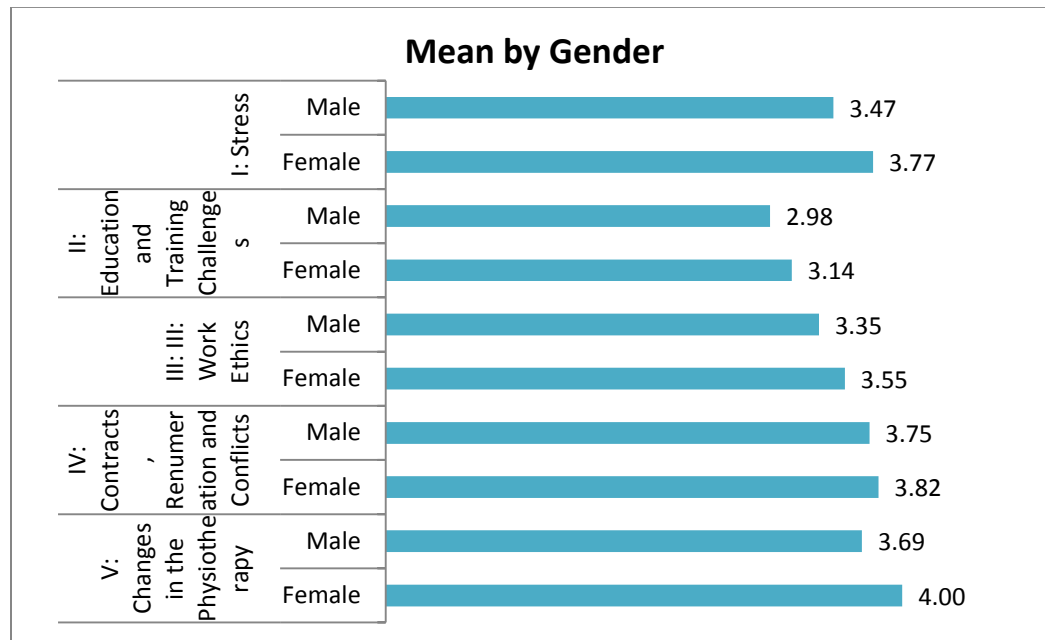


Figure 4: Descriptive Statistics by Gender Groups

Table 8: Descriptive Statistics by Gender Groups

Gender		N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
I: STRESS	Male	48	3.4667	1.18166	.17056	-1.344	98	.182
	Female	52	3.7731	1.09904	.15241			
II: EDUCATION AND TRAINING CHALLENGES	Male	48	2.9757	.79448	.11467	-1.035	98	.303
	Female	52	3.1442	.83041	.11516			
III: WORK ETHICS	Male	48	3.3542	1.07608	.15532	-.948	98	.346
	Female	52	3.5545	1.03728	.14384			
IV: CONTRACTS, REMUNERATION AND CONFLICTS	Male	48	3.7458	.90647	.13084	-.371	98	.711
	Female	52	3.8154	.96190	.13339			
V: CHANGES IN THE PHYSIOTHERAPY	Male	48	3.6875	.72902	.10523	-2.141	98	.035
	Female	52	4.0000	.72910	.10111			

Table 9: Descriptive Statistics by Age Groups

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
I: Stress	20-30 years	28	4.5571	.86984	.16438	4.2199	4.8944
	31-40 years	56	3.4357	1.02059	.13638	3.1624	3.7090
	above 40 years	16	2.6625	.84449	.21112	2.2125	3.1125
III: Education and Training Challenges	20-30 years	28	3.8869	.56118	.10605	3.6693	4.1045
	31-40 years	56	2.8006	.68933	.09212	2.6160	2.9852
	above 40 years	16	2.5417	.49628	.12407	2.2772	2.8061
III: Work Ethics	20-30 years	28	4.4821	.80551	.15223	4.1698	4.7945
	31-40 years	56	3.1875	.90902	.12147	2.9441	3.4309
	above 40 years	16	2.6146	.40697	.10174	2.3977	2.8314
IV: Contracts, Remuneration and Conflicts	20-30 years	28	4.6643	.61114	.11549	4.4273	4.9013
	31-40 years	56	3.5250	.86092	.11505	3.2944	3.7556
	above 40 years	16	3.1375	.44253	.11063	2.9017	3.3733
V: Changes in the Physiotherapy	20-30 years	28	4.4405	.81677	.15435	4.1238	4.7572
	31-40 years	56	3.6429	.51191	.06841	3.5058	3.7799
	above 40 years	16	3.5417	.74907	.18727	3.1425	3.9408

Table 10: ANOVA test results

2.3 ANOVA test						
		Sum of Squares	df	Mean Square	F	
I: Stress	Between Groups	41.158	2	20.579	22.577	.00
	Within Groups	88.415	97	.911		
	Total	129.572	99			
III: Education and Training Challenges	Between Groups	27.211	2	13.606	34.430	.00
	Within Groups	38.332	97	.395		
	Total	65.543	99			
III: Work Ethics	Between Groups	44.847	2	22.424	33.232	.00
	Within Groups	65.451	97	.675		
	Total	110.299	99			
Iv: Contracts, Remuneration and Conflicts	Between Groups	32.141	2	16.070	28.982	.00
	Within Groups	53.787	97	.555		
	Total	85.928	99			
V: Changes in the Physiotherapy	Between Groups	13.687	2	6.843	16.253	.00
	Within Groups	40.841	97	.421		
	Total	54.528	99			

Table 11: Post hoc tests – Multiple comparisons

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
I: Stress	20-30 years	31-40 years	1.12143*	.22097	.000	.6829	1.5600
		above 40 years	1.89464*	.29920	.000	1.3008	2.4885
	31-40 years	20-30 years	-1.12143*	.22097	.000	-1.5600	-.6829
		above 40 years	.77321*	.27064	.005	.2361	1.3104
III: Education and Training Challenges	20-30 years	31-40 years	1.08631*	.14550	.000	.7975	1.3751
		above 40 years	1.34524*	.19701	.000	.9542	1.7362
	31-40 years	20-30 years	-1.08631*	.14550	.000	-1.3751	-.7975
		above 40 years	.25893	.17820	.149	-.0947	.6126
III: Work Ethics	20-30 years	31-40 years	1.29464*	.19013	.000	.9173	1.6720
		above 40 years	1.86756*	.25743	.000	1.3566	2.3785
	31-40 years	20-30 years	-1.29464*	.19013	.000	-1.6720	-.9173
		above 40 years	.57292*	.23285	.016	.1108	1.0351
Iv: Contracts, Remuneration and Conflicts	20-30 years	31-40 years	1.13929*	.17235	.000	.7972	1.4814
		above 40 years	1.52679*	.23337	.000	1.0636	1.9900
	31-40 years	20-30 years	-1.13929*	.17235	.000	-1.4814	-.7972
		above 40 years	.38750	.21109	.069	-.0315	.8065
V: Changes in the Physiotherapy	20-30 years	31-40 years	.79762*	.15019	.000	.4995	1.0957
		above 40 years	.89881*	.20335	.000	.4952	1.3024
	31-40 years	20-30 years	-.79762*	.15019	.000	-1.0957	-.4995
		above 40 years	.10119	.18394	.583	-.2639	.4663

Table 12: Descriptive statistics by Hours of Work

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
I: Stress	0≤39 hours	23	3.061	0.785	0.164	2.721	3.400
	40≤48 hours	58	3.476	1.138	0.149	3.177	3.775
	More than 48 hours	19	4.768	0.697	0.160	4.433	5.104
III: Education and Training Challenges	0≤39 hours	23	2.913	0.635	0.132	2.638	3.188
	40≤48 hours	58	2.885	0.797	0.105	2.675	3.095
	More than 48 hours	19	3.789	0.669	0.153	3.467	4.112
III: Work Ethics	0≤39 hours	23	3.094	0.683	0.142	2.799	3.390
	40≤48 hours	58	3.247	1.027	0.135	2.977	3.517
	More than 48 hours	19	4.544	0.812	0.186	4.152	4.935
IV: Contracts, Remuneration and Conflicts	0≤39 hours	23	3.400	0.706	0.147	3.095	3.705
	40≤48 hours	58	3.634	0.895	0.118	3.399	3.870
	More than 48 hours	19	4.695	0.700	0.161	4.357	5.032
V: Changes in the Physiotherapy	0≤39 hours	23	3.391	0.633	0.132	3.118	3.665
	40≤48 hours	58	3.828	0.676	0.089	3.650	4.005
	More than 48 hours	19	4.474	0.641	0.147	4.165	4.783

Table 13: ANOVA tests within and between groups

ANOVA						
		Sum of Squares	df	Mean Square	F	
I: Stress	Between Groups	33.450	2	16.725	16.878	.000
	Within Groups	96.122	97	.991		
	Total	129.572	99			
III: Education and Training Challenges	Between Groups	12.381	2	6.191	11.295	.000
	Within Groups	53.162	97	.548		
	Total	65.543	99			
III: Work Ethics	Between Groups	28.026	2	14.013	16.521	.000
	Within Groups	82.273	97	.848		
	Total	110.299	99			
IV: Contracts, Remuneration and Conflicts	Between Groups	20.447	2	10.224	15.145	.000
	Within Groups	65.481	97	.675		
	Total	85.928	99			
V: Changes in the Physiotherapy	Between Groups	12.259	2	6.130	14.066	.000
	Within Groups	42.269	97	.436		
	Total	54.528	99			

Table 14: LSD Multiple Comparisons test results by hours of work

		LSD Multiple Comparisons				95% Confidence Interval	
Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
I: Stress	0≤39 hours	40≤48 hours	-.4149925	.245	.094	-.902	.072
		More than 48 hours	-1.70755*	.309	.000	-2.320	-1.095
	40≤48 hours	0≤39 hours	.4149925	.245	.094	-.072	.902
		More than 48 hours	-1.29256*	.263	.000	-1.815	-.770
III: Education and Training Challenges	0≤39 hours	40≤48 hours	.0279860	.182	.878	-.334	.390
		More than 48 hours	-.87643*	.230	.000	-1.332	-.421
	40≤48 hours	0≤39 hours	-.0279860	.182	.878	-.390	.334
		More than 48 hours	-.90442*	.196	.000	-1.293	-.516
III: Work Ethics	0≤39 hours	40≤48 hours	-.1529235	.227	.502	-.603	.297
		More than 48 hours	-1.44966*	.286	.000	-2.016	-.883
	40≤48 hours	0≤39 hours	.1529235	.227	.502	-.297	.603
		More than 48 hours	-1.29673*	.243	.000	-1.780	-.814
Iv: Contracts, Remuneration and Conflicts	0≤39 hours	40≤48 hours	-.2344828	.202	.250	-.636	.167
		More than 48 hours	-1.29474*	.255	.000	-1.800	-.789
	40≤48 hours	0≤39 hours	.2344828	.202	.250	-.167	.636
		More than 48 hours	-1.06025*	.217	.000	-1.491	-.629
V: Changes in the Physiotherapy	0≤39 hours	40≤48 hours	-.43628*	.163	.009	-.759	-.113
		More than 48 hours	-1.08238*	.205	.000	-1.489	-.676
	40≤48 hours	0≤39 hours	.43628*	.163	.009	.113	.759
		More than 48 hours	-.64610*	.174	.000	-.992	-.300

Table 15: Descriptive Statistics by Income

N	Mean	Std.	Std. Error	95% Confidence Interval
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				Deviation	for Mean		
					Lower Bound	Upper Bound	
I: Stress	0≤15,000	54	3.9444	1.16322	.15829	3.6269	4.2619
	15,001≤35,000	36	3.1389	.91317	.15219	2.8299	3.4479
	35,001≤50,000	10	3.6600	1.27558	.40337	2.7475	4.5725
III: Education and Training Challenges	0≤15,000	54	3.4074	.77883	.10598	3.1948	3.6200
	15,001≤35,000	36	2.6435	.62887	.10481	2.4307	2.8563
	35,001≤50,000	10	2.7167	.78979	.24975	2.1517	3.2816
III: Work Ethics	0≤15,000	54	3.8148	1.13162	.15399	3.5059	4.1237
	15,001≤35,000	36	2.9259	.71430	.11905	2.6842	3.1676
	35,001≤50,000	10	3.4500	.91304	.28873	2.7969	4.1031
	Total	100	3.4583	1.05552	.10555	3.2489	3.6678
Iv: Contracts, Remuneration and Conflicts	0≤15,000	54	4.1185	.89739	.12212	3.8736	4.3635
	15,001≤35,000	36	3.2722	.77113	.12852	3.0113	3.5331
	35,001≤50,000	10	3.8000	.87939	.27809	3.1709	4.4291
V: Changes in the Physiotherapy	0≤15,000	54	4.0185	.76730	.10442	3.8091	4.2280
	15,001≤35,000	36	3.5648	.66102	.11017	3.3412	3.7885
	35,001≤50,000	10	3.9667	.61764	.19532	3.5248	4.4085

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
I: Stress	Between Groups	14.030	2	7.015	5.889	.004
	Within Groups	115.543	97	1.191		
	Total	129.572	99			
III: Education and Training Challenges	Between Groups	13.939	2	6.970	13.101	.000
	Within Groups	51.604	97	.532		
	Total	65.543	99			
III: Work Ethics	Between Groups	17.067	2	8.534	8.879	.000
	Within Groups	93.231	97	.961		
	Total	110.299	99			
Iv: Contracts, Remuneration and Conflicts	Between Groups	15.474	2	7.737	10.652	.000
	Within Groups	70.454	97	.726		
	Total	85.928	99			
V: Changes in the Physiotherapy	Between Groups	4.598	2	2.299	4.466	.014
	Within Groups	49.930	97	.515		
	Total	54.528	99			

Post Hoc Tests by income

Multiple Comparisons by Income

LSD								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
I: Stress	0≤15,000	15,001≤35,000		.80556*	.23483	.001	.3395	1.2716
		35,001≤50,000		.28444	.37573	.451	-.4613	1.0302
	15,001≤35,000	0≤15,000		-.80556*	.23483	.001	-1.2716	-.3395
		35,001≤50,000		-.52111	.39013	.185	-1.2954	.2532
III: Education and Training Challenges	0≤15,000	15,001≤35,000		.76389*	.15694	.000	.4524	1.0754
		35,001≤50,000		.69074*	.25110	.007	.1924	1.1891
	15,001≤35,000	0≤15,000		-.76389*	.15694	.000	-1.0754	-.4524
		35,001≤50,000		-.07315	.26073	.780	-.5906	.4443
III: Work Ethics	0≤15,000	15,001≤35,000		.88889*	.21094	.000	.4702	1.3076
		35,001≤50,000		.36481	.33751	.282	-.3051	1.0347
	15,001≤35,000	0≤15,000		-.88889*	.21094	.000	-1.3076	-.4702
		35,001≤50,000		-.52407	.35045	.138	-1.2196	.1715
Iv: Contracts, Remuneration and Conflicts	0≤15,000	15,001≤35,000		.84630*	.18337	.000	.4823	1.2102
		35,001≤50,000		.31852	.29340	.280	-.2638	.9008
	15,001≤35,000	0≤15,000		-.84630*	.18337	.000	-1.2102	-.4823
		35,001≤50,000		-.52778	.30464	.086	-1.1324	.0769
V: Changes in the Physiotherapy	0≤15,000	15,001≤35,000		.45370*	.15437	.004	.1473	.7601
		35,001≤50,000		.05185	.24700	.834	-.4384	.5421
	15,001≤35,000	0≤15,000		-.45370*	.15437	.004	-.7601	-.1473
		35,001≤50,000		-.40185	.25646	.120	-.9109	.1072

*. The mean difference is significant at the 0.05 level.

Table 16: Descriptive Statistics by taking Course Groups including t-test Results

Taken Additional Courses		N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
I: STRESS	Yes	41	3.371	1.108	0.173	-1.884	98	.063
	No	59	3.803	1.144	0.149			
II: EDUCATION AND TRAINING CHALLENGES	Yes	41	2.882	0.803	0.125	-1.880	98	.063
	No	59	3.189	0.804	0.105			
III: WORK ETHICS	Yes	41	3.000	0.412	0.064	1.978	98	.051
	No	59	2.828	0.440	0.057			
IV: CONTRACTS, REMUNERATION AND CONFLICTS	Yes	41	2.878	0.523	0.082	0.500	98	.618
	No	59	2.831	0.425	0.055			
V: CHANGES IN THE PHYSIOTHERAPY	Yes	41	2.789	0.536	0.084	-1.542	98	.126
	No	59	2.949	0.494	0.064			

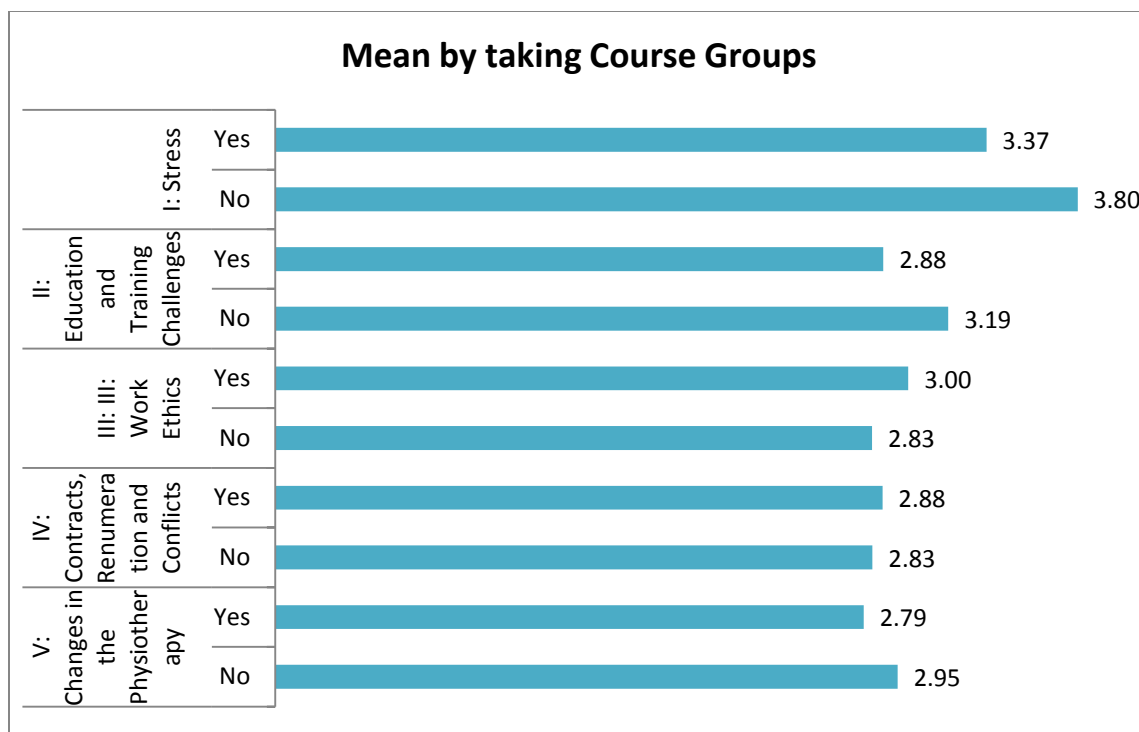


Figure 5: Descriptive Statistics by taking Course Groups including t-test Results

Table 17: Descriptive Statistics by Educational Level Groups

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
I: Stress	College	10	3.520	0.948	0.300	2.842	4.198
	University degree	70	3.754	1.159	0.139	3.478	4.031
	Postgraduate	18	3.256	1.178	0.278	2.670	3.841
III: Education and Training Challenges	College	10	2.933	0.779	0.246	2.376	3.490
	University degree	70	3.198	0.828	0.099	3.000	3.395
	Postgraduate	18	2.676	0.678	0.160	2.339	3.013
III: Work Ethics	College	10	3.417	0.907	0.287	2.768	4.065
	University degree	70	3.598	1.085	0.130	3.339	3.856
	Postgraduate	18	3.019	0.953	0.225	2.545	3.492
IV: Contracts, Remuneration and Conflicts	College	10	3.960	0.853	0.270	3.350	4.570
	University degree	70	3.843	0.970	0.116	3.612	4.074
	Postgraduate	18	3.533	0.823	0.194	3.124	3.943
V: Changes in the Physiotherapy	College	10	3.700	0.597	0.189	3.273	4.127
	University degree	70	3.910	0.786	0.094	3.722	4.097
	Postgraduate	18	3.759	0.569	0.134	3.476	4.042

ANOVA Test

		Sum of Squares	df	Mean Square	F	Sig.
I: Stress	Between Groups	3.718	2	1.859	1.421	.247
	Within Groups	124.334	95	1.309		
	Total	128.053	97			
II: Education and Training Challenges	Between Groups	4.120	2	2.060	3.232	.044
	Within Groups	60.554	95	.637		
	Total	64.673	97			
III: Work Ethics	Between Groups	4.837	2	2.418	2.207	.116
	Within Groups	104.091	95	1.096		
	Total	108.927	97			
Iv: Contracts, Remuneration and Conflicts	Between Groups	1.664	2	.832	.953	.389
	Within Groups	82.935	95	.873		
	Total	84.600	97			
V: Changes in the Physiotherapy	Between Groups	.610	2	.305	.564	.571
	Within Groups	51.373	95	.541		
	Total	51.983	97			

Table 18: Descriptive Statistics by Experience

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
I: Stress	Inexperienced	16	4.5000	1.07331	.26833	3.9281	5.0719
	Just experienced	32	3.9313	1.03564	.18308	3.5579	4.3046
	Very experienced	52	3.1692	1.01933	.14136	2.8854	3.4530
III: Education and Training Challenges	Inexperienced	16	4.0833	.47532	.11883	3.8301	4.3366
	Just experienced	32	3.1875	.69529	.12291	2.9368	3.4382
	Very experienced	52	2.6731	.65841	.09131	2.4898	2.8564
III: Work Ethics	Inexperienced	16	4.5208	.79553	.19888	4.0969	4.9447
	Just experienced	32	3.6615	1.01819	.17999	3.2944	4.0286
	Very experienced	52	3.0064	.87071	.12075	2.7640	3.2488
Iv: Contracts, Remuneration and Conflicts	Inexperienced	16	4.5750	.84814	.21203	4.1231	5.0269
	Just experienced	32	3.9063	.89872	.15887	3.5822	4.2303
	Very experienced	52	3.4615	.81893	.11357	3.2335	3.6895
V: Changes in the Physiotherapy	Inexperienced	16	4.6458	.70415	.17604	4.2706	5.0211
	Just experienced	32	3.9896	.73071	.12917	3.7261	4.2530
	Very experienced	52	3.5192	.52565	.07289	3.3729	3.6656

7.3 ANOVA Test

		Sum of Squares	df	Mean Square	F	Sig.
I: Stress	Between Groups	26.053	2	13.026	12.206	.000
	Within Groups	103.520	97	1.067		
	Total	129.572	99			
III: Education and Training Challenges	Between Groups	25.059	2	12.530	30.021	.000
	Within Groups	40.484	97	.417		
	Total	65.543	99			
III: Work Ethics	Between Groups	30.003	2	15.002	18.122	.000
	Within Groups	80.296	97	.828		
	Total	110.299	99			
Iv: Contracts, Remuneration and Conflicts	Between Groups	15.896	2	7.948	11.008	.000
	Within Groups	70.032	97	.722		
	Total	85.928	99			
V: Changes in the Physiotherapy	Between Groups	16.446	2	8.223	20.946	.000
	Within Groups	38.081	97	.393		
	Total	54.528	99			

Table 19: Descriptive Statistics by years of work at Qatar

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
I: Stress	Less than 1 year	3	3.467	1.501	0.867	-0.262	7.196
	1-5 years	13	3.062	1.274	0.353	2.292	3.831
	5-10 years	19	3.853	0.979	0.225	3.381	4.325
	10-15 years	14	4.557	1.050	0.281	3.951	5.163
	over 15 years	51	3.439	1.048	0.147	3.145	3.734
III: Education and Training Challenges	Less than 1 year	3	3.500	0.928	0.536	1.195	5.805
	1-5 years	13	2.923	0.784	0.217	2.450	3.397
	5-10 years	19	3.351	0.791	0.182	2.969	3.732
	10-15 years	14	3.738	0.619	0.165	3.381	4.096
	over 15 years	51	2.781	0.740	0.104	2.573	2.989
III: Work Ethics	Less than 1 year	3	3.333	1.590	0.918	-0.616	7.283
	1-5 years	13	3.179	1.170	0.324	2.473	3.886
	5-10 years	19	3.596	1.031	0.236	3.100	4.093
	10-15 years	14	4.500	0.901	0.241	3.980	5.020
	over 15 years	51	3.199	0.884	0.124	2.951	3.448
Iv: Contracts, Remuneration	Less than 1 year	3	3.733	1.137	0.657	0.908	6.558

and Conflicts	1-5 years	13	3.477	1.012	0.281	2.866	4.088
	5-10 years	19	4.063	0.808	0.185	3.674	4.453
	10-15 years	14	4.771	0.483	0.129	4.493	5.050
	over 15 years	51	3.486	0.841	0.118	3.250	3.723
V: Changes in the Physiotherapy	Less than 1 year	3	3.889	0.694	0.401	2.165	5.613
	1-5 years	13	3.487	0.968	0.269	2.902	4.072
	5-10 years	19	3.895	0.903	0.207	3.459	4.330
	10-15 years	14	4.452	0.549	0.147	4.136	4.769
	over 15 years	51	3.758	0.574	0.080	3.597	3.920

ANOVA Test

		Sum of Squares	df	Mean Square	F	Sig.
I: Stress	Between Groups	19.112	4	4.778	4.109	.004
	Within Groups	110.461	95	1.163		
	Total	129.572	99			
III: Education and Training Challenges	Between Groups	12.837	4	3.209	5.784	.000
	Within Groups	52.706	95	.555		
	Total	65.543	99			
III: Work Ethics	Between Groups	20.032	4	5.008	5.271	.001
	Within Groups	90.266	95	.950		
	Total	110.299	99			
Iv: Contracts, Remuneration and Conflicts	Between Groups	20.885	4	5.221	7.626	.000
	Within Groups	65.043	95	.685		
	Total	85.928	99			
V: Changes in the Physiotherapy	Between Groups	7.264	4	1.816	3.650	.008
	Within Groups	47.264	95	.498		
	Total	54.528	99			

Appendix F: Research Hypothesis Development

Hypotheses

H1: *Stress and work burnout negatively impacts physiotherapists' performance and intention to leave.*

This hypothesis is based on the findings of the literature review that work burnout and emotional stress that comes from working in a traumatic environment is one of the major leading challenges that physiotherapists face in their workplace (Bragard, 2015; Khan, Yusoff & Khan, 2014; Gandi *et al.* 2011). According to Gandi *et al.* (2011), health practitioners' connection and empathy towards their patients is one of the professional requirements and core values in their career. However, in most times, it could be a cause of stress especially where the patient demonstrates high levels of suffering or the physiotherapist is exposed to traumatic situation. Khan *et al.* (2014) further adds that the long-working hours that physiotherapists put in and the job demands as another major challenge that causes work-related stress. Further, studies show that in Qatar, there are deficiencies in the number of professional physiotherapists, a situation that has forced the country to outsource more practitioners from other countries to meet the current labor shortage in the physical therapy field (National Health Strategy, 2016; Oxford Business Group, 2014).

H2: *Lack of enough education and training has a negative effect on physiotherapists' performance and intention to leave.*

This hypothesis is based on the findings of the literature review that shows that the lack of educational and practical clinical experience to handle the highly-technological and ever changing health demands is a major challenge that physiotherapists face at their workplace (Eng & Tang, 2007; Jack *et al.*, 2010). Further, the literature showed that unlike most developed countries such as Australia, the UK, and the U.S. where a licensed physiotherapist must hold a four-years Bachelor's Degree as well as a 2-years Master's degree in Physiotherapy, the minimum requirement in most healthcare organizations in Qatar is a 4-years Bachelor's degree in Physiotherapy which is attributed to the shortage of healthcare personnel in the country (National Health Strategy, 2016).

The literature also showed that most physiotherapists in Qatar lack practical experience and mentorship programs that are critical in enhancing the knowledge capacities for fresh physiotherapy graduates to handle clinical roles. Further, technological changes pose major challenges among physiotherapists in Qatar as they are faced with new systems and equipment that they are not trained to use (Nicholls & Larmer, 2005). Expounding on this point, Jack *et al.* (2010) argued that undertrained and unskilled employees spend more than expected time on a task especially when they are not sure how to undertake it, and in some cases, could cause injury and errors since they lack the expertise needed to handle most situations professionally. This causes inefficiency in the workplace and discontent amongst the personnel, who may opt for other easier careers whose tasks are easier to undertake (Eng & Tang, 2007).

H3: Complicated work ethics in physiotherapy field in Qatar reduces the performance of the physiotherapists and influences their intention to leave.

This hypothesis is derived from Richardson (2015) study that found that physiotherapists may be forced to compromise what is best for their patients when trying to achieve the best practice standards because of some rules and regulations that may limit their practice (Richardson, 2015). Further, the study noted that the diversity of their operation and service delivery settings such as home health, community-based care, hospitals, sports, and private office also pose a challenge to physiotherapists since each of these care setting has priorities, expected behaviors and rules that often vary (Richardson, 2015). Physiotherapists also face challenges with the ever-changing rules and regulations as they have to stay in touch with the current publications by the various bodies that govern their professional careers.

H4: Poor employment contracts, remunerations and conflicts at the workplace have a negative effect on physiotherapists' performance and intention to leave.

This hypothesis is based on the literature findings that Qatar has rigid work contracts and immobile labor market where workers find it difficult to move from one job to another (Oxford Business Group, 2014). While the low pay may lead to negative employee performance since it demotivates staff (Kube *et al.*, 2013), the rigid work contracts reduce employees' turnover as many employees choose to stay because of the impeding difficulties that they face when

changing jobs (Campbell *et al.*, 2012). Further, the literature established that labor unions play a major role in ensuring the fair treatment of the employees as well as ensuring that employees get fair compensation for their work among other issues (Gleeson, 2010). Therefore, membership in a labor union was perceived as a positive indicator for articulating the rights of employees. Also, the findings show that poor management of employer-employee conflict could lead to poor communication, low motivation and lack of cooperation and teamwork, which are indicators of poor performance and inefficiency (Gilboa *et al.*, 2008; Lerner & Henke, 2008; Kelly *et al.*, 2011). Moreover, conflicts at a work place tend to consume employees time and energy instead of concentrating on more productive activities, which could also have a negative effect on the employee performance (Beauregard & Henry, 2009). This was supported by Bouckennooghe, Raja & Butt (2013) who found that in organizations where conflicts escalate to high levels to an extent that they cannot be resolved amicably, employees may be forced to leave the organization, leading to high employee turnover.

H5: Changes in the physiotherapy negatively influences physiotherapists' performance and intention to leave.

This hypothesis is based on the statistics released by the World Bank (2016) showing that the demographical changes in Qatar pose a major threat to physiotherapists since the aged population require more physical therapy, which would cause a supply deficit causing physiotherapists. Further, the prevalence of obesity and diabetes in Qatar show that one in every five persons (20%) is at a high risk of developing diabetes while 12.5% of the Qataris have been diagnosed as pre-diabetic, implying that they have signs of diabetes (Christos, 2014). Further, Love *et al.* (2015) study found that physiotherapists have a challenge dealing with diabetic population because the traditional role of physiotherapists has been focused on other injuries and illnesses, as obesity and overweight issues were regarded the mandate of dieticians since obesity was attributed to eating problems. However, given that the lack of physical activity has been attributed to these issues, the role of physiotherapists in preventing and managing obesity and weight-related diseases has been redefined (Love *et al.* 2015).