Researching the Workplace Factor influencing Nursing Work Culture at Sultan Bin Abdulaziz Humanitarian City (SBAHC) nursing rehabilitation units

Ahmad Al Baker

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DECLARATION

I hereby certify that this dissertation constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

I declare that the dissertation describes original work that has not previously been presented for the award of any other degree of any institution.

Signed,

Ahmad Al Baker

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ABSTRACT

Nurses are forming the majority of the professional population in the healthcare industry. The specialized passionate and humanitarian care that nurses excel to patients and families requires ongoing support and organization care and attention. The unit work culture is the norms, habits, and behavior that the team is practicing, influenced by how the organization system, strategy, and culture are being outlined. Nurses need to work in a positive culture that enhances their best of performance and productivity to provide a high quality and safe care. Besides, this will limit the negative impact on nurses that results in a stressful job and burnout, as well as increase the turnover.

Research Aim: This study aims to research the influential work factors that shape the nursing work culture in SBAHC nursing units. These factors are leadership, satisfaction, teamwork, nurse behavior in practice, and professional commitments. The factors are interrelated and in overall are shaping the nursing work culture.

Methodology/ Design: The study followed a quantitative, positivists approach that was conducted in a single phase utilizing an analytical survey design. Electronic survey was distributed to (439) nurses at SBAHC nursing units. (322) nurses with a percentage of (73%) out of the total nursing staff have participated in the survey.

Findings and Conclusion: The findings showed that the nurse's responses in agreement percentage above (80%) that all workplace factors are facilitating the work norms, habits, behavior which reflect in the overall work culture. The findings also showed a significant contribution prediction of nurse's work factors of the overall nursing work culture, where *Beta coefficient* ranges (0.128- 0.175), $P<0.01$. Nurses at SBAHC have reflected a comfortable and pleasant working culture within their unit. Nurses have viewed that the leadership strategies and approaches are supportive. Nurses had perceived an excellent level of job satisfaction and low job stress which did not affect the work practices. There were good communication and teamwork within the nurses' team, nurses as well have good work behavioral control and management, also there was an excellent level of professional commitments and loyalty. The overall conclusion that the work factors verified that nurses are having the appropriate work culture that assists them to perform work tasks, engage themselves in practice, and the ability to innovate. The work factors have significantly valued the nursing work culture at nurses' units. This indicates that the system and strategies, work practices are helpful to facilitate and support the nurses' work practices. However, there is a need for ongoing improvement in enhancing the work culture of nurses by focusing on the strategies that serve nurses' performance and productivity at work, in which to decrease the stress, workload, intention to leave.

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Chapter 1: Introduction

1.1 Research Background

In the Healthcare industry, there is a variety of complex work settings that are regulated by strategies, systems, policies, and work norms which is creating multi-focus areas of intentions and implementation solutions to facilitate the vital domain of healthier work culture (Moyano, et al. 2019). Organizations' productive and high standards performance is strongly linked and indicated how the employees are having a comfortable work culture, increased level of satisfaction and happiness, health promotion activities, and wellbeing programs.

The hospital system is divided into micro-units that include nursing. Where nursing is considered the highest number of health professionals in most healthcare organizations. The nursing units are considered a smaller scale of organization that has its own system of work norms that has a unique type of quality of care (Ma, Olds, and Dunton, 2015). Nursing has multi-aspect of work practices and a variety of specialties within their work environment that is aligned with organizational characteristics (Lake, 2002). Lake (2002, p.178) defined the nursing practice environment as “the organizational characteristics of a work setting that facilitate or constrain professional nursing practice”.

The influential effect on nursing workplace cultures such as limited development opportunities, fairness payment, and rewarding, work stress factors, workload, and the staffing numbers, is thoroughly linked to the

organizational outcome, as there is a relationship to the cost control, bed occupancy, and length of stay (Hahtela, et al. 2015). Nurses are among those affected by reducing pay, minimal rest days, and unfair work status (Phua & Hue,2015 cited in Barrientos, et al. 2018). Clinical nursing units are challenged mostly with the nurse's shortage and recruitment issues (Duffield.et al. 2011).

Nurses have a behavioral reaction to the work culture. Nurses are affected by the pressure and stress generated by the system and strategies of the workplace that leads to affect their cognitive status to perform work tasks safely and effectively (Barbe, Kimble, and Rubenstein, 2018). Nursing Rehabilitation services culture is being triggered by multiple influential practice factors that reflect on nurses' work norms and routines such as the hospital setting, system of work, workflow, the leadership, multinational nurses' diversity, and nurses' specialized rehabilitation role. Also, the difference in patients' scope, patient's injury, patient's length of stay.

In Saudi Arabia, the hospital operation system is divided based on ownership, governmental (public), other governmental (military, security forces, etc) and private. Each owner has their own system of work policies and work practices which has a direct and indirect impact on nursing units (Ambani, Kutney, and Lake, 2020).

The nursing profession has always been one of the main cornerstones of every healthcare system. The nursing practice framework is extended from the nursing profession code of practice that is gained from nurses learning, in

which nurses at all levels learned principles of being professionally loyal, team worker, having positive behaviors in practice, and more. Taken into consideration that these principles have a specific framework that produces its overall image. As well nursing units' practice is part of the organization's bigger framework practices such as the strategies, policies of the administration, human capital, financial, and quality that are interfering and habituating the practice routines within nursing units. Both practices' origins are considered factors that would formulate the work norms and routines that influence the work culture. Hence, the focus of the study is outlining how is the nursing practice framework looks like, describing how are work practice factors are influencing the nursing work culture, and it's an explanation of the relationship within these factors that shape the norms, attitudes, and behavior within the work culture. Overall, it explains the nurses' perception of the work culture.

SBAHC and nursing work practice system

Sultan Bin Abdulaziz Humanitarian City (SBAHC) is a private center that provides services in rehabilitation, other surgical and medical. SBAHC provides a specialized comprehensive service to patients in inpatients and outpatients setting. Different programs for pediatric and adult distributed in 20 inpatients units, besides, outpatients that include ER, ICU, OR, and ambulatory clinics. Frontline staff nurses and nurse assistants are the direct providers in collaboration with the interdisciplinary team.

The strategies and system at SBAHC work practices are providing strong support to healthcare workers which are creating safe and high standards of care to staff and patients with their families. There have been strategies that are directed to improve people's experience and human capital management. Many rewarding and recognition systems implemented in place. Nursing services are in alignment with these organizational strategies. Nursing strategies are targeting the importance of outlining the nursing work culture, that enables nurses to work toward the hospital strategies of optimal care provision and safe practices for staff and patients (Hughes, 2008).

There are many different specialties within healthcare organizations that give them a unique label related to the distinguished scope of services. The rehabilitation services and its related scopes are among the rare specialties that are provided in a special comprehensive framework targeting a special population. SBAHC practice model is providing comprehensive rehabilitation services within the region. This is a leading model of unique work experience for the nurses working in rehabilitation specialties.

In Rehabilitation nursing, which is quite varying from acute care workplace. Nurses are providing patient care 24/7 (Ma, Olds, and Dunton, 2015), the average patients stay is ranging from 3 to 12 weeks as inpatients or outpatients. The longer stay of patients need a structured system and support by the organization leadership to decrease the stressful demand of patients that meet their patient’s expectations. However, misunderstanding of system rules such as unstructured implementation and monitoring due to the

multidisciplinary work conflicts with limited leadership support expectations, would truly reflect negatively with time on the degree of nurse’s attachment, behavior changes, and feeling uncomfortable in wok environment.

At SBAHC, the Nursing profession is dealing with challenges in work practice. Nurses are performing duties in a multidisciplinary and multinationalism framework. Physicians, rehabilitation therapists, psychologists, and administrative from different countries, which has an impact on teamwork, collaboration, cultural differences, and communication strategies that could be insensible, and hence, leads to frustration, dissatisfaction within the work culture.

One of the main issues that the turnover rate in nursing rehabilitation is ranged between 10-20 % within the last two years, besides there is a shortage of nurse’s manpower that is experienced in the rehabilitation field. There were many factors identified during the exit interviews including dissatisfaction, workload, leadership changes, and limited professional development opportunities.

Another key area that has a direct impact on nurses is the frequent changes in nursing leadership over the past years. The changes are including the frontline leaders as well. This is reflecting on the stability of nurses' work practices and is creating chaos and conflict with changes in leadership strategies. Although there are general main strategies that are maintained, but the leadership style and direction of work outlines will be different.

On the other side, despite the challenges mentioned above, there are multiple strengths and areas for promotions. The organization has been accredited with 8 international accreditation which has high standards of safety and quality care. There is an ongoing implementation for Magnet accreditation, which is a well-known nursing-specific accreditation that is aimed to empower and improve nursing work standards. Nurses are specialized in rehabilitation care practice, in which it is a major and unique factor for nurse's experience. Besides, there are human capital strategies that are directed to enhance people's experience. For example, SBAHC was awarded in 2016 as the best healthcare working environment within Saudi Arabia. The hospital awarded for the best "Just culture" strategies implementation in 2019. Hence, there is a percentage of nurses who are attached, and having a longer working stay within the organization varies from 5-18 years.

1.2 Significance of the Research

The importance value for the study is referred to the fact that rehabilitation services are considered the biggest and a rare comprehensive service within the country and the region. Which can be a leading model for developing other services within the country that is considered fragmented. Rehabilitation nurses are providing multi-diverse service in terms of the unique deliverable outcome for patients with a long stay. As a leading example, this study is delivering identification of the successful alignment strategies and system work factors that leads to an effective and sensible work culture for rehabilitation nurses' front-liners that shape their work culture to achieve the

safe care and the appropriate respectful environment, (Kennerly et al. 2015). Therefore, it is a guide for hospital care systems, policies, scholars, and leadership within the region to consider in building nursing capacities, creating an innovative mode, and effective and efficient nursing practice.

1.3 The research problem and research objectives

This research aims to study the relationship between the influences of work factor dimensions within the workplace culture of nurses at SBAHC nursing rehabilitation units. These relationships would provide a helpful assessment for the key driving forces of the system, norms, behaviors that determine the description and nature of work culture. Besides, healthcare leaders are guided to the concepts of understanding and implementation strategies for the best of work culture setting for nurses (Kennerly et al. 2015). The objectives of the study defined as follow:

- To explore how the work behaviors, attitudes, and norms of practices within the workplace affect nursing work culture in terms of teamwork, professional commitment and loyalty, nurse's behavior in practice, satisfaction, and leadership.

This objective is achieved by the literature review.

- To determine the relationship of the factor domains of teamwork, professional commitment, nurse's behavior in practice, satisfaction, and leadership in relation to the overall nursing work culture.

- To clarify how the front-line nurses perceived the effect of the strategies and workplace practices in relation to the work culture at rehabilitation nursing units.

The above two objectives achieved by the primary survey research.

- To provide leading baseline guidance for academic scholars, policymakers, and nursing decision-makers of the factors influencing nurse's work culture in rehabilitation services.

This objective achieved by studying the findings from the other objectives.

1.4 Research Focus and scope, and research methodology

This research is in the management domain that is targeting organizational focus in healthcare settings in Saudi Arabia. Specifically, it is focusing on the work practice factors that front-line nurses are dealing with on daily basis, in which the norms, behaviors, and attitudes of work practices shaping the workplace culture in the rehabilitation nursing unit at SBAHC. The study is researching domains factors including professional commitment, leadership, teamwork, job satisfaction, and nurse behavior in practice. These domains have an interlinked relationship and collectively are shaping the nurse work culture.

The study had been submitted to SBAHC management and the IRB committee. The committee had reviewed and approved the study. Due to the sensitive information and data within the study, there had been a strict

confidential protocol followed by the researcher, where all information is used for the research purposes. The management was supportive and encouraging for the benefits to the hospital and staff.

The research methodology is adopting a positivist approach. The researcher did not interfere with the collection of data and present a conclusion of the real facts. The research method is an analytical survey (Collis & Hussey, 2013.p 63), that is targeting nurses' participants. The participants included are the nurses and nurse aide working at SBAHC nursing.

The study participants did not involve the nurse leaders, nurse trainees, and the nurses who are recently joined the hospital, less than 3 months. As well, it is limited to the SBAHC nursing units, as the rehabilitation services provided in a comprehensive framework, which cannot be found within the region.

The anonymous study survey questionnaire is focusing on the work practice factors of (Leadership, Satisfaction, behaviors in practice, teamwork, and professional commitment and loyalty) in relation to the work culture. It also covers the relationships of the nurse's demographics factors that are associated with the work culture, such as age, gender, education, experience, and unit services scope.

The electronic survey questionnaire which includes the electronic consent and the participants' information sheet was distributed through email to all

participants requesting their voluntary participation. It includes a brief description of the study's purpose and objectives.

1.5 Structure of the study

Chapter 1 presented the introduction and the research aim and objectives of the study, besides, the significance of the study.

Chapter 2 examines the supportive related literature to the nurse work culture and relationship with domain factors of work practices.

Chapter 3 discusses the methodology utilized in the research study and the methods to collect data and analyze them.

Chapter 4 presenting the results and discussion of the major research findings.

Chapter 5, the last study chapter where the researcher presents conclusions, recommendations, limitations of the research.

Chapter 2: Literature review

The study is assessing the characteristics of the cultural framework and the workplace practices that nurses placed in, which is originated and aligned with a bigger organizational framework scale. Leaders are able to identify strength areas for promotion, improvement areas, key aspects, and missing strategies. It’s an overall all capturing of the nurses' work cultural description and standing on the points of strategies and structural reforms. The study framework model as shown in Figure 2.1 presenting the links of the workplace culture, framework design/ Hospital strategies, the nursing work culture, and the work factor.

2.1 Workplace culture

Organizations are characterized by a cultural personality, where there are beliefs, values, uniqueness, and behavior that label them and distinguish their work practices from others. The work culture is an indication of the satisfaction and performance of employees (Ritonga, Ibrahim, and Bahri, 2019). The organizational culture will be reflected in how the employees perceive, think, and feel of these shared values and activities of the workplace, and this can be achieved by the presence of employees capacity building, integration, and development (Hartnell, et al. 2019).

The workplace culture is enriching the values of the organization through the focus on the frontline workers and frontline leaders, where direct care is experienced. A recent study by (Manley, Jackson, and McKenzie, 2019) emphasized how the organization corporate and leaders are required to have

cultural strategies that enable cultural norms of safety with more focus on front line team in a person-centered framework, they have indicated the need of organization enablers who play a role of a facilitator to promote engagement, innovation, and change within frontline employee to solidify the organization cultural values.

Organization culture that has a culture of error management within their policies and work norms would impact positively to limit the errors and adverse events, that would ensure a learning opportunity from each incident and as well reflect high performance (van Dyck et al. 2005 cited inTrinchero, Farr-Wharton, and Brunetto, 2019b).

Shaping a positive work culture is indicated by the organizational learning tactic. Where there are opportunities for employees to build knowledge and skills through training, learning from improvements, promoting the strength areas. There are opportunities for organizations to improve performance, quality of services, competitive advantages, and maintain adaptability of the environment (Hosseini, et al. 2020).

There is a strong connection between how organization strategies are directed to have a positive working culture to the high standards of performance and productivity levels of nurse's employees (Hanan, 2009). The positive culture is the approach for maintaining the highest quality of care and evidence of successful achievements. This means that the sustainability of positive work practices will become a cultural norm of the workplace. Evidence

of this, it’s believed that organizations that demonstrate institutional and decentralized decision-making processes will be reflecting the perception of staff ownership (Schirle, McCabe, and Mitrani, 2019).

The workplace culture could be toxic and have a negative implication on the organization and the workers. The negative impact is a result of misbehavior or bad attitudes norms that did not address well within practices and strategies. Workplace incivility as an example, which has a negative outcome on people's experience that leads to unwanted behavior and affects interpersonal relationships (Miner, et al. 2019). Miner, et al. (2019) indicated that organizational structure as well could motivate these types of bad behaviors. As an example, precipitating structure (example, downsizing, and change on hierarchy structures) these changes could trigger situations that leads to negative personal interaction. Another type is the competition to achieve a higher level of position, salary, or rewards, which is a trigger for finding opportunities to focus on achieving the motive without consideration of peoples around.

2.2 Workplace framework design

In the workplace setting, there are work factors that facilitate the work task and outcome to be completed, and it’s a reflection of the overall culture. This includes the resources, the physical environment, safety aspects, professional and personal development, and workers' wellbeing and health programs.

The promotion of the organizational framework is fulfilled by the availability of safe environmental facilities, healthy lifestyle, and wellness programs such as sports centers and psychological support, health checkup, health promotion, and more. These programs are strengthening the staff attachment to the workplace as it is part of the human capital management aspects and it's much appreciated by the employees as per the focus group study by (Seward, et al. 2019). Although of the benefits to the workplace and how much help to the promotion of performance, organizations tend to have limited financial support for improving the work environment due to the lack of knowledge or evidence related decisions (Roskams and Haynes, 2019).

The organizations that introduce a happier and comfortable work setting for employees would be significantly reflecting on job satisfaction, which reflects on the personal attachment, behaviors, and values of the organization (McCarthy and Ford, 2020). It’s believed that engaging employees with interactive roles are improving their attachment to the organization (Guo, Qiu, and Gan, 2020).

The work environment is a key indicator of cost-saving and reducing turnover within the hospitals (Smith, 2018). Also, Smith (2018) recommended that there should be an ongoing data collection method to capture the work-related issues of nurses for mangers and leader’s improvement strategies. The continuous improvement of work environment programs and minimizing the barriers and behavior distraction is a helpful guide to enhancing productivity (Roskams and Haynes, 2019).

Communication in the workplace has an integral part in achieving efficient and productive outcomes. Leaders with their presence and communication with workers are enhancer for better interaction and building the relationship (Newnam, and Goode, 2019). Multi-mode of communication in different work-related issues within workers will keep the cycle of information running and limit the missing tasks.

Teamwork and collaboration between the team is a motivator for creativity and innovation. There must be a level of participatory approach where workers share experiences and practices strengths that create a dynamic change facilitator within the team which results in interactive activities to solve work issues and promoting work performance and work environment improvement (Yoshikawa and Kogi, 2019). These participatory approaches are guided with awareness, training, and ongoing evaluation.

2.3 Healthcare system work culture strategies

In healthcare, the culture of health and safety is the main concern to decrease the incident error level that may harm patients (Trinchero, Farr-Wharton, and Brunetto, 2019a). The way that system, strategies, and policies are formulated is linked to how the work culture shaped. safety climate is defined as “moral perceptions that workers share regarding their working environment” (Zohar,1980 cited in Trinchero, Farr-Wharton, and Brunetto, 2019a, pp.143). The safety climate is part of the safety culture. Ethical climate and ethical competencies are a key assistant to nurse’s work culture (Poikkeus, et

al. 2020). However, the nurse work strategies have a bigger impact than the safety climate on the patients' outcomes (Olds, et al. 2017).

Positive healthcare culture is distinguished through connections and relationships between staff, supervisors, and leaders. Trinchero, Farr-Wharton, and Brunetto (2019b) highlighted that psychological capitals and relationships produce an effective workplace culture that enhances safety and best care. Also, the healthcare work culture is promoted by ensuring the high quality of care standards, structured system, and effective leadership models and strategies (Vazquez, 2019).

Patients' health and safety are significantly linked to the nursing work setting design, where nurses must be well equipped with the support of resources, technology, and development since they have a bigger responsibility within the complexity of the health care system (Lin and Liang, 2007). if nurses are unhappy, dissatisfied, and uncomfortable to do their work tasks effectively and efficiently, then there is an impact on patient safety and nurses' safety as well (Lin and Liang, 2007).

Although of the differences in the healthcare system between hospitals, nurses have developed a sense of adaptation of the work challenges. It became normal in their work task and routines. This was found in the study of (Urban, 2014), where the institutional ideological framework of the hospital drives nurse's adaptation to consider challenges of staffing, workload, limited patient services, cost reductions, and more as part of normal nurses' work. nurses

were shaped to follow the ideological framework. They have employed their altruistic approaches, knowledge, and experience to resolve issues and overcome barriers.

2.4 Nurse work culture

A healthy and respectful work environment directs people with the appropriate and supportive work culture. The positive nursing culture is where the norms, attitudes, and beliefs formulate a pattern that nurses follow and adapt to produce a care outcome (Kennerly et al. 2012). The healthy work culture is an indicator of organization financial achievement, higher nurses' performance, and higher quality patient care (Wei, et al. 2018).

Implementing high standards of positive work culture is extended from the organization's learning strategies, research and development, and staff development (Ammouri, et al. 2015). Nurturing staff with a culture that assists them to build their capacity is an opportunity for nursing unit capabilities building. On the other side, building a shared agreeable value among the nursing team is keeping the unity and strategies work culture in the same direction. Congruence value is where the nurses' personal and professional values meet the organizational culture description (Shao, et al. 2018). When nurses have resilience and adaptation to synergize with the workplace, then it's an indicator of belongings that prevent nurse's intention to leave.

There is diversity within the nursing profession. where nurses are working among a multi-workforce, multidisciplinary, and multicultural employee within

the work setting, and this is named as enculturation (Gustafson, 2005). They have diversity in the cultural background where the education and work norms are different. It's crucial to get the teamwork and closing gap variances in a unified work culture through training and education. Cultural competencies are essential since it is covering the organization's cultural view and multicultural differences include languages and gestures, expressions, etc, in which these gap variances decrease. Nurses are able to gain additional knowledge and skills in cultural diversity to use them competently within the team (Jongen, McCalman, and Bainbridge, 2018). Nurses' cross-cultural communication skills would enable nurses to identify and deal with patients' cultural aspects of rights, dignity, respect (Miller, et al. 2008).

This would be related to how the health care system strategies policies to serve such a critical area. Nurses face challenges of manpower shortage, high workload, availability of resources, and recognition system that limit the value of their essential role. Peter, Macfarlane, and O'Brien-Pallas (2004) have found through interviewing focused nurses' groups that nurses are facing unfair treatment of the system which can be described as limited power decision ability, exploitation, and limited role capacity. They have added that the hospitals' strategies were shifting more on medical and business value. Besides, nurses are overburdened by performing other providers' task roles if they are unavailable. These challenges in the health care system impacting on additional organization costs, in terms of staff leaving and replacing with others (Kennerly, et al. 2012).

The nursing shortage is a global healthcare industry challenge. Saudi Arabia as well, suffering the same challenge. The study that was conducted by (Ambani, Kutney, and Lake, 2020) showed that the turnover rate which has a negative impact of the work practice environment is increasing and it leads to a shortage of resources. The shortage as a challenge is reflecting back on the remaining nurses' stress and increase workload. Hence, satisfactory resources' availability is a key domain in the hospital strategy that maintains a safe working culture. in the study of (Albashayreh, et al. 2019) conducted in Oman, they have concluded that the availability of adequate nurses' manpower will be positively impacting the working environment. Which is a success indicator, saving cost, and better nurses retention strategy for hospitals. Olds, et al (2017, p.156) as well emphasized that "A professional nurse work environment is characterized as having adequate staffing, managerial support for nurses, and good nurse-physician relations".

One of the main contributing measures to research the nursing perceptions of how the work culture serves to facilitate their role. Studies have shown that viewing nursing perception is an indicator to outline the work culture through studying the variable of work contexts (Choi, et al. 2013). There are many tools utilized in previous studies that can help finding the framework component of environment and work culture (Choi, et al. 2013). Such as the PES-NWI by (Lake, 2002), NCAT by (Yap et al. 2014), PNWE by (Choi, et al. 2004), and more. Each scale is studying the related factors that affect or promote the nurses' work culture.

In a study conducted by (Aboshaiqah, 2015) about the nursing work environment in Saudi Arabia, the author concluded that nurses must be given satisfying opportunities in designing the work environment and being supported by the hospital administration.

The nursing work culture has a big and valued impact on care quality and improvement strategies for hospitals (Ma, Olds, and Dunton, 2015). The nursing team is involved with all care aspect, the more suitable and comfortable work environment is, the best quality of care for patients. The nursing working culture must be extended from the fairness and justice of the organization to have similar opportunities like others as part of the overall culture, nurses must have a respect and dignity to their work rights, in which nurses are gaining more empowerment (Kuokkanen, et al. 2014). Nurses will have a more expanded practice capacity and ability to live comfortably within the workplace.

Patient care outcome is a core intention of nurse's work tasks. Effective patient care outcome is linked significantly to the nurse's work environment. Smith, et al (2018) highlighted the correlation significance in the study of patient missed care within the nursing group work, called 'collective efficacy', in relation to the nurse's work practices. Where the optimum complete care performed by nurses, the better safe work culture.

In nursing rehabilitation, there is a patient-centered care concept. Nurses are involving patients and families within the care decisions, in which they have choices to achieve their preferences of care as possible, which overall all

assisting in reaching the patient's intervention outcome. This concept is also supportive of limiting the nurse’s intention to leave and increase in nurse retention (Hughes, 2008). Nurses are involved in the patient's care plans of achieving the life social capacity and adaptation to the new work-life which is related to their injury and increase the patients' and families' wellbeing (Routasalo, Arve, and Lauri, 2004). There is a need to enrich nurses with the required knowledge and skills that raising the level of work confidence and facilitate the role within the work culture.

2.5 Workplace cultural factors domains

There are multiple dimensions in the workplace practice that is affecting and shaping the work culture (Spence and Lau, 2006). however, there was limited literature that combines a common factor that influences the nursing work culture. Most of the literature was measuring organizational safety and culture. as an example, Soh, et al. (2016) utilized Safety attitude questionnaire to discuss areas of job satisfaction, teamwork, leadership, and others. Kennerly, et al. (2012) studied occupational subculture areas that affect the nursing work culture. In this study, it has been identified through the search engine the related factors that affect the nursing work culture, which grouped in five main domains. These domains are interlinked as there are connections and relationships result in outlining the nursing unit cultural framework it provides an explanation and exploration of the relationship between driving work practices factors with nursing work culture:

2.5.1 Professional commitment and Loyalty

"Professional commitment is defined as a belief in and acceptance of the values of the profession which is chosen, effort to actualize these values, desire to improve him/herself and determination to maintain membership in that profession" (Benligiray and Sönmez, 2011 cited in Alkaya, Sözbir, and Kahraman, 2018, pp.19). Rehabilitation nursing is focusing on patient's outcomes and goals through multiple tactics of interactions, (Routasalo, Arve, and Lauri, 2004). Where a nurse's commitment in collaboration with the interdisciplinary team is a key required drive to complete such principles. the care is provided around the clock 24/7 , in which nurses is the essential collaborative and liaison of patient care plan of independence maximization within the overall care team (Elo, et al. 2012). "High levels of affective commitment are known to positively, significantly relate to a wide range of work-related behaviors including organizational citizenship behaviors." (Lavelle et al., 2009; Solinger et al., 2008 cited in Perreira, et al. 2018.p.317).

Nursing is a caring, humanitarian, and a passionate profession. These characteristics are enriching professional commitments and enforce their sense of accountability (Struwe. et al. 2013). Nursing resources are considered the source of quality care information (Ma, Olds, and Dunton, 2015). Within the positive work culture, there is a psychological perception sensed by the nurses which makes a connection with the workplace (Shao, et al. 2018). Hanan (2009) in her study of multinational nurses' workers in Saudi Arabia, emphasized that employees have an attachment with organization value and goals that makes them hard workers and have more organization commitment.

The rehabilitation nurse must use their ultimate knowledge and skills capacity to enable and manage this role specialization. Rehab nurses' work culture has much of human interaction and social life activities, in which there are professional commitments toward this specialty that promote the care and decrease the barriers of variations and discrimination and assisting nurses not leave work (Chang, et al. 2019). The best way is to engage nurses in different activities which gives them more empowerment, influential, and decision-making abilities that enhance their commitments through the development of a professional practice model (Sohal, 2020).

Being a nurse is urging nurses to have a moral identity, where nurses develop a self-disciplined responsibility sense toward the job and moral accountability to patients' care (Peter, Macfarlane, and O'Brien-Pallas, 2004). This would serve in better work culture. On the contrary, the authors emphasized that the presence of ethical implications among nurses is reflecting the difficult work culture would be.

Up to some level, nurses must be advocating their right and responsibilities to involve more in decision making, speaking up, and applying self-care principles to advocate their own value (Peter, Macfarlane, and O'Brien-Pallas, 2004). Besides, nurses who have a feeling of psychological ownership for the work they do are developing a sense of stewardship and feeling more responsible (Schirle, McCabe, and Mitrani, 2019).

2.5.2 Job Satisfaction

This domain is very essential, and it's interlinked with all other practice factors. There are key questions related to nursing happiness at work and the health promotion of performance, job satisfaction, workload, and burnout. Understanding and aligning these areas are helpful to design the work practice and strategies in a way to improve care quality to patients. If these areas are comforting nurses and perceived well by nurses, then it will reflect on patients' care quality and satisfaction level of nurses (Koy. et al, 2015). Studies show that higher job satisfaction and less turnover were found significantly indicated within a positive nursing work practice (Wei, Sewell, Woody, & Rose, 2018 cited in Al Sabei, et al. 2020). Its highly recommended that nurses' job satisfaction be included as a quality improvement strategy in the hospitals (Al Sabei, et al. 2020).

The health status and stress level of the nurses is linked to the work positive culture. A study was conducted by (Arnetz, et al. 2019) to identify the biomarkers of stress physiological and psychological on nurses. The finding was “based on individual nurse-level data suggest that both negative (work stress) and more positive (psychological safety, competence development) work environment factors are related to biological markers in nurses” (p.680).

The leaders in place are very essential in the nurses' satisfaction through the design of work habits, work tasks, decision making involvement, and nurses engagement activities which will empower nurses and introducing a healthier culture of work. The nursing work task is multi-dimensional and requires a

physical and mental ability which is enhanced by the availability of work facilitation and support (Barbe, Kimble, and Rubenstein, 2018). Hence, the nurses will have more psychological empowerment through the leadership guidance in which will improve the satisfaction and decrease the stress level (Ciccolini, Comparcini, and Simonetti,2012).

Nursing satisfaction is linked to patient satisfaction and outcome. As highlighted by (D. McHugh. et al, 2011) that the satisfied nurses with a low level of stressful work burden are reflecting on better patient experience and lowering the adverse incidents. Koy, et al. (2020) as well indicated that the nursing quality of care has a direct link with nurse work satisfaction. Improvement in the nursing work culture along the way is linked with low rates of job dissatisfaction (Kutney-Lee, et al. 2013).

Nurses' challenges of exhausting work tasks, workload, missing meal breaks, and pressure of shifting is reflecting on the level of dissatisfaction, hence, it has much impact on the nurses and patient safety (Lin and Liang, 2007).

The feeling of belonging and internal motivation needs within the work reflects on nurse’s self-actualization that is gained within the work culture, where nurses' compassion satisfaction is indicated (Burtson and Stichler, 2010). Worth mentioning that motivation is energizing nurses to have an influence on the system (Casida and Pinto-Zipp, 2008). That leads to intensifying the sense of self-actualization and empowerment.

In hospital work strategies, the motivation of the nurse's team is required to empower them and decrease the work stress and increase satisfaction level. High motivation is evidenced by better work practice (Ahlstedt, et. al 2019)." Working independently, with colleagues from the same profession, integrated with learning, visible progress, and receiving feedback from the work itself, contribute to work motivation." (Ahlstedt, et. al 2019.p.32).

Motivation can be intrinsic which needs to be promoted, however, strategies to work on internal nurses' motivation could not last for a long time. Here it comes to work on the extrinsic motivation, where strategies to support staff in terms of financial motivation, psychological motivation, review of practice workload, or development of knowledge and skills (Toode, et al. 2015).

In the study of (Choi, et al. 2013), significant correlations had been found of nurses' job satisfaction and the nurses leaving intention from the job within a workplace, where there are issues with work practices, resources, and management behavior. However, what could be helpful for nurses' commitments and limit job turnover is preparing the nurses with knowledge and skills, along with ethical competencies and ethical safety principles which are reflecting on their work culture (Poikkeus, et al. 2020).

2.5.3 Leadership

This work factor domain is considered the drive of all other domains as the leaders are expected to outline the work culture through the facilitation of all work factors to assist nurses in performing their tasks. The nurses are feeling and perceiving the leadership efforts and sense it in everyday work (de Moura, et al. 2013). Nursing leadership is a key contributing factor for a healthy working environment (Wei, et al. 2018).

Leadership responsibility lies in designing the system, strategies, and policies to serve as support for nursing to perform their role at the optimum level. This would include the availability of enough staff numbers, satisfactory pay management, resource availability, nurses' development opportunity, and training and education (Lin and Liang, 2007). The fact that managers could find a way to direct the educational intervention strategies that enhances social interaction and improving the nurses' satisfaction factors (Burtson and Stichler, 2010).

Leadership expects to outline clear job responsibilities and clear role tasks. Nurses feeling conflict in the role which leads to more frustration and overwhelming when the responsibilities are not aligned with what they were trained for (Bucknall & Thomas 1997, Aiken et al. 2001, Lu et al. 2006 cited in Choi, et al. 2013.p. 436).

What could assist nurses to express the challenges if they have management who listen to the concerns and works toward solving and supporting (Choi, et

al. 2013). Leaders must observe the work and frontline nurses' challenges. Nursing leadership rounds is a very useful strategy to directly observe and evaluate the nurses' work tasks. Leadership "Gemba Walk" is a helpful strategy to connect, maintaining the relationship, and gain trust with employees (Gesinger, 2016). Therefore, frontline leaders create an essential alignment and strategies enhancement with their availability, visibility, leadership guidance, and support (Duffield et al. 2011).

The system and leadership are monitoring and guiding the nursing care. "so it is expected that nurses realize the importance of the process of leadership as one of continuous and dynamic learning, and one that has the capacity for guiding people to be enthusiastic about the work, in order to achieve common goals. In this way, the nurse leader may be the motivator of strategies that involve the entire team for the performance of nursing actions." (de Moura, et al. 2013. pp.199).

Leadership strategies to overcome the changes in the healthcare industry must be in a creative with a transformational leadership approach to introduce adaptability principles within the nursing team where there are multiple opportunities for improvement and innovation along with change management solutions (Casida and Pinto-Zipp, 2008). Adaptability is where the nurse managers are guiding the nurses to change the mindset view to new opportunities. nurses can take a lead for change and improvement initiatives, enrichment of accountability to lead innovations. This would enhance the sense of belongings and proudness of achievement.

2.5.4 Teamwork

The teamwork in healthcare referred to the different skills such as collaboration, communication, and support which are acquired by the healthcare team to present themselves in the holistic health care needs within a clinical setting (Barton, Bruce, and Schreiber, 2018). In the following review, the discussion about teamwork and communication.

Teamwork

In patients care there must be integration and a high degree of collaboration between the care team to deliver the best-desired patients' outcomes. The team interactions and interlinked collaboration is referred to the teamwork, where it is a key aspect of the work setting that confirm and reinforce the improvement in high care and standards of quality (Bragadóttir, Kalisch, and Tryggvadóttir, 2019). The basis of achieving these care plans require a structured sharing of care decision, consultations, bridging gaps of missing care areas in a respectful manner (Sangaleti, et al. 2017). Burtson and Stichler (2010) found that the more nurses have interaction activity within the team, the higher nurses care impact within the workplace culture. "researchers found that better teamwork between nurses and physicians/nurses and stronger nursing leadership at the unit-level were associated with better nurse outcomes and quality of care" (Ma et al., 2015 cited in Ma, Olds, and Dunton, 2015.p.1571).

In the study of (Perreira, et al. 2018) it was emphasized there is a direct relationship between an interdisciplinary relationship which is called

‘organizational citizenship behaviors’ and the commitments of the nurse’s staff toward the team through understanding the work attitude and behaviors. This reflects the work culture that has effective and mutual collaborations is strengthening the teamwork principles within the team.

The teamwork design varies between nursing teams based on the type of services, unit structure, and system capabilities. The staffing number and staff mix have an impact on the functionality and productivity of the team (Bragadóttir, Kalisch, and Tryggvadóttir, 2019). The nurses' demographic has to be designed based on the services need and complexity such as gender, age, cultural background, experience, and qualifications. The team division as well is built based on the best utilization of the available resources. Also, it is associated with the level of collaboration and connection within the group team. (Bragadóttir, Kalisch, and Tryggvadóttir, 2019) indicated a study that was researching the link between adequate staffing perception with teamwork, revealed that adequate staffing perception is a reflection of high teamwork score. However, the team perception of low staffing reported a lower score of teamwork.

The teamwork culture adoption in healthcare is facing multiple challenges such as lack of collaboration, shifting of tasks to nursing which increases the workload, and less support of the system. Besides, bullying in nursing is a critical issue that leads to an increase in turnover (Etienne, 2014).

Teamwork establishment can result from issues or conflict resolutions. Workers are different in terms of interpersonal factors, organizational attributes, desire, needs, ideas, etc. Nurses are facing similar conflicts issues among nursing staff which can be considered as a common issue within the healthcare system, it affects their relationship and collaboration, where it has an impact on the stress, burnout, and turnover levels (Almost, 2006). However, conflicts can be a preceding source for improvements if wisely and systemically managed. Based on these facts, nurses must learn a lesson to keep the teamwork and wellbeing principles within their team. They need to decrease the effect of the arising destructive conflicts concept and improve constructive concepts (Almost, 2006).

Teamwork requires a competency assessment of the team's ability to knowledge and skills to present within the system design. Further, it needs an education intervention to enrich the team with the required level as a competent team (Barton, Bruce, and Schreiber, 2018). This would include principles of accountability, collaboration, goals orientation, and realization of values. These principles are essential to building unity and shared goals direction within the team.

Communication

Nurses' daily tasks are successfully completed with the essential effective communication strategies followed within the nurses' team such as the emotional and caring support through the information flow (Movahedi et al. 2011). The nurses' relationship with patients is heightened by effective and efficient communication approaches followed that improve patients outcomes,

achieve a satisfactory experience, and lowering the adverse event (Movahedi et al. 2011).

Within the nursing work practice, effective communication approaches have an essential playground methodology to maintain the patient's safety and harm prevention (Ammouri, et al. 2015). Nurses are the core direct care patients who need to speak up and report any errors or risks around the patient's safety. However, nurses need to be guided with a system that facilitates the reporting culture and the existence of a non-punitive reporting strategy. in which nurses are having fewer fears to report that leads to a constructive patient safety standard. This non-punitive approach known as "Just Culture", where there is no blame on nurses if there are policies and a system error (Paradiso, 2019). On the contrary, it's an encouragement for nurses to be involved in development and improvement activities. The true fact is that organizations applying such approaches are seems to have a positive culture perception.

"Nursing cooperation with other healthcare providers reveals an effective quality of care to patients" (Purdy et al. 2010 cited in Aboshaiqah, 2015.p. 511). The nursing model design of work could impact the nurses' and patient's outcomes. Decentralized nurse station design as an example keeps the nurses stay more time in interaction with patients but less within the nurse team (Real, et al. 2019). Nurses have more direct contact with patients 24/7 other than healthcare providers. Patients feel more comfortable discussing issues with nurses where they find more time than doctors as per the study

conducted in inpatients setting within Saudi Arabia tertiary hospitals (Binsalih et al. 2011 cited in Aboshaiqah, 2015.p. 511).

Open and accurate communication in the workplace is depending on multiple work factors such as care professional's relationship, respect, trust, and time availability (Tschannen and Lee, 2012). Effective communication is linked to the differences between nurses' professionals' background culture, job categories, education, and expertise. Open communication is where the team is able to speak and relay messages without fear. accuracy is where the team relays and delivers a clear and correct message (Tschannen and Lee, 2012). Therefore, many miscommunication errors are referred to as the inability to send the exact meaning behind the message. The availability of different modes of communication could have an impact as well. As an example, utilizing technology aiding devices such as electronic systems, mobile phones, overhead paging, etc. Education of the care professionals is an effective strategy to improve communication, which will enhance the clarity and shared decision (Tschannen and Lee, 2012).

2.5.5 Nurse behavior in Practice

Health care professionals are usually having a code of ethical conduct and obligations to the profession that includes respect, honesty, commitment, trust, etc (Carroll, 2012). nursing professionals as well, have a set of defined ethical professionalism behavior commitments through education studies and work policies. Shared principles of peer accountability, and sense of responsibility human needs (Carroll, 2012). These nursing profession

cornerstone ethics involved in every practice that nurses demonstrate with coworkers and patients.

The nurse work behavior is expected to be a compassionate, presenting support, and humanitarian care, more specifically, when working with customers like patients. Its though expected to be more with a longer stay of patients. Nurses are expected to employ their full knowledge and skills with care. In addition, there is a level of adherence and compliance to the work standards should be followed (Kennerly, et al. 2012). Saying that however, the predictor of fatigue may appear with more time in such work culture that has an effect on personality and hence, behavior. In which it reflects how the leadership and system are supportive (Woodrume, 2016). “Negative changes in nurses’ cognitive and psychosocial functioning can adversely affect nursing care and patient outcomes, especially in the area of patient safety” (Barbe, Kimble, and Rubenstein, 2018, p 915).

The relationship emotions among nurses are very essential for the nursing practice, where it improves the influence on healthy professional relationships and patients care decisions (Smith, Profetto-McGrath, and Cummings, 2009). Training nurses on utilizing emotional intelligence is a useful drive to maintain connections and best patients care decisions. For the reason that nurses work as a team who interact frequently, Therefore, this kind of intelligent communication delivery skill model is value adding to better work practice. These skills include how to understand and interact with others, and how to

control and manage emotional reactions (Smith, Profetto-McGrath, and Cummings, 2009).

Misbehaviors are common in nursing teams' relationships. There have been many reports that nurses suffered from bullying and work incivility. Work incivility defined as "consistent behavior used to degrade or control another's behavior, including individuals or groups" (Farrell, 1997, 1999 cited in Khadjehturian, 2012.p. 638). Observing and controlling such behaviors through policies and leadership is a key improvement of the respect relationship within the work practice, which leads to better satisfaction and limited intention to leave the job. Other side factors mentioned by (Çaylakb and Altuntaş, 2017) are related to the 'organization silence'. In which nurses are feeling of disruptive actions, low confidence, not speaking up, and a sense of withdrawal within the work culture that caused by poor organizational culture norms and leads nurses to leave work.

Another form of nursing team misbehaviors is identified in (Roberts, Demarco, and Griffin, 2009) study about oppressed group behavior (OGB), where there is a cycle of fear and which disrupt the work practice and impact negatively on the health care system. its described by a nurse feeling of inadequacy, low self-esteem, and lack of autonomy that leads to an escalating common attribute among all team. The nurses are feeling powerless to express their needs. Hence, there is unfair dominating power over others within the healthcare system. This kind of culture must be identified and corrected by advocating nurses' values.

Nurses turnover is a reaction to the nurse's perception of how much the culture is comfortable and satisfying their needs. As an example, if the nurses were supported by providing the essential resources that facilitate their work tasks and keep them safe of harm such as devices to prevent injuries (like personal protective equipment) (Choi, et al. 2013).

One of the best strategies that enhances positive behavior is the involvement of nursing staff with interactive and engagement activities. The engagement has a positive impact on nurses' buy-in, more specifically in change and innovation implementations which serve in the organizational outcome (Sohal, 2020). Nursing staff in most structured unit practice has distributed role assignments such as specialization in quality improvement tasks, or patient's safety prevention program, education, and training activities. The more engagement activities, the best comfortable workplace.

Magnet accreditation standards emphasize the successful culture of the nursing team. Nurses are enhanced to exploit the opportunities of personal and professional development which elevate their level of empowerment and advocating their rights and responsibility that reflect in furnishing the work standards. These principles are evidenced within the hospital involved in Magnet with successful experience (Moss, Mitchell, and Casey, 2017).

2.6 Objective achievement through the literature

It is obvious that the reviewed studies are providing how the healthcare system must be strategized in a positive alignment through practices and policies, and work culture that motivates and satisfy the nursing workers to stimulate their good practices and enhances the relationships to work as a team in order to achieve the best care standards of patients and maintain the safe work setting. Leadership is a key player within the organization and nursing units for the role of establishing the appropriate work standards, physical environment, resources availability, and psychological work comforts for nurses to extract their higher energy of the performance, and plants the sense of belongings and attachments to the workplace which prevents them of thinking to leave the job. However, on the other side, preventing the harm from negative practices and behaviors as well, which is leading to provide a safe workplace. This needs close monitoring and evaluations to interfere if such practices happen and to innovate and promote the best practices.

2.7 Hypotheses

Based on the literature review, below is the list of tentative hypotheses being established

H1. The nurse's loyalty to the nursing profession enhances the work culture.

H2a(0). The Leadership strategy does not affect the nurse's unit work culture.

H2a(1). The Leadership strategy affects the nurse's unit work culture.

H2b(0). Leadership approaches do not affect the nurse's unit work culture.

H2b(1). Leadership approaches affect the nurse's unit work culture.

H3 Nurses' job satisfaction drives a positive work culture.

H4 A positive work culture reduces nurses' job stress

H5. Nurses' work collaboration as a team is positively related to improving the work culture.

H6(0). Effective nursing team communication is not a key boost of work culture.

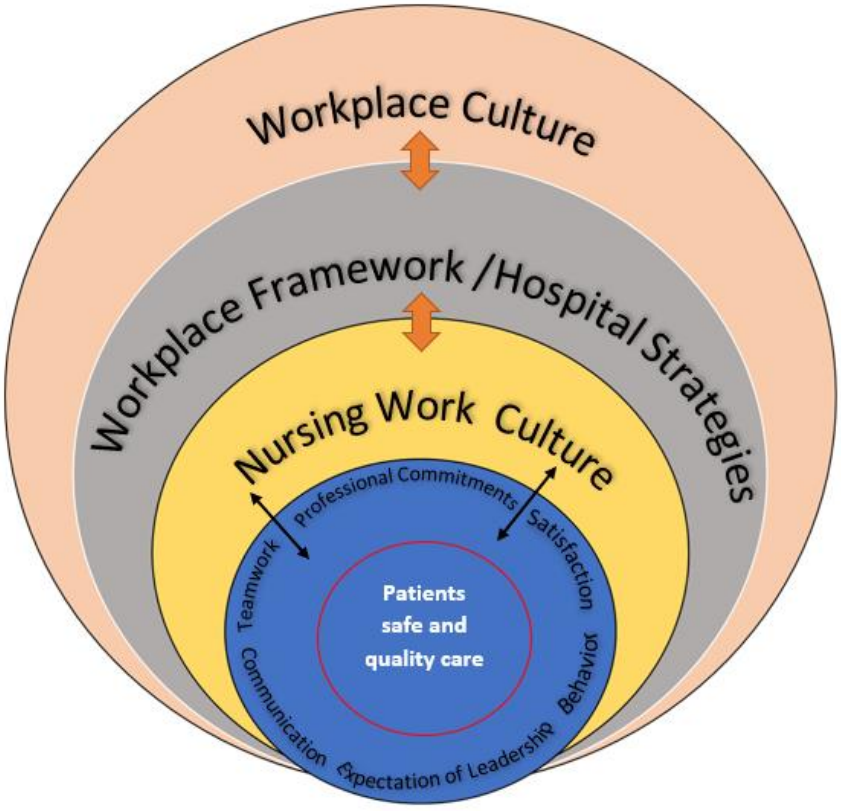
H6(1). Effective nursing team communication is a key boost of work culture.

H7. Positive nursing behavior in practice enhances the work culture.

2.8 Chapter Summary

This chapter has presented a detailed overview of the literature review providing a guide of the research scholars' view on how the healthcare system strategies and work practice are affecting the nursing work culture. The workplace practice factors were explored in literature. As well, there are hypotheses developed to provide the initial outline of how the study is exploring the relationships. The diagram below is providing the study framework model.

Figure 2. 1. Research study Framework Model



Chapter 3: Research methodology and methods

The research methodology is the selection of appropriate process and design utilized to collect and analyze the information about a topic using a specific technique (Collis & Hussey, 2013). It's a plan of action of a method to produce the desired outcome, where it needs knowledge and skills to formulate the framework of the research (Daniel, Kumar, and Omar, 2018).

In the following discussion, there is a presentation of the research methodology followed including the research paradigm, research method, data collection and analysis method, reliability and validity, and ethical consideration. There is as well an explanation summary of the research methodology model.

3.1 Research Paradigm/ Approach

The methodological research approach is following a positivist approach that is linked to quantitative research, where facts of the actual reality are measured and explained. It is a deductive approach that is aiming to provide a description and inferring along with the conclusion of the different study variables relationship (Raines, 2013). There is objectivity within this paradigm the has separation of the study variables and control of the testing environment.

The healthcare work culture has a specific practice, norms, work habits (Yeun and Han, 2016). There is a developed work habitual that keeps transforming from different structure level within the organization or previous experience

work systems so it's inherited along the way (Martinez. et al. 2015). Through utilizing the positivist approach, there is an implementation of an appropriate methodology that explains the reality relationship within the work culture without interfering with the researcher. The tool in the research methodology is the scale used to measure the relationship between the factors. It then followed by an interpretation of the results to reflect the actual facts.

Within the complexity of the health care system and the multi-factorial relationship that is shaping the working norms and routines, the explanation is required to define, assess the outline, and finding relationships, in order to conclude the work culture situation. Further to this, there is a need to assess and explain the work factors and the overall culture as highlighted in this study. Capturing the relationship key points connections is the baseline to infer what affects that other, where are the strong points and the weak points. Besides, it related the relationship of the factors to the population in terms of demographic differences such as job title, working units, education level, seniority, and nationality.

The actual facts of reality gathered through the perception of frontline nurses as they have an accurate reflection of the work culture. The hospital is encouraging the nurses to speak up and engagement them of strategies evaluation through multiple surveys such as the safety culture assessment where nurses average participation ranges 40-80 % for 2019, nurses job satisfaction survey by the NDNQI where the nurses' participation is 84 % for

2019, and the hospital yearly satisfaction survey where the nurses' participation is 76 % for 2019 (SBAHC data with permission).

3.2 Research Method

This section is discussing the research method to test and analyze the key variables. The nurse working culture is the (dependent variable). and the work practices factors include the nurses' satisfaction, the leadership, professional commitment, teamwork, and behavior in practice is the (independent variables) as well as there is a relationship between them, in addition, the nursing demographic groups relationship reviewed. This study is adopting a quantitative analytical survey research design (Collis & Hussey, 2013.p 63). The survey questionnaire used to reflect the measurement of the hypothesis variables, it is formulated concerning the research topic and problem, that links hypotheses variables (Saris and Gallhofer, 2014). There are construct areas, where each has items that reflect the study hypotheses.

Instrument development

The survey questionnaire, (refer to appendix 1) was developed, which initially consist of 11 items for demographic data about participants. It's about the general and work-related characteristics of nurses linked with study (primary role, age group, gender, religion, ethnic group, nationality, marital status, hospital experience, education level, unit name, English language). These items are vital in which related the relationship of the factors with nursing group categories. As it is a helpful guide that concluded the findings explanations to these groups.

The study questionnaire as well consists initially of 35 items which include the main section, which is the questions related to the factors in the hypotheses. The items answer scale used is 6-Likert- type scale (strongly agree, agree, tend to agree, tend to disagree, disagree, strongly disagree). The questions were distributed into 5 construct areas that reflect the overall nursing work culture concept. It included construct items that were formulated based on the literature review. Previous studies used different measures of the work practice and culture, which are reliable and validated tools. The question was crafted from different literature to formulate the questions and construct. Examples are including measuring the unit culture in neonatal (Spence and Lau, 2006), Nursing work culture assessment (Yap et al. 2014), the PES-NWI which was developed and validated by (Lake, 2002), the tool targeted nurse working index, National database of nursing quality indicators (NDNQI) to measure the nurse's satisfaction (NDNQI, 2020), Nursing Teamwork Survey by (Kalisch, Lee, & Salas, 2010), Nurses' Professional Commitment by (Al-Hamdan, Dalky & Al-Ramadneh, 2017), Occupational Stressor Scale' by (Chen, et al. 2020). Question Items are referenced for easy tracking and linkage.

The questions were developed and it included selected questions from literature discussions and scales and it's presented in the questionnaire as follow, the leadership scale (10) items that are covering leadership strategy subscale and approaches subscale, satisfaction scale (5) items, behaviors in practice scale (4 items), teamwork scale (12) items covering teamwork subscale and communication subscale, and professional commitment scale

(4) items. The survey was crafted utilizing google form software using a private email. A link was generated and shared with participants.

3.3 Data Collection method

The questionnaire was circulated using an electronic online survey. a printed copy was not been utilized considering the pandemic COVID-19 situation as per the new UOL policy (University of Liverpool, 2020). Each nurse has a work email account, where it is utilized as a core communication within the hospital. The nurses have access from workstations and home as well.

An email was sent to rehabilitation nurses at their units to ask their voluntary participation in the study, a link was shared for the online survey. Within the email, there is an explanation about the purpose of the study with a summary of expected objectives. The survey notification instructed the participants to review the participant information sheet which included ethical and confidential information for study use only (Laureate Online Education, 2019). Also, participants requested to grant their approval through electronic consent at the beginning of the survey. The duration for data collection was completed within 3 weeks period. This had considered the schedule of nurses' duty and off time. A frequent reminder of participation had been sent every 3 days. After completing the questionnaire, automatic notification through the survey was shown to all participants of nurses with a thank you message for participation.

As the researcher is being part of the organization, there was no interference or direct effect on participants during the data collection, all communication

mainly through the email. However, none of the participants choose to contact for any queries. Also, the utilization of the standards statistical process ensured the study objectivity. the role of the researcher is separated from the study to prevent any conflict of interest.

3.4 Sample selection

The available voluntarily participants nurses are the targeted sample for this study from all rehabilitation nursing units at Sultan Bin Abdulaziz Humanitarian City, Riyadh, KSA. The selection of the nurses' sample was convenient for the study (Phillips, Aaron, and Phillips, 2013). The total number of nurses is around 439 nurses across all units. The total targeted nursing units are 22 including inpatients and outpatients. The nurse's inclusion had included all nurses who have been working in the hospital for more than 3 months; the exclusion was for nurses worked less than 3 months, head nurses, and nurse trainees. The expected responses were estimated to be a minimum of 205 nurses considering the confidence interval is set to 0.95, as said in (Collis & Hussey, 2013, p.199)

3.5 Data Analysis

Data analysis incorporated descriptive and inferential statistical analysis. Descriptive analysis included percentages, mean, mode, median, and sample distribution that are linked to demographic group participants (Sutanapong and Louangrath, 2018). Psychometric evaluation of group participants answers to different construct scale questions. These numbers and

percentages had guided the overview look as a baseline for the detailed analysis.

The inferential analysis had included independent *t*-test (Sutanapong and Louangrath, 2018). Also, there was a correlation coefficient test for the factor's relationship with nurse's responses in each scale /subscale. As well, analysis of variance using One-way *ANOVA*, the *Welch* test was used. finally, the regression analysis level of scale/subscale is measured in relation to the overall nursing work culture. The significance level was set to 0.05.

The proposed hypothesis analysis conducted through multiple regression analyses.

H1. The nurse's loyalty to the nursing profession enhances the work culture.

H2a(0). The Leadership strategy does not affect the nurse's unit work culture.

H2a(1). The Leadership strategy affects the nurse's unit work culture.

H2b(0). Leadership approaches do not affect the nurse's unit work culture.

H2b(1). Leadership approaches affect the nurse's unit work culture.

H3 Nurses' job satisfaction drives a positive work culture.

H4 A positive work culture reduces nurses' job stress.

H5. Nurses' work collaboration as a team is positively related to improving the work culture.

H6(0). Effective nursing team communication is not a key boost of work culture

H6(1). Effective nursing team communication is a key boost of work culture.

H7. Positive nursing behavior in practice enhances the work culture.

3.6 Validity and Reliability

The strength of the study findings requires reliable and validating process and data (Roberts, Priest, and Traynor, 2006). Process monitored through documentation time and events record logging. There was a strict verification of the collection of data, sample and instrument utilization and validation. No variances documented and stressed on once the research implemented.

The reliability and validity testing for the survey instrument was conducted through a trial of testing stability (Mohajan, 2017). The questionnaire survey was used in a pilot study of (37) nurses, which indicated the suitability and stability of the instrument as a tool for the research study. There was a consistency of the participant answers, the reliability by the use of alpha coefficient, where the more than 0.8 was acceptable (Roberts, Priest, and Traynor, 2006). The main reasons for the piloting phase were to verify the item sequence, the practicability of the tool, and to add more clarity of language and wording to be more understandable for the participants. As well, the time needed for completing the survey. The detailed pilot study for validity and reliability explained in chapter 4.

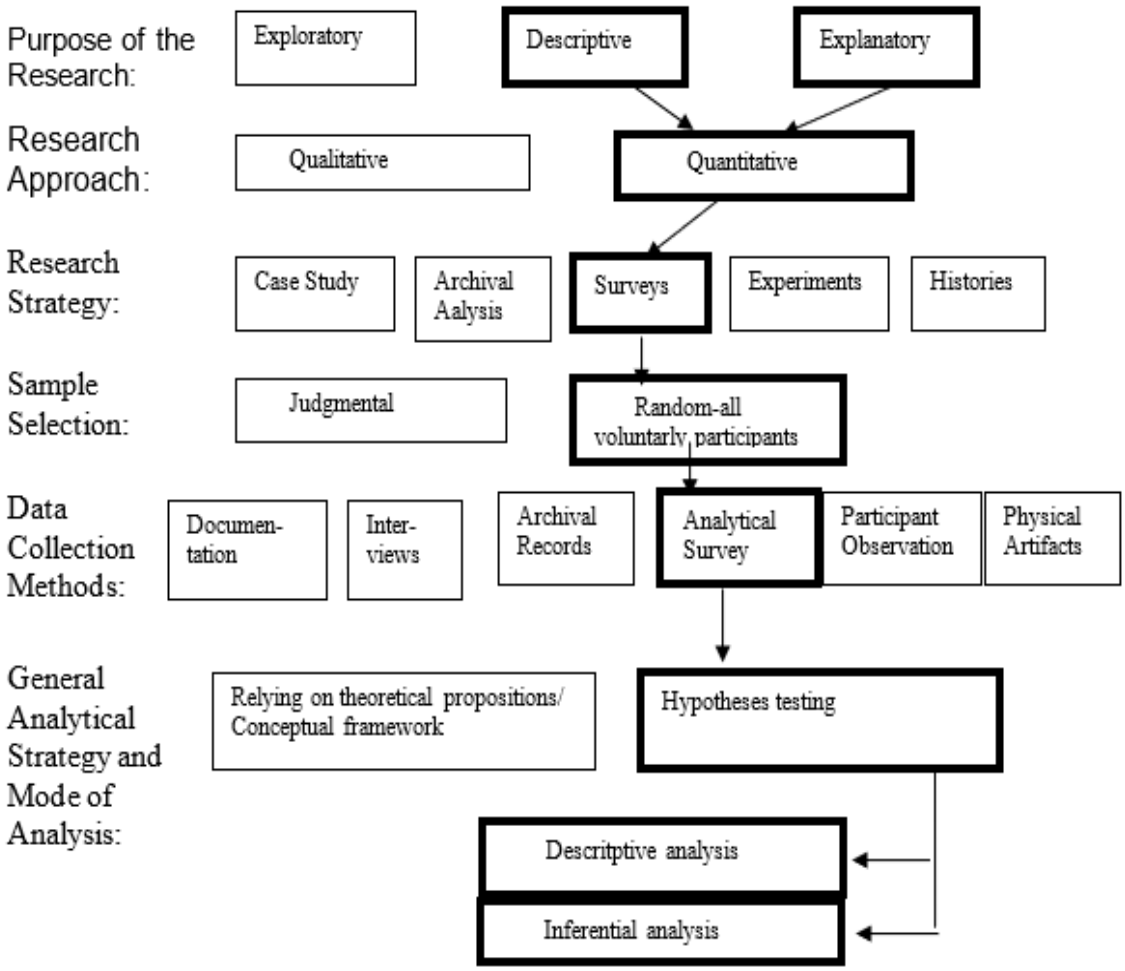
3.7 Ethical Consideration

The study was framed with an ethical work initiated by the ethical approval of the hospital IRB research ethical committee, the hospital senior management agreement and support, and also, the nurse's participant's consent was voluntarily granted. The study had considered the research ethics highlighted in as per the UOL guidelines (Laureate Online Education, 2019). The University of Liverpool ethical guidelines were followed strictly as highlighted, (Laureate Online Education, (2019). Research ethical concepts and protocols followed such as preventing participants of any harm, dignity respecting, consent agreement, participants anonymity, and cultural aspects (Gray, et al. (2017). All participants were informed and ensured of the ethical input and anonymity through attaching the participants' information sheet prior to the survey.

3.8 Chapter Summary

Below is the diagram summary of the research methodology model used in the study as explained above.

Figure 3. 1. Summary of Methodology



Chapter 4: Results and Discussion

This chapter begins with a presentation of the demographics results of the general and work-related characteristics of participants nurses and responses percentages. The results analysis initiated with a discussion of the validity and reliability testing of the instrument used. Also, there is a correlation between the demographics and the responses to the scale/subscale. Finally, there is a regression analysis model used for the scale/subscale contribution in predicting the nursing work culture and the testing of the hypotheses based on the nurse's responses.

4.1 Demographic results

The demographic information of participant nurse's analysis was divided into two categories, the general category characteristics (gender, age, education, marital status, nationality, English language). Also, the work-related characteristics (primary role, duration of work experience in SBAHC, and the nursing unit). The tables (table 4.1 and Table 4.2) below shows the participation numbers and percentage of both demographic characteristics. The detailed tables and graphs analysis presented in (appendix 2), Table 4.1, 4.2, Graph 4.1 to 4.9.

Table 4. 1. General demographic characteristics of participating nurses

		N (%)
Gender	Male	93 (28.9)
	Female	229 (71.1)
Age	20-30 years	103 (32)
	31-40 years	168 (52.2)
	41-50 years	44 (13.7)
	more than 50 years	7 (2.2)
Highest degree of nursing education	Diploma	55 (17.1)
	Bachelor	260 (80.7)
	Master	7 (2.2)
Marital status	Single	149 (46.3)
	Married	169 (52.5)
	Divorced	2 (0.6)
	Widow	2 (0.6)
Nationality	Filipino	298 (92.5)
	Jordanian	12 (3.7)
	Saudi	4 (1.2)
	Malaysian	3 (0.9)
	South African	5 (1.6)
English is your first language	Yes	87 (27)
	No	235 (73)

Table 4. 2. work-related general information about participating nurses

		N (%)
Primary role	Staff Nurse	241 (74.8)
	Nurse Assistant	81 (25.2)
Duration of employment in SBAHC	3-12 months	28 (8.7)
	1-5 years	156 (48.4)
	6-10 years	96 (29.8)
	11-15 years	36 (11.2)
	More than 15 years	6 (1.9)
Unit	Outpatient clinic	11 (3.4)
	Wound Care Unit	18 (5.6)
	Traumatic Brain Injury 1	12 (3.7)
	Traumatic Brain Injury 2	10 (3.1)
	General Rehab 1	13 (4)
	General Rehab 2	11 (3.4)
	Home Health Care	10 (3.1)
	Medical General 1	21 (6.5)
	Medical General 2	9 (2.8)
	Operating Room (OR, Anesthesia, pre-holding, recovery, Day surgery)	40 (12.4)
	PED I	17 (5.3)
	PED II	12 (3.7)
	PED III	16 (5)
	PED IV	11 (3.4)
	PED V	9 (2.8)
	PED VI	22 (6.8)
	Spinal Cord injury 1	10 (3.1)
	Spinal Cord injury 2	11 (3.4)
	Stroke 1	10 (3.1)
	Stroke 2	13 (4)
	Women Health unit 1	16 (5)
	Women Health unit 2	20 (6.2)

The percentage of nurse's responses of (73.3 %) is reflecting good participation, which is a common interaction of SBAHC nurses' habits to the projects and surveys as mentioned earlier in chapter 3, point 3.1.

The demographics data of responses presenting the percentage of nurses group categories participation which shows the highest percentage of nurses were from Staff nurses with 241 (74.8%) as most of the nurses doing the

specialized patient care role are staff nurses. The female nurses with 229 (71.1%) were higher in the sample. The highest percentage of nurses worked in SBAHC was within the group of (1-5) and (6-10) years of experience with 156 (48.4%), 96 (29.8 %) respectively, which indicate that there are experienced nurses among the groups who stays to work within the work culture as this indicate there is a level of comfortable work setting for nurses that makes their intention to leave is limited, besides, it reflects a satisfaction level as well. 260 (80.7 %) of nurses had a bachelor's degree which is in alignment that the staff nurse's qualification requirement for employment. Most of the nurse's workers at SBAHC are from Filipino nationality nurses with 298 (92.5 %), which is very common in the gulf area. The majority number of nurses with 235 (73%) were not originated from an English-speaking background as their first language. There are young ages of nurses working at SBAHC represented in two groups of (31-40) and (20-30) years old with 168 (52.2 %), 103 (32%) respectively. The highest presentation of units was from the OR with 40 (12.4 %), they have more No. of nurses distributed in different functions inside the operating room. However, some units are sharing almost a similar scope and patients population. The study intended to divide each unit since each unit has a separate team and a direct supervisor.

4.2 Survey Results and analysis

In this section, there is a presentation analysis of the nurse's responses to the scale/subscale. Also, there is a correlation between scales and the association with demographics and scale responses. Finally, there is a

presentation of the hypotheses testing result. All results are combined with explanations that justify the findings.

The survey was sent to participants nurses through a link that refers them to complete the survey and submit. The data collection was done within three weeks. The submitted survey response was collated in a software excel sheet were data were cleaned and prepared to enter in SPSS statistical software v.25 for windows, for further analysis.

The purpose of the study was to research the influencing work practice factors through assessing the nurses' perception, in which it reflects the nursing work culture, through assessing five component areas, the leadership, satisfaction, nurse behavior in practice, teamwork, and professional commitment.

This study was done as a single-phase through an analytical survey design using a quantitative method. A 6-Likert- type scale was used to collect the nurses' perception of the workplace cultural factors component. The total sample participated voluntarily in the study was (322), it is presenting a response rate of (73.3 %) of the total nurses in SBAHC which is (439) who were sent to them the link to participate.

4.2.1 Validity and Reliability testing

The validity of the questionnaire survey instrument tool was done by the review of the contents and performing the constructs validity testing. Expert researchers and nurses had participated in the review of the contents through the pilot study. The validity of the study construct areas was conducted through the nurses' responses with statistical factor analysis (Roberts, Priest,

and Traynor, 2006). Additionally, Correlations of nurses' responses with the construct areas were evaluated as well. The research study considered the best result of validity in hypotheses indicated when there is more tap for each construct (Mohajan, 2017).

The content was reviewed through researcher experts and expert nurses. They have recommended reducing the demographic questions by omitting 2 questions which have limited value-adding to the study. the final demographic items were (9) including (Primary role, gender, age, unit, education, work experience, nationality, marital status, and English language). As well, within the subscale construct, 4 questions were added, one to leadership scale, one to nurse behavior in practice, and an additional two for satisfaction in a subscale for Job stress. The total scale items were (39).

Construct validity of the questionnaire was tested using SPSS software, V.25. the test utilized is Factor items loading, interrater reliability, and correlations. It was revealed that the subscale constructs were valid to capture and reflect the nursing work culture. the Cronbach alpha was (.951).

The reliability testing was reviewed through a pilot survey for (37) nurses. It was revealed that the reliability testing for the items in the questionnaire relevant to each construct which provides credibility information. The overall reliability of the instrument was (.951). The following alphas coefficient table 4.3 shows the ranges of each construct area between (.72-.921), which signifies that there is adequate inter-rater reliability within the subscale instrument.

A correlation test using Pearson correlation was utilized between the scale/ subscale and the overall mean of scales that represent the nursing work culture. The data presented in table 4.4 shows that the pilot testing correlation was found very significant and the ranges of r (36) = (.641-.868) $P < .01$.

Table 4. 3. The overall reliability of scale/subscale

Scale/ Subscale Construct areas		*Cronbach alphas* α	
A. The Leadership	*Leadership strategy (4) items*	.722	.845
	Leadership approach (6) items	.72	
B. Satisfaction	*Satisfaction (5) items*	.831	.831
C. Nurse Behavior in practice	*Nurse Behavior in practice (4) items*	.911	.911
D. Teamwork	*Teamwork (6) items*	.916	.921
	Communication (6) items	.813	
E. Professional commitment	*Professional commitment (4) items*	.908	.908
Overall	Overall *(35) items*	.951	.951

Cronbach alphas coefficient (α). N = (37)

		Leadership	Satisfaction	Work behavior in Practice	Teamwork	Professional commitment and loyalty
Satisfaction	Pearson Correlation	.476**				
	Sig. (2-tailed)	.003				
	Covariance	.091				
Work behavior in Practice	Pearson Correlation	.661**	.413*			
	Sig. (2-tailed)	.000	.011			
	Covariance	.114	.096			
Teamwork	Pearson Correlation	.619**	.342*	.829**		
	Sig. (2-tailed)	.000	.038	.000		
	Covariance	.104	.077	.169		
Professional commitment and loyalty	Pearson Correlation	.589**	.348*	.626**	.643**	
	Sig. (2-tailed)	.000	.035	.000	.000	
	Covariance	.149	.119	.192	.194	
Nursing work culture	Pearson Correlation	.810**	.641**	.868**	.846**	.836**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	Covariance	.120	.128	.156	.149	.221

Table 4. 4. Pearson Correlations' significance between construct scales.

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Another validation of the tool was utilized is the factor loading of items for each construct in the subscale all items were higher or almost (.5) on the rotation component matrix utilizing Kaiser normalization, (see Table 4.6). As shown in the below table 4.5, it was supported by the Kaiser-Meyer-Olkin (KMO) and Bartlett's tests for sampling Adequacy for each construct.

Scale	KMO and Bartlett's tests
A. The Leadership	.742
B. Satisfaction	.798
C. Nurse Behavior in practice	.835
D. Teamwork	.736
E. Professional commitment	.708

Table 4. 5. Kaiser-Meyer-Olkin (KMO) and Bartlett's tests for sampling Adequacy.

	Components							
Scale items	1	2	3	4	5	6	7	8
Work_Beh_3	.829							
Work_Beh_4	.828							
Team_4	.808							
Leader_Approach_6	.678							
Work_Beh_2	.658							
Team_3	.649							
Commmunication6	.643	.516						
Work_Beh_1	.559							
Team_1		.824						
Commmunication2		.791						
Work_Beh_5		.791						
Commmunication1		.743						
Team_5		.690						
Team_2		.682						
Commmunication4		.492						
Commmunication5		.473						
ProfC_2			.854					
ProfC_3			.801					
ProfC_1			.724					
ProfC_4		.492	.653					
Satisfaction_4				.905				
Satisfaction_2				.826				
Satisfaction_5				.819				
Satisfaction_1				.542				
Leader_Approach_1					.739			
Leader_Approach_3					.706			
Satisfaction_3					.696			
Leader_Approach_2					.678			
Leader_Strategy_4					.677			
Leader_Strategy_3					.528			
Leader_Approach_4						.850		
Leader_Strategy_2						.753		
Leader_Strategy_1							.818	
Leader_Approach_5							.505	
Commmunication3								.878

Table 4. 6. Rotated Component Matrix [a]

[(]N = 37). (Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.[a][(a]. Rotation converged in 11 iterations.)

4.2.2 Participant nurses' responses to scale/subscale

The 5-research scales including subscale analysis were also examined using descriptive statistics including means, median, and standard deviations, which are presented in Table 4.7. 3 scales including subscale that reflects the hypothesis which include the leadership (Leadership strategy, leadership approaches), satisfaction (job satisfaction, job stress), and teamwork (teamwork, communication). The remaining two scales are nurse behavior in

practice and professional commitments. The mean had provided the central tendency for each construct studied, while the standard deviations offered the variations to participant responses distribution.

	Mean	Standard Deviation	Median
Total leadership scale	5.11	.66	5.00
Leadership strategy sub-scale	5.16	.63	5.00
Leadership approach sub-scale	5.07	.72	5.00
Total satisfaction scale	4.98	.77	5.00
Job satisfaction sub- scale	5.01	.78	5.00
Job stress sub-scale	4.91	.86	5.00
Nurse behavior in practice scale	5.11	.70	5.00
Total teamwork scale	5.21	.68	5.09
Teamwork sub-scale	5.25	.74	5.00
Communication sub-scale	5.18	.66	5.00
Professional commitment scale	5.43	.63	5.50

Table 4. 7. The mean, median scores, and standard deviations of total and subscales.

the total score for all is 6.

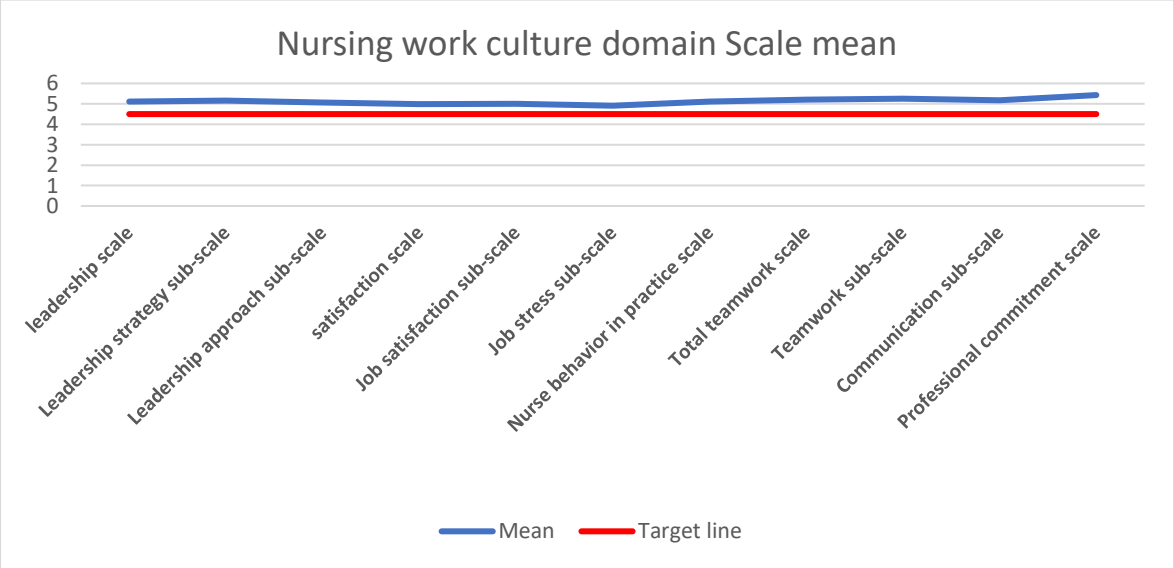
In appendix 2, table 4.8 to 4.12 presented the percentage of the detailed response to each scale/ subscale rating of the Likert type scale (Strongly Disagree, Disagree, Tend to Disagree, Tend to Agree, Agree, Strongly Agree).

The 6 Likert-type scale used presented the values of each level as follow (strongly agree = 6, agree = 5, tend to agree = 4, tend to disagree = 3,

disagree = 2, strongly disagree = 1). All of the questions were in a positive direction and there was no reverse scale value. In this analysis, it was considering that the disagreement level is reflected in (disagree, strongly disagree) level, the mid-level (tend to disagree, tend to agree), and the agreement level is (agree, strongly agree). These categories will facilitate the interpretation of the results.

There was no significant variation of the nurse's response to the 5-scale used in the data collection instrument. As presented in Table 4.7, the mean ranges between scales from 4.91 for the job stress subscale to 5.43 for the professional commitment scale which presents a good level of positive agreement to each scale domain which means out of the 6 scale levels, the positive responses were above 82 % in all scale ratings as presented in graph 4.10. The standard deviations range between (.63) professional commitment scale and leadership strategy subscale to (.86) job stress subscale.

Graph 4.10 Mean distribution of all scale/subscale



Looking at the highest percentage of nurse's answers among each scale, in leadership, the question item of (There are enough support services resources to get the job done) 65 % of nurses answer agree. It can be observed that the items of nurses participation in internal governance and policymaking perceived a good score of agreement with a percentage above (80%), this indicates that nurses have opportunities for decision making, engagement with work system and process as highlighted by (Schirle, McCabe, and Mitrani, 2019), in which it empowers nurses for the sense of ownership. Another point, for the leadership who are creating an opportunity for nurses for self-development, building capacities, and opportunities to learn from mistakes (Hosseini, et al. 2020). It was confirmed through the findings of these points, nurses scored above (80%) agreement. At SBAHC, there are multiple strategies implemented by the leadership to ensure the standards of practice are high, the engagement of staff, and decision-making opportunities as reflected by these findings.

Under the satisfaction scale, 64.3 % of nurses agree to the item (Nurses are satisfied with the nursing tasks assignment in our unit). Also, most of the points under this scale, nurses scored above (80%) of agreement of their satisfaction level. The importance of the satisfaction scale is that it's linked to all other scales, as the other work factors will reflect on the nurse's satisfaction level. Based on these findings, the conclusion is that there is a system built that makes nurses comfortable at their work, which is a good reflection of the nursing work culture (Kutney-Lee, et al. 2013). However, it can be observed that the point of the work practice burden has a variation of scores

between nurses, where they scored (5.3 %) tend to disagree and (13.7 %) tend to agree, which is in the mid-level, these areas need further investigation as these nurses might have an additional workload that makes them not appearing to have a good level of satisfaction compared to others.

As well, among the nurse behavior in practice scale, 66.5 % of nurses agree that (Nursing efficiently Managing their role and responsibilities timing). All of the items in this scale scored above (80 %) of agreement, however, there are three items in the mid-level, where nurses scored from (7-10 %), although it's a low percentage compared to the rest of nurses, it indicates that some of the nurses more monitoring and development opportunities in the units to align them with others. The reasons due to the behavior in practice could result in practice error, at some level it could be risky to patients or staff, hence, the leadership measures of staff rounding and interview will be very much helpful to deal with this variations as highlighted in (Duffield et al. 2011) . as well to ensure the safety of staff and decrease level of harm (Choi, et al. 2013).

In the teamwork scale, 67.7 % of nurses agree that (Staff uses appropriate language with other staff) as the highest rating. It's observed that there is a high score of agreement within the subscale with a percentage of agreement more than (85 %). This reveals a good teamwork and communication level within the team that creates a team spirit and comfortable work culture for nurses and emphasized the sense of organizational citizenship behavior (Perreira, et al. 2018).

Professional commitments and loyalty scale presented with 53.1 % of nurses strongly agree that they are proud to tell others that I am part of this profession, which shows a strong commitment and loyalty to the nursing profession. As well, in all items, the level of an agreement reflected the higher score compared to other scales with a percentage (90 %) and above. This comes in alignment with findings of nurse's professional commitments in the study of (Al-Hamdan, Dalky, & Al-Ramadneh, 2017). In most health care settings, nurses are very loyal and proud of their profession, of what a caring and humanitarian job they perform. Also, at SBAHC, the humanitarian part is one of the cornerstone values of the organization, in which nurses are acquiring additional caring and professional proudness extended of these values.

4.2.3 Correlation between scales

The correlation between scale/subscale was tested using the spearman correlations. findings concluding that there is a moderate positive correlation between most of the nurse work culture component scales, as indicated by the Spearman (rho) correlation coefficients. Where all correlations are significant at the 0.01 level; values < 0.5 indicate low correlation, values of ≥ 0.5 and < 0.8 indicate moderate correlation; values > 0.8 indicate high correlation (Yap et al. 2014). The lowest correlations were found between the scale of the professional commitment with satisfaction, leadership, and teamwork, the value ranges were (0.39 to 0.47). The highest correlations were found to be within the leadership subscales, and between the communication and teamwork scale with the value of (0.79). see Table 4.13 below.

Scale/subscale	Leadership Strategy	Leadership Approach	Job Satisfaction	Job Stress	Nurse Behavior	Teamwork	Communication	Professional Commitment
Leadership Strategy	1.00							
Leadership Approach	0.79	1.00						
Job Satisfaction	0.66	0.69	1.00					
Job Stress	0.58	0.56	0.70	1.00				
Nurse Behavior	0.65	0.63	0.74	0.71	1.00			
Teamwork	0.51	0.52	0.62	0.52	0.75	1.00		
Communication	0.61	0.60	0.69	0.61	0.78	0.79	1.00	
Professional Commitment	0.42	0.47	0.45	0.39	0.50	0.49	0.56	1.00

Table 4.13. Correlations between scales.

(Note: All correlations are significant at the 0.01 level; values < 0.5 indicate low correlation, values of ≥ 0.5 and < 0.8 indicate moderate correlation; values > 0.8 indicate high correlation (Yap, Kennerly, & Flint, 2014).

4.2.4 Association between demographics and nursing work culture scale domains.

The association of general and work-related demographics to the scale/subscale were tested. The data were analyzed using a one-way *ANOVA* statistical method that used to measure the influence of the differences between demographic groups on the domain scale of (leadership, satisfaction, nurse work behavior, teamwork, and professional commitment). Statistically significant relationships specified with an alpha coefficient level of < 0.05. some of the groups used the Welch test instead of One-way ANOVA as shown in table 4.14 below. The details of groups mean, and standards deviation are presented in appendix 2, Tables 4.15 to 4.24.

	leadership scale			satisfaction scale			Nurse behavior in practice scale			teamwork scale			Professional Commitment scale		
	F	t	*p*	F	t	*p*	F	t	*p*	F	t	*p*	F	t	*p*
Age [a]	1.9		0.154	1.58		0.22	1.698		0.191	1.372		0.273	1.48		0.24
Gender		-1.94	0.053		-1.57	0.12		-2.36	0.019*		-2.01	0.046*		-1.25	0.22
Nationality [a]	7.88		0.000*	2.99		0.03*	7.145		0.005*	57.01		0.000*	0.72		0.61
English is your first language		2.24	0.026*		1.969	0.05*		1.517	0.13		1.044	0.297		0.533	0.59
Marital status	2.25		0.083	1.81		0.15	2.534		0.057	0.237		0.044*	0.53		0.67
Primary role		-0.1	0.923		-1.24	0.22		-0.47	0.641		-0.5	0.617		-0.11	0.91
Unit [a]	3.44		0.001*	1.56		0.08	-8.91		0.004*	-8.71		0.004*	1.48		0.08
Duration of employment in SBAHC	9.7		0.053	2.04		0.11	1.041		0.402	1.276		0.3	1.37		0.27
The highest degree of nursing education	0.42		0.657	1.47		0.23	0.477		0.621	0.42		0.657	3.09		0.08

Table 4.14 Association relationship between demographics and scale.
([a]: Welch test is reported instead of one-way ANOVA. * indicate statistical significance with *p*-value ≤ 0.05).

The participants' demographic characteristics (general, and work-related) relationship with their responses to the scale/subscale were tested utilizing the independent *t*-test for gender, English as the first language, and primary role as there were two groups for each. One-way *ANOVA* used for marital status, duration of work experience, and highest education, these items with multiple answer options it shows the difference in scores with variables that have 3 or more groups and is combined with post-hoc tests (Tukey or Games-Howell tests) to localize the difference. However, when homogeneity of variance is not assumed, Welch test is reported instead of one-way *ANOVA* for age, nationality, and unit. The results as presented in Table 4.14, as well see in appendix 2, Tables 4.15 to 4.24 shows the significant differences of each demographic groups with scale as follow (these groups significance

presented with *P*<0.05. "F" coefficient is reported with ANOVA, while "*t*" is reported with the independent sample's t-test):

1. Leadership scale. There was a significant difference between the nationality (F = 7.88) , Malaysian nationality (M = 5.94; SD = 2.89) showed higher mean scores compared to other groups, as indicated by post-hoc tests, English as first language (t = 2.24) , and unit (F = 3.44).Nurses working in spinal cord injury 1 unit (M = 4.93, SD = .08) reported statistically significant lower leaderships scores compared to those working in wound care unit (M = 5.37, SD = .38) and PED IV unit (M = 5.40, SD = .51), (*p* = 0.001).

   The results verify that the leaders are different in their strategy and approaches with their unit staff. As mentioned in (Burtson and Stichler, 2010), when the leaders introduce strategies that intervene with the needs of the unit, the more staff are comfortable in their unit work culture. Perhaps the frontline leaders are the key since they have direct interaction activities with staff that streamline the work strategies, as well enhances the relationship among staff.

2. Satisfaction scale. There were significant differences between groups of nationality (F= 2.99), nurses with Malaysian nationality (M = 5.71, SD = .25) also scored statistically significant increase in satisfaction scores, (*p* = 0.03). English as first language (*t* = 1.96), those who

speak English as a first language also reported slightly higher scores, (p = 0.05).

The view of the results confirms the importance of nurses' comfortable work culture, the feeling of empowerment, and limiting the negative variances, in which improve the job satisfaction (Ciccolini, Comparcini, and Simonetti,2012).

3. Nursing behavior in practice scale. The significant differences showed in gender (t = - 2.36), nationality (F = 7.14)), and unit (F = - 8.91). One-way ANOVA showed statistically significant difference in nurse behavior scores among different nurses' units, as those working in stroke 2 (M = 4.51, SD = 1.64) , and spinal cord injury 2 (M = 4.48, SD = 1.58) reported lower mean scores (p = 0.004). Also, those with Malaysian nationality (M = 5.89, SD = .19) compared to Filipino (M = 5.13, SD = .62) and Jordanian (M = 5.03, SD = .38) , (p = 0.005) . Independent sample's t-test showed a statistically significant difference between male (M = 4.97, SD = .96) and female nurses (M = 5.17, SD = .55) with regard to their responses to nurse behavior in practice, (p = 0.019). These differences show that the nurses' behavior in the practice are different between different groups as the sense of responsibility, honesty, trust, etc. (Carroll, 2012) plays an important role toward being more productive and good performer nurse. Nurses commitment to the code of work ethics is very essential to streamline the behavior in practice.

4. Teamwork scale. The groups of gender (t = - 2.01), nationality (F = 57.01), marital status (F = 0.237), and units (F = - 8.71) showed a significant differences in relation to the teamwork scale . Nurses working in PED IV (M =5.41, SD = .49) reported a statistically significant difference in scores, compared to those in general rehab 2 (M = 5.05, SD = .30) , spinal cord injury 1 (M =5.07, SD = .19) , and women health 1 (M =5.04, SD = .41) , p = 0.004 .In addition, statistically significant difference was found in teamwork scales among different genders ,male (M = 5.09, SD = .94), female (M = 5.26, SD = .53), (p = 0.046). Nationalities, the lowest were Saudi (M =3.50, SD = 2.89), and the highest were the Malaysian (M = 5.97, SD = .05), ($p \leq$ 0.001).it was slightly significant difference between single (M = 5.10, SD = .84) and married nurses (M = 5.31, SD = .48) , (p = 0.044).

5. Professional commitment: No statistically significant differences between groups were reported, which clearly verify that nurses are committed to their profession and they show loyalty regardless of different characteristics groups, this in alignment with (Al-Hamdan, Dalky, & Al-Ramadneh, 2017) study of nurses professional commitment.

Reviewing the results as per the demographic categories, the findings revealed there are no significant differences among age, primary role, hospital employment experience, and the highest nursing education groups in relation to the scales responses. The significant differences that are shown within the

group of gender and nationality are affected by the percentage of participants, as there are (71%) of nurses are female, and (92%) of nurses are Filipino nationality. The marital status showed a significant difference in relation to the teamwork scale. However, the important significant differences appearing within the different units in relation to the leadership, nurse behavior in practice, and teamwork. These are core areas of differences that relate to each unit's work styles, leadership variations, and scope of the unit. As well, it is worth mentioning that the team formulation in each unit has a shape that creates their culture of work. Although, the mean score of the agreement for most of the scales is quite good, however, the variation between scores proofs the norms, strategies, and work practice differences are important to consider in some units more than the others.

4.2.5 Hypotheses analysis

The hypotheses testing was conducted through the Multiple regression model between the scale/subscale and the overall scale of nursing work culture as presented in Table 4.26 below.

Table 4.26 Multiple Linear Regression Model for Scale/subscale with all nursing work culture scale. ([a]. Dependent Variable: Total nursing work culture).

Coefficients [a]

Model		Standardized Coefficients	Sig.	Correlations	
		Beta		Zero-order	Part
1	Leadership strategy sub-scale	.128	.000	.871	.058
	Leadership approach sub-scale	.146	.000	.867	.067
	Job satisfaction sub-scale	.157	.000	.923	.065
	Job stress sub-scale	.175	.000	.855	.089
	Nurse behavior in practice scale	.141	.000	.927	.053
	Teamwork sub-scale	.150	.000	.861	.065
	Communication sub-scale	.134	.000	.914	.051
	Professional Commitment	.128	.000	.665	.101

In this study, it has been hypothesized that the relationship of the domain work factors as perceived by nurses through a scale/subscale concerning the nursing work culture. The analysis conducted using a multiple linear regression model using standard coefficient *Beta*, which reflects the prediction strength of each scale/subscale to assess the contribution and prediction of each subscale to the total nursing work culture. The analysis based the acceptance of the hypothesis on the significance level presented by the *Beta coefficient*. The findings revealed that there is a significant positive relationship for all domain's scale/subscale with ($P< 0.01$), represented with *Beta* value ranges from (.128 to .175), see table 4.13. Below are the findings of the results for each scale/subscale significant prediction of the overall nursing work culture.

1. Leadership

The leadership scale has included two subscales that reflect the hypotheses. Leadership approach and leadership strategy. The results findings show that the leadership approach with (*Beta* = .146), P<0.01. This reflects a significant prediction of the effectiveness of leadership approaches to the nursing work culture, though, the alternative hypothesis H2b(1) that leadership approach affects positively the nursing work culture is accepted and the null hypothesis H2b(0) is rejected. As well, the leadership strategy has a significant prediction with (*Beta* = .128), P<0.01. Noting that this subscale had the lowest prediction within the scales. However, the alternative hypothesis H2a(1) that leadership strategy affects

positively the nursing work culture is accepted and the null hypothesis H2a(0) is rejected.

2. Satisfaction

Satisfaction has two subscales. Job satisfaction and job stress. It was noticed that Job stress subscale had the most contribution to the prediction of nursing work culture among all scales (*Beta* = .175), P<0.01. hence the alternative hypothesis H4 that the nursing work culture reduces the job stress is accepted. The job satisfaction subscale also was the second order of significant prediction of nursing work culture (Beta = .157), p<0.01. The alternative hypothesis H3 that Job satisfaction drives the positive nursing work culture is accepted.

3. Nurse behavior in practice

The hypothesis H7 which indicate that nurse behavior in practice enhances the nursing work culture is accepted. This was confirmed by the scale significant prediction of the nursing work culture with (*Beta* = .141), P<0.01.

4. Teamwork

2 subscales were representing the teamwork scale. Teamwork and communication subscales. The teamwork subscale significantly contributed to the prediction of nursing work culture with (*Beta* = .150) *P* < 0.01. this reflects the acceptance of hypothesis H5 that Nurses' work collaboration as a team is positively improving the work culture. The communication subscale as well was significantly considered a key boost for the nursing work culture (*Beta* = .134), *P* < 0.01. which confirms the acceptance of alternative hypothesis H6(1), and the rejection of null hypothesis H6(0).

5. Professional commitments

It was noticed that the professional commitment scales as the leadership strategy has the lowest contribution (*Beta* = .128), *P* < 0.01. However, the significance of the findings confirmed the acceptance of the alternative hypothesis H1 that indicates the nurse's loyalty to the nursing profession enhances the nursing work culture.

Hypotheses	Accepted/rejected
H1. The nurse's loyalty to the nursing profession enhances the work culture.	accepted
H2a(0). The Leadership strategy does not affect the nurse's unit work culture.	rejected
H2a(1). The Leadership strategy affects the nurse's unit work culture.	accepted
H2b(0). Leadership approaches do not affect the nurse's unit work culture.	rejected
H2b(1). Leadership approaches affect the nurse's unit work culture.	accepted
H3 Nurses' job satisfaction drives a positive work culture.	accepted
H4 A positive work culture reduces nurses' job stress.	accepted
H5. Nurses' work collaboration as a team is positively related to improving the work culture.	accepted
H6(0). Effective nursing team communication is not a key boost of work culture.	rejected
H6(1). Effective nursing team communication is a key boost of work culture.	accepted
H7. Positive nursing behavior in practice enhances the work culture.	accepted

Table 4.27 Hypotheses accepting/rejection based on the results.

4.3 Discussion

The results analysis has explored and explained the nurse’s responses to the scale/subscale, which revealed a good level of agreement of nurses that work factors are contributing positively in shaping a good nursing work culture. The nursing units are a part of the overall organization structure, where it considered a micro organization structure (Ma, Olds, and Dunton, 2015). Each unit has a unique scope of services, frontline nurses’ team, direct nursing supervisor. The unit system and strategies are being controlled by policies that provide the guidance of work within the team. The policies are providing the methodologies to provide the services. Also, the legal and ethical guide to performance. The nursing work culture is the work habits, norms, behavior that is shaping the nursing work attribute. The work factors discussed in the study are the key factors that outline how the nurses' work culture within a unit is being formulated. The factors are generated from the work system and strategies and are affected by the team's internal factors of collaboration, commitments, and teamwork.

In this study, nurses reacted with their perception of how are they viewing the culture. The core perception relayed to nurses as they are carrying over the strategies and system of work, transforming into safe practice and performance (Barbe, Kimble, and Rubenstein, 2018). The work factors are the supporter to create a good nursing culture. the findings are presenting the positive perception of nurses toward the work practices they placed in.

The leadership as a mediator, supporter, and facilitator of work practice for front-liners are perceived of carrying out these characteristics effectively and efficiently which meets the nurse's expectations. Nurses are viewing the strategy of leaders in their areas are assisting them with defined, explained, monitored, and a clear scope of practice at each unit. They find the opportunity to participate in decision making and process developments. And they have a professional development plan set by leaders (Lin and Liang, 2007). Leaders' approach was also perceived well by nurses, as leaders are visible, accessible, and providing the opportunity of the learning environment (Duffield et al. 2011). These opportunities have given the nurses the floor to adapt, improve, and innovate (Casida and Pinto-Zipp, 2008). At SBAHC, nursing leadership had created many strategic projects to accommodate a good nursing culture for nurses. There were many programs, examples such as regular rounding, reporting system, issues escalating policies, open communication meetings with leaders, resource availability, and more. Nurses have opportunities to speak up, improve, and make effective innovations and changes (Peter, Macfarlane, and O'Brien-Pallas, 2004).

The nurses have reflected a satisfactory degree at their job, and the perception of workload burden does not affect their level of stress which is contributing to better work culture. The responses indicate that there is a comfortable level with the work task assignments, job description, and unit staff collaborations. Nurses have developed psychological motivations that assisted in their performance and productivity (Toode, et al. 2015). SBAHC has built a regular evaluation and monitoring system which is directed to

assess the satisfaction of staff through regular yearly surveys such as the NDNQI RN satisfaction, work safety, and the employee satisfaction survey. Action plans are monitored and implemented for the improvement areas. Besides, there is a department of people experience who has many activities that are aimed to improve the employees' work and life experience.

In the nursing units, the staff has developed a sense of accountability and responsibility that enables them to perform work tasks effectively and efficiently. As well, they have gained control over the work behavior that is extended of their compliance to system ethical principles. Nurses are viewing there is acceptable behavior that is contributing to building a structured work culture within the units. The respect behavior among staff assisting them to build a good team. However, this does not mean that there are no conflicts or misleading behaviors, but it reflects they have policies and control to contain and resolve, perhaps change it to learning lessons. The nurse’s behavior needs ongoing observation and guidance for the reason that shifting of behavior could happen at any time as a result of stress or unfair treatment. Theses variation must be captured and dealt with before it impacts on a bigger negative culture. as mentioned by (Barbe, Kimble, and Rubenstein, 2018, p 915) that “Negative changes in nurses’ cognitive and psychosocial functioning can adversely affect nursing care and patient outcomes, especially in the area of patient safety”.

Teamwork is a critical work factor in shaping the work culture. Although there are a system and strategies that align staff to enhance teamwork and

communication, the nurse's internal factor of motivation and satisfaction is a drive to comply with working as a team. Interpersonal relationships, desires, and needs of nurses are essential to establish good teamwork. These factors if not managed well, could lead to conflict and disrupt the work culture. Leaders must meticulously observe these drives to enhance collaboration and communication which assist in decreasing the stress level and intention to leave (Almost, 2006). At SBHAC, nurses have reacted with a good level of teamwork and communication. This level is affected by the ongoing and support with many activities of enhancing relationships such as team building, a celebration of success, and recognition of efforts. working with multinational nurses requires an additional effort to align the teamwork, cultural diversity, and communication principles. Although the majority are Filipino nurses, however, the other nationality numbers are variant from season to another.

This linked to the leader's strategy to implement measures that create teamwork to enhance job performance and maintain safety (Ammouri, et al. 2015). These strategies could include the availability of communication tools, cultural adaptation training, design of the work tasks, staff skill mix, and the flow of work.

The nurse's professional commitment and loyalty is the surrounding frame of all other work factors, as it energizes the nurses believes toward having attachment and belongings to the value and mission of the hospital. It's a reminder for nurses that their profession core value is being passionate and caring, besides, it is a humanitarian job. In most improvement strategies, leaders tend to use these reminders to enhance the power of performance

within nurses. As reflected in the findings, nurses have scored a high percentage with no variances among the categories. This reflects that they are ready to have the base of the nursing work culture. In other means, nurses are prepared to communicate and collaborate, ready to engage, comply with the leadership guidance, and are empowered to innovations. Leaders are urged to utilize the nurse's loyalty to assist with the development of professional practice strategies (Sohal, 2020).

4.4 Chapter Summary

This chapter has reviewed the results of nurses' responses to the scale/subscale through analysis of demographics, correlations, and prediction of all scales of the nursing work culture. The discussion explained the strength of nurses' reflection on each scale.

Chapter 5: Conclusions and Recommendations

5.1 Review of Chapter 1-4

Here is a summary review of chapter 1-4 contents. Chapter 1 has introduced the research topic importance which explores the nursing work culture within the healthcare system that emphasizing strategies, policies, and work behavior that outline the work culture. As well, there is a description of the SBAHC and nursing work practice. The chapter has included the purpose and objective of the study that relates the work practice factors to the overall nursing work culture at SBAHC units. In chapter 2, there was a presentation of the literature review on how the workplace culture and practices system and strategies serve the best for nurses to facilitate their work and prevent the negative impacts. Also, the importance of implementing strategies that ensure the comfortable work culture for nurses to enhance their performance. There was a detailed discussion of literature about the work factors related to the nurse's work culture. Hypotheses developed to relate the work factor influence on the nursing work culture and a study framework model has been developed. Chapter 3 introduced the research methodology and design of the study, which followed a positivists approach and an analytical survey study methodology. Detailed information presented about the study sample, data collection method, instrument development, reliability and validity of the research methodology. In addition to the data analysis methods utilized. Chapter 4 has introduced the results and data analysis with justified discussion. There were detailed descriptive and inferential statistical analyses with explained tables about the participants' nurses and their demographics and responses that conclude their perception about the work factors in their

units. Hypotheses testing has been shown through the analysis. A discussion about the results with explanations was presented.

5.2 Answer to Research Aim

In chapter 1 the research aim was as the following:

This study aims to study the relationship between the influences of work factor components within the workplace culture of nurses at SBAHC nursing rehabilitation units. These relationships would provide a helpful assessment for the key driving forces of the system, norms, behaviors that determine the description and nature of work culture. Besides, healthcare leaders are guided to the concepts understanding and implementation strategies for the best of work culture setting for nurses (Kennerly et al. 2015).

The research has 4 objectives:

Research objective one

- To explore how the work behaviors, attitudes, and norms of practices within the workplace affect work culture in terms of teamwork, professional commitment and loyalty, nurse’s behavior in practice, job satisfaction, and leadership.

This objective has been achieved through the review of previous studies and literature. Where there are validated data that had discussed the nurses' work factors and how important for the system and strategies of the workplace be outlined to facilitate the nurses' work and enhancing the nurses' performance and productivity (Ritonga, Ibrahim, and Bahri, 2019) Also, it will shape the

positive nursing work culture. Besides, the previous studies emphasized on creating a culture that has good leadership, enhancing the professional commitments and loyalty, teamwork, communication, engagement, and empowerment for nurses which facilitate their work practice (Manley, Jackson, and McKenzie, 2019).

Research objective two

- To determine the relationship of the factor domains of teamwork, professional commitment, nurse's behavior in practice, teamwork, satisfaction, and leadership in relation to the overall nursing work culture.

Research objective three

- To clarify how the front-line nurses perceived the effect of the strategies and workplace practices in relation to the work culture at rehabilitation nursing units.

The above two objectives achieved by the primary survey research. The data has shown statistically significant contributions to the work factor in the prediction of the nursing units' work culture. Additionally, the nurse's perception has been presented through their responses, in which it shaped their behavior and norms in each unit through the domain work factors. Nurses have an agreement level for all nursing work culture component scale with a percentage higher than (80 %), it's a reflection of the system, strategies, and policies implemented at SBAHC nursing units. Nurses have

created an improvement adaptation and interaction within the team that reflects in work, skills, and performance innovations (Yoshikawa and Kogi, 2019).

Research objective four

- To provide leading baseline guidance for academic scholars, policymakers, and nursing decision-makers of the factors influencing nurse's work culture in rehabilitation services.

This objective achieved by providing explanations and recommendations from the study findings of the other objectives that benefit other nurse leaders, policymakers, and scholars about the nursing work culture in rehabilitation nursing units.

The study objectives findings are seeming to be interlinked and aligned. The literature review presented what are the needed strategies and practices that must be implemented in healthcare settings to facilitate the nurses' work culture and practices (Vazquez, 2019), where many factors will affect nurses' work such as work design, structure, financial supports, wellbeing activities, etc. There is an agreement that these strategies are effective at SBAHC as per the study findings, where the practices and work norms are shaping the positive nurses' work culture in the working units. Nurses are extending these strategies from the policies, leadership, engagements, decision making, and more. Besides, there is guidance for nurse leaders and policymakers in the promotion of these work practices, and plan actions to strengthen the weak areas. The study results verify previous research that discussed the

importance of work factors observation and monitoring, also it is presenting the model in rehabilitation nursing units which has different patients' scope.

5.3 Overall Conclusions

The study aimed to assess the influence of SBAHC nurse's work factors at their units on the nursing work culture. These 5 domain factors are (leadership (strategy, approaches), satisfaction (job satisfaction, job stress), nurse behavior in practice, teamwork (teamwork, communication), and professional commitments. Each domain factor was tested utilizing a scale of question items which reflects the nurse's perception of the domain. The scale/subscale correlations are moderate positive. The importance of this study is due to there are limited studies that aim to assess the nursing work culture in rehabilitation setting work scope, where there is a specialized diversity of patients populations and injuries, and longer stay of patients.

The findings revealed that there is a variation of significance between nurse's responses based on their demographics concerning each work factor domain, the variation mainly appearing in different nursing units, although, they were scoring higher agreement level. This concludes that the nurse's team diversity is in a complex micro working unit within the organization that aims for good quality care (Ma, Olds, and Dunton, 2015). Dealing with this diversity and complexity urge the hospital system and nursing leadership to strategize a working system that suits this diversity of mindsets, backgrounds, behaviors, and perceptions. Also, to create an appropriate positive working culture to comfort nurses in their work. also, it empowers nurses to be a value-adding

member of the organization. the diversity of units' scope and teams are requiring the insights of leaders to implement the appropriate strategies and approaches that suit each unit work practice.

The findings verify that the work factors within nursing affect positively the overall nursing culture of work in the unit at SBAHC. The strength of these predictive factors explained by the nurse's perceptions. Although of the variations between the work scope of each unit, the difference in the leadership of each unit, and the demographic characteristic differences, nurses are having a good overall nursing work culture in their units. The view of the nurses are clearly explaining that leadership is essential with their strategy and approaches, there is teamwork and communications that enhancing the workflow, there is a work control over the nurses' self-behavior, and there are commitments and loyalty to the profession. Also, nurses are satisfied with the job with limited stressors that disturb their work practice.

The findings can be explained due to SBAHC's comprehensive rehabilitation work setting implementation of a standardized policy, work system, strategies, and resources support to present key success factors to align the work in the nurse's units. As well, it must be congruent with the hospital vision, mission, and values. Nurses are affected by every single decision or process created by the organization. hence, if the hospital organizations successfully implement these positive work culture strategies, it will reflect on the employee workers' motivation, engagements, and innovations (Manley, Jackson, and McKenzie, 2019). It was explained earlier that nurses in their units are suffering from many challenges related to workload, carrying over

other providers' functions, and the nursing staff shortage. Although, the positive attribute by SBAHC has been accommodating and overcoming theses needs and challenges carefully which limits the negative impacts. Nurses have built an ideological framework and adaptation within the work system that resulted in putting their knowledge and experience to overcome work challenges (Urban, 2014).

It appears from the findings, that there are minorities from nurses who require further attention within the team, although, the positive relationship of these work factors with the overall culture has been assessed. Perhaps multiple opportunities for development and improvement that nurse leaders are able to take measures for (Hosseini, et al. 2020). In which it covers a bigger scale of work culture that satisfies nurses, enhance their performance, and being more productive in the unit and the organization (Hanan, 2009).

Personally, the dissertation project has been an excellent learning experience that contributed positively to nursing field experience in the research study for the master's program. There was an opportunity to apply the learning theories of management. The literature reviewed shows how much researchers are spending the time and efforts to present a key benefit area for nurses successful and support areas, and the challenges that nurse leaders are trying to figure out and solve within the diversity of settings. The facts that have been observed about reality are not what they look like, hence, the research study will be employed to dig deep to explain or explore to present a good material for

organizations and nurses. This study assisted in understanding how the nurses perceive the decisions and processes that are formulated, which positively or negatively it will reflect on their performance and productivity. Also, it's a reflection on the nurses' professional and personal life, where they carry out the results of these gained norms and work behaviors on patients' care. This indicated that the leadership has to review every approach and strategy they follow and keep evaluating and monitoring the impacts. It is an ongoing practice of work quality improvement as emphasized by (Ma, Olds, and Dunton, 2015).

The nursing work culture as a sensitive study topic can be researched in a different approach that could gain deeper facts about the nurses' perception such as one to one interviews. Further to this, the focus can be on the challenges that nurses may encounter in their work cultures such as the pressure of workload, the work balance with other healthcare providers, and the effectiveness of leadership as a supporter and guidance to staff.

5.4 Recommendations

The research study and the findings presented an important topic that is essential for the healthcare setting and the nurses' framework of practice. Happiness, engagement, empowerments, and comfortable work setting are key areas for nurses' cultural enhancements. Nurses as the cornerstone and the backbone of every healthcare design have to be considered with every strategy and policy that is made by the organization leaders.

The nursing work culture has many components. In this study, 5 key areas of nurses work influential factors that they deal with in every day have been highlighted, however, many other factors can be studied and perhaps these areas can be studied one at a time to discuss a detailed impact on nurses' perception, how they are reacting within each factor domain that contributes to shaping their norms and behavior of practice. As an example, the leadership can be researched on the approaches and strategies of each level and how is the transformation of the workplace strategies to each unit through these leadership levels.

The previous studies have recommended multiple strategies that enhance the work practice, norms, and behaviors that enrich nurses comfortable work and bring excellent outstanding performance. This would create a safe, respectful work culture shape (Kennerly et al. 2015). The importance of theses work strategies is pushing the work limits of nurses and healthcare providers to more innovative and change within the organization starting from their smaller scale units. Aside from this, the negative aspects will be limited such as dissatisfaction, burnout, workload, turnover, and leaving intention.

The relationship between the work factors and how it outlines the nursing work culture is significantly linked (Spence and Lau, 2006). Where the challenge of any of these critical factors will affect the rest and the overall work culture. The study in SBAHC showed an example of how the work strategies, leadership, the support of resources, the structure of workflow, communication and teamwork, and more have been containing the required need work setting for nurses in their units. This was reflected by the frontline

nurses who have the real perception and effect of these practices. Nurses who live in a positive work culture are developing self-motivation, self-actualization (Burtson and Stichler, 2010), in which it drives empowerment, innovation, and creative change framework.

5.5 Research Contributions

The research study has a key contribution area with knowledge and evidence-based facts that is beneficial to the practice and academic, below is a brief discussion

5.5.1 Contribution to nursing practice

The contribution to the field of management, specifically nursing management is well presented in this study. The nursing profession has been showing its importance within the healthcare industries through their small teams of each unit of practice. the nursing units are formulating micro organization units, where the units work habits, norms and behaviors are a result of the overall policies and work system implemented. In the rehabilitation setting, the scope of practice is different from other acute care. nurses showed a good work culture in the units.

The research area verifying the need for the best care to nurses' staff and frontline nurses who show passionate and humanitarian attention to patients and family lives. The study is providing the tactics of facilitating the work factors they placed in to overcome work task challenges, live with each other, enhancing the productivity to complete this noble mission. Nurse leaders are

the direct monitor and supporters who are creating these work culture tactics to comfort nurses for their best performance. Besides, it assists in shifting leaders' minds and strategies to support nurses and nursing practice. As they are the key to improve the shortfalls, feedback to senior management, and keep a close relationship with their team. The nurses as well are guided to keep the implementation of good strategies to the best that maintains the teamwork, feeling of empowerment and deepen the professional commitments and loyalty. The combined facts collected from literature and the study verify the care of work culture to nurses.

5.5.2 Contribution to academic

The evidence-based model presented in the study provides a piece of information for scholars and academics in the field of nursing management. the model which was used showed a connection that links the workplace culture and framework design to the smaller scale of micro organized nursing units. Where it verified with nurse’s work factors influence the overall unit work culture. The nurse’s perception is a true validation of how these systems are shaped in which it reflects on the unit culture. the research methodology could be transformed into a different setting where nursing rehabilitation practiced in different areas. There is a need to evaluate the work norms, practices, behaviors of nurses at all times. The information within the study is an additional verification in the nursing practice improvement that qualifies high standards of nursing staff and patients care and safety.

Additional research academic contributions are referred to as the study involvement of nurses' professional and personal aspects, such as the interaction, wellbeing, professional commitments, communication, teamwork, team relationships, and more. It's an addition to the social science that shows the powerful nursing work and what true intentions must be implemented in place to empower nurses' professional and personal work life. The nursing work culture in each nursing unit is a true reflection of the overall nursing practice and healthcare organization's work system.

The research area is a drive for academic scholars and nursing researchers to dig deeper into the nursing work culture. There are multiple evidenced-based work factors that need to be investigated in a detailed and individual scale focusing on each work factor to have a positive work culture for nurses.

5.6 Limitation and further research

Although the finding of the study revealed a strong contribution of the work factors of leadership, satisfaction, nurse behavior in practice, teamwork, and professional commitments are shaping a good nursing unit's work culture, however, the study has limitations that must be mentioned for future research projects. One of the limitations that the study was conducted in SBAHC, where involving other organization with similar scope of practice in rehabilitation would improve the validation of the results, which is rare within the region to have a comprehensive rehabilitation specialized hospitals. Also, due to the situation of the pandemic of Covid-19, there were limitations to access additional nurses who are stranded outside the country, besides, there

are nurses who had a full schedule dealing with COVID -19 patients, who did not have a chance to participate in the study. Due to the COVID-19 situations as well, the patients' census and hospital operations were low, this gave the nurses a more relaxed work time different from the usual work. however, if the study was repeated in a different timing or season through the year, it could verify the findings for nurses' responses. Another limitation related to the scale used which was collated from different nursing cultural and environmental work practice, although the reliability and validity were strong enough to uses, it needs further testing in a different work environment, nurses diversity, different work scope. This would be recommended for future research use and validation of the strength of the scale. Further studies on a similar topic are recommended for future research.

5.7 Chapter Summary

This chapter presented the research conclusions and recommendations based on the study. A brief review of chapters 1-4, in addition to the verification of the study objective achievements. The study conclusion was explained with recommendations for future research. Finally, the limitation of the study was considered for future research guidance.

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Appendix 1: Questionnaire Changes and references.

Piloting Questions	Changes in questions	Answers		References
What is your primary role?	What is your primary role?	Staff Nurse Nurse Assistant	No changes	
What is your unit?	What is your unit?	□*PEDS I* □ *PEDS II* □*PEDS III* □ *PEDS IV* □*PEDS V* □ *PEDS VI* □*GR I* □ *GR II* □*WHU I* □ *WHU II* □*Medical General I* □ *Medical General II* □*Stroke I* □ *Stroke II* □*TBI I* □ *TBI II* □*SCI I* □ *SCI II* □ *OPD* □*OR* □ *HHC* □ *WCU*	No changes	
How long you have been employed in SBAHC? *	How long you have been employed in SBAHC?	3-12 months 1-5 years 6-10 years 11-15 years More than 15 years	No changes	
What is your gender? *	What is your gender?	Male Female	No changes	
What is your highest degree level of nursing education? *	What is your highest degree level of nursing education?	Master Bachelor Diploma	No changes	
Marital Status *	Marital Status	Single Married Divorced Widow	No changes	
What is your age?	What is your age?	20-30 years 31-40 years 41-50 years More than 50	No changes	
which racial/ethnic category do you belong to (Select the one best answer)?			Omitted - no/limited additional value based on expert researcher review	
What is your religion?			Omitted - no/limited additional value based on expert researcher review	
What is your Nationality? *	What is your Nationality?	Saudi/ Filipino/ Jordanian/ Malaysian/ South African	No changes	

Is English your first language?	Is English your first language?	Yes No	No changes	
	A. The leadership			
Nurse leaders are setting a defined standard of practice in nursing units.	LS 1. Nurse leaders are setting a defined standard of practice in nursing units.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No Changes	Kalisch, Lee, & Salas (2010)
Head Nurse/ Manager is monitoring staff compliance with the Standards of task rules.	LS 2. Head Nurse/ Manager is monitoring staff compliance of the Standards task rules.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No Changes	Kalisch, Lee, & Salas (2010)
Nurse Leaders' strategies are involving Nursing in the internal governance of the hospital.	LS 3. Nurse Leaders' strategies are involving Nursing in the internal governance of the hospital.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No Changes	(Lake,2002)
Nurses in our unit have Career development/clinical ladder opportunities. *	LS 4. Nurses in our unit have Career development/clinical ladder opportunities. *	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No Changes	(Spence and Lau, 2006)
	LS 5. There are enough support services resources to get the job done.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	New question added as per the expert researcher review	Chen, et al. (2020)
There are opportunities for nurses to participate in policy decisions. *	LA 6. There are opportunities for nurses to participate in policy decisions. *	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No Changes	(Lake,2002)
Head Nurse/ Manager is explaining the standards of task rules for staff.	LA 7. Head Nurse/ Manager is explaining the standards of task rules for staff.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No Changes	Kalisch, Lee, & Salas (2010)
Head Nurse/Manager is highly visible and accessible to staff.	LA 8. Head Nurse/Manager is highly visible and accessible to staff.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No Changes	(Lake,2002)
Head nurse/Manager of	LA 9. Head	Strongly Agree/ Agree/ Tend to	No Changes	(Lake,2002)

staff is supportive of the nurses. *	nurse/Manager is supportive of the nurses. *	Agree/ Tend to Disagree/ Disagree/ Strongly Disagree		
Nurses have plenty of opportunity to discuss patient care problems with each other on our unit	LA 10. Nurses have plenty of opportunities to discuss patient care problems with head nurse/ manager on our unit. *	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	rephrased	(Lake,2002)
Head Nurse/Manager use mistakes as learning opportunities, not criticism.	LA 11. Head Nurse/Manager use mistakes as learning opportunities, not criticism.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No Changes	(Lake,2002)
	B. Satisfaction			
Nurses are satisfied with the nursing tasks design on our unit	12. Nurses are satisfied with the nursing tasks assignment in our unit.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	rephrased	NDNQI,2020)
Nurses recommend our unit as a good place to work.	13. Nurses recommend our unit as a good place to work.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No Changes	NDNQI,2020)
Nurses on our unit are satisfied with the hospital nursing administrator	14. Nurses in our unit are satisfied with the nursing unit Leadership	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	rephrased	NDNQI,2020)
Nurses in our unit, satisfied with their jobs	15. Nurses in our unit, satisfied with their jobs.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No Changes	Yap, et al. (2014)
Overall, the culture of this organization is positive that helps to make sure patients are given high-quality care	16. Overall, I am satisfied with the culture of workplace that helps staff Not to Leave work.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	rephrased	Yap, et al. (2014)
	17. I am comfortable with my work schedule and hours.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/	New question added as per the expert	Chen, et al. (2020)

		Strongly Disagree	researcher review	
	18.The burden of work does NOT affect the overall work practice.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	New question added as per the expert researcher review	Chen, et al. (2020)
Nurse behaviors in practice	C. Nurse behaviors in practice			
Nurses in our unit have good control over the work tasks.	19. Nurses in our unit have good control over the work tasks.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No Changes	Yap, et al. (2014)
Nursing efficiently carries out their role and responsibilities.	20. Nursing efficiently Managing their role and responsibilities timing.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	Rephrased	
Nurses effectively carry out their roles and responsibilities.	21. Nurses effectively carry out their roles and responsibilities.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No Changes	Yap, et al. (2014)
Nurses are enthusiastically behaving towards their roles and responsibilities	22. Nurses are enthusiastically performing their roles and responsibilities.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	rephrased	
There is a respectful behavior among nurses in our unit.	23. There is a respectful behavior among nurses in our unit.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No Changes	
	24. There is an innovative and creative work practice in our unit.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	New question added as per the expert researcher review	(Spence and Lau, 2006)
Teamwork	D. Teamwork			
Staff help each other in daily tasks.	25. Staff help other in daily tasks.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No changes	Kalisch, Lee, & Salas (2010)

Staff show respect for one another.	26. There is a respectful relationship among staff	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	rephrased	Chen, et al. (2020)
Staff trust one another.	27. There is a trust relationship among staff	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	Rephrased	Kalisch, Lee, & Salas (2010)
Staff feel connected to one another.	28. There is a collaboration relationship among Staff.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	Rephrased	
There is a good deal of teamwork among nurses I work with.	29. There is a good deal of teamwork among nurses in our unit	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	Rephrased	Chen, et al. (2020)
Nurses I work with ask each other to pitch in and help when things get busy. *	30. Nurses I work with ask each other to pitch in and help when things get busy.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No Changes	Kalisch, Lee, & Salas (2010)
Nurses communicate with support to each other. *	31. Nurses communicate with support to each other.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No Changes	*(NDNQI, 2020)*
Physicians cooperate with nurses on our unit. *	32. There is good communication between nursing and physician to get job done	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	Rephrased	
Staff use appropriate language with patients and family	33. Staff communicate appropriately with patients and families.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	rephrased	
Staff care documentation in health records is helpful to get job done	34. Staff documentation of the care plan is well communicated to get the job done.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/	rephrased	

		Strongly Disagree		
Staff use appropriate language with other staff *	35. Staff use appropriate language with other staff	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No changes	
E. Professional Commitment and Loyalty	E. Professional Commitment and Loyalty			
I feel very loyal to the nursing profession. *	36. I feel very loyal to the nursing profession.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No changes	Al-Hamdan, Dalky & Al-Ramadneh, (2017)
For me, nursing is the best of all professions.	37. For me, nursing is one of the best of all professions.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	rephrased	Al-Hamdan, Dalky & Al-Ramadneh, (2017)
I am proud to tell others that I am part of this profession.	38. I am proud to tell others that I am part of this profession.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No changes	Al-Hamdan, Dalky & Al-Ramadneh, (2017)
I really care about the nursing care profession.	39. I really care about the nursing care profession.	Strongly Agree/ Agree/ Tend to Agree/ Tend to Disagree/ Disagree/ Strongly Disagree	No changes	Al-Hamdan, Dalky & Al-Ramadneh, (2017)

Appendix 1. References

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Appendix 2: Results Analysis statistical tables and graphs

Table 4.1 General demographic characteristics of participating nurses

		N (%)
Gender	Male	93 (28.9)
	Female	229 (71.1)
Age	20-30 years	103 (32)
	31-40 years	168 (52.2)
	41-50 years	44 (13.7)
	more than 50 years	7 (2.2)
Highest degree of nursing education	Diploma	55 (17.1)
	Bachelor	260 (80.7)
	Master	7 (2.2)
Marital status	Single	149 (46.3)
	Married	169 (52.5)
	Divorced	2 (0.6)
	Widow	2 (0.6)
Nationality	Filipino	298 (92.5)
	Jordanian	12 (3.7)
	Saudi	4 (1.2)
	Malaysian	3 (0.9)
	South African	5 (1.6)
English is your first language	Yes	87 (27)
	No	235 (73)

Table 4.2. work-related general information about participating nurses

		N (%)
Primary role	Staff Nurse	241 (74.8)
	Nurse Assistant	81 (25.2)
Duration of employment in SBAHC	3-12 months	28 (8.7)
	1-5 years	156 (48.4)
	6-10 years	96 (29.8)
	11-15 years	36 (11.2)
	More than 15 years	6 (1.9)
Unit	Outpatient clinic	11 (3.4)
	Wound Care Unit	18 (5.6)
	Traumatic Brain Injury 1	12 (3.7)
	Traumatic Brain Injury 2	10 (3.1)
	General Rehab 1	13 (4)
	General Rehab 2	11 (3.4)
	Home Health Care	10 (3.1)
	Medical General 1	21 (6.5)
	Medical General 2	9 (2.8)
	Operating Room (OR, Anesthesia, pre-holding, recovery, Day surgery)	40 (12.4)
	PED I	17 (5.3)
	PED II	12 (3.7)
	PED III	16 (5)
	PED IV	11 (3.4)
	PED V	9 (2.8)
	PED VI	22 (6.8)
	Spinal Cord injury 1	10 (3.1)
	Spinal Cord injury 2	11 (3.4)
	Stroke 1	10 (3.1)
	Stroke 2	13 (4)
	Women Health unit 1	16 (5)
	Women Health unit 2	20 (6.2)

Table 4.3. The overall reliability of construct subscale *Cronbach alphas coefficient* (α). N = (37).

Subscale Construct areas		*Cronbach alphas* α	
A. The Leadership	*Leadership strategy (4) items*	.722	.845
	Leadership approach (6) items	.72	
B. Satisfaction	*Satisfaction (5) items*	.831	.831
C. Nurse Behavior in practice	*Nurse Behavior in practice (4) items*	.911	.911
D. Teamwork	*Teamwork (6) items*	.916	.921
	Communication (6) items	.813	
E. Professional commitment	*Professional commitment (4) items*	.908	.908
Overall	Overall *(35) items*	.951	.951

Table 4.4. Pearson Correlations significance between construct subscales

		Leadership	Satisfaction	Work behavior in Practice	Teamwork	Professional commitment and loyalty
Satisfaction	Pearson Correlation	.476**				
	Sig. (2-tailed)	.003				
	Covariance	.091				
Work behavior in Practice	Pearson Correlation	.661**	.413*			
	Sig. (2-tailed)	.000	.011			
	Covariance	.114	.096			
Teamwork	Pearson Correlation	.619**	.342*	.829**		
	Sig. (2-tailed)	.000	.038	.000		
	Covariance	.104	.077	.169		
Professional commitment and loyalty	Pearson Correlation	.589**	.348*	.626**	.643**	
	Sig. (2-tailed)	.000	.035	.000	.000	
	Covariance	.149	.119	.192	.194	
Nursing work culture	Pearson Correlation	.810**	.641**	.868**	.846**	.836**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	Covariance	.120	.128	.156	.149	.221

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

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.5 Kaiser-Meyer-Olkin (KMO) and Bartlett's tests for sampling Adequacy.

Scales	KMO and Bartlett's tests
A. The Leadership	.742
B. Satisfaction	.798
C. Nurse Behavior in practice	.835
D. Teamwork	.736
E. Professional commitment	.708

Table 4.6 Rotated Component Matrix [a] (N = 37)

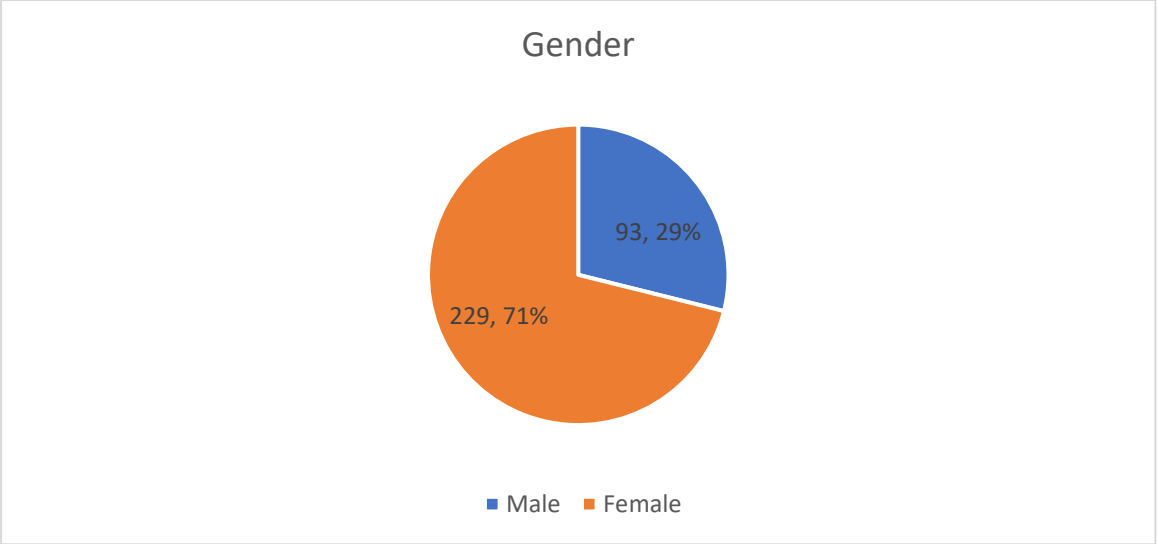
	Component							
Scale items	1	2	3	4	5	6	7	8
Work_Beh_3	.829							
Work_Beh_4	.828							
Team_4	.808							
Leader_Approach_6	.678							
Work_Beh_2	.658							
Team_3	.649							
Commmunication6	.643	.516						
Work_Beh_1	.559							
Team_1		.824						
Commmunication2		.791						
Work_Beh_5		.791						
Commmunication1		.743						
Team_5		.690						
Team_2		.682						
Commmunication4		.492						
Commmunication5		.473						
ProfC_2			.854					
ProfC_3			.801					
ProfC_1			.724					
ProfC_4		.492	.653					
Satisfaction_4				.905				
Satisfaction_2				.826				
Satisfaction_5				.819				
Satisfaction_1				.542				
Leader_Approach_1					.739			
Leader_Approach_3					.706			
Satisfaction_3					.696			
Leader_Approach_2					.678			
Leader_Strategy_4					.677			
Leader_Strategy_3					.528			
Leader_Approach_4						.850		
Leader_Strategy_2						.753		
Leader_Strategy_1							.818	
Leader_Approach_5							.505	
Commmunication3								.878

Extraction Method: Principal Component Analysis.

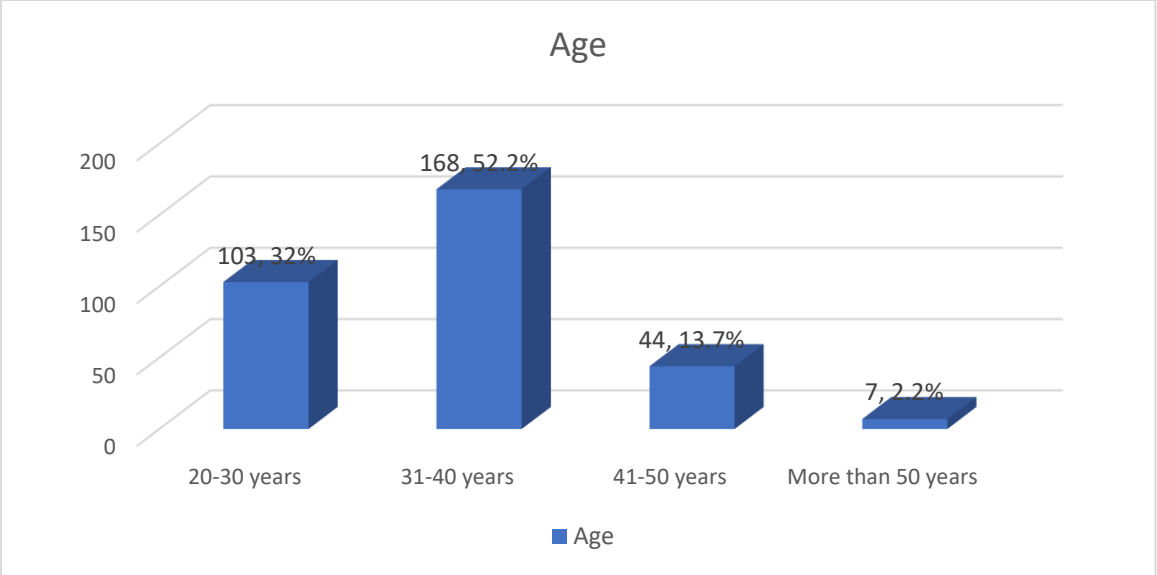
Rotation Method: Varimax with Kaiser Normalization. [a]

[a]. Rotation converged in 11 iterations.

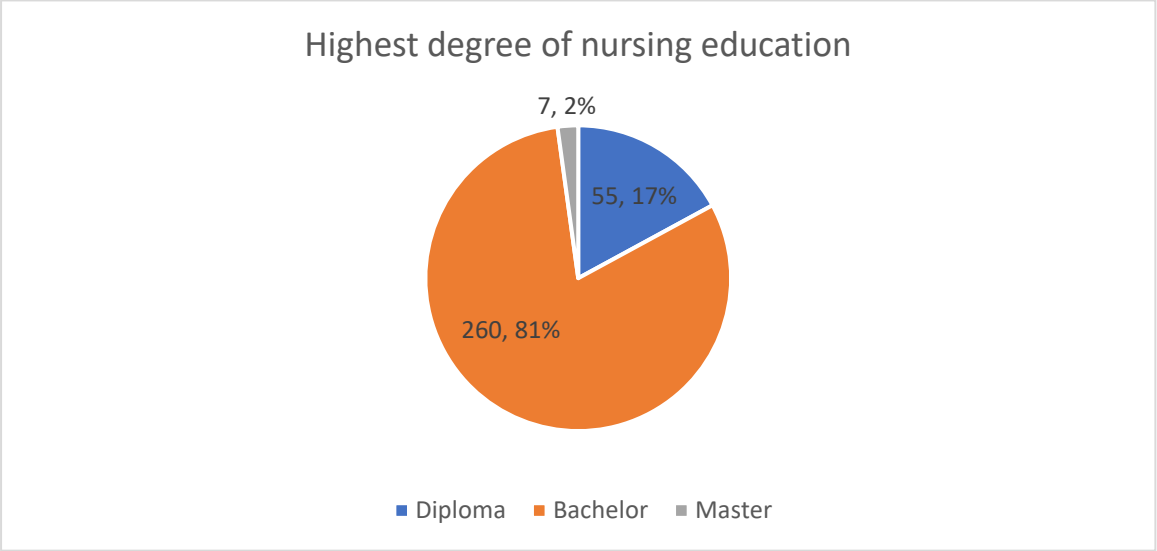
Graph 4. 1. Demographic results: Gender



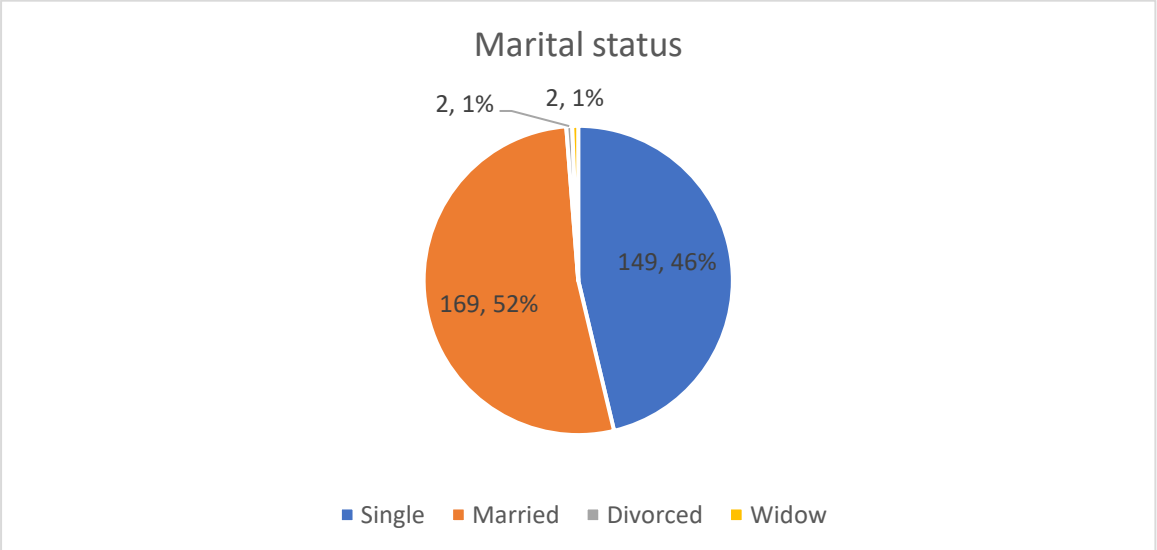
Graph 4. 2. Demographic results: Age



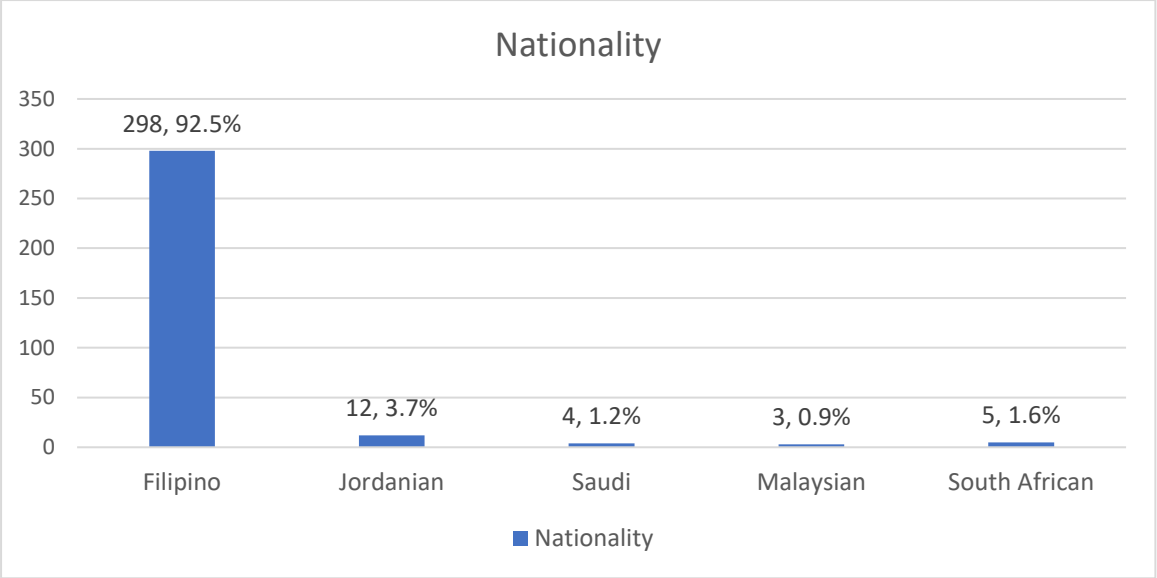
Graph 4. 3. Demographic results: Highest nursing education degree level



Graph 4. 4. Demographic results: Marital Status

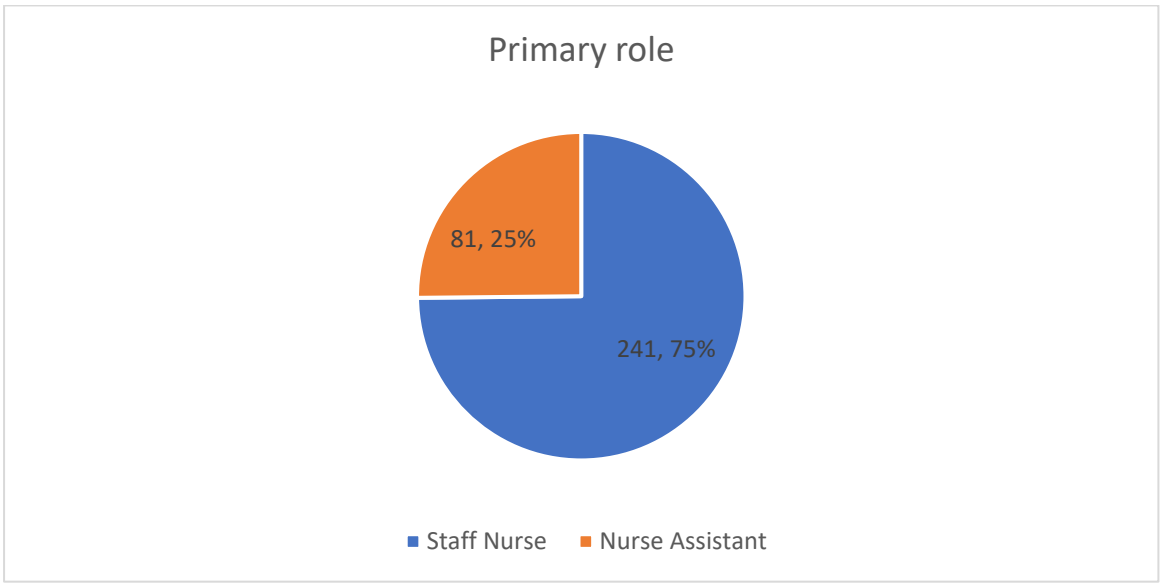


Graph 4. 5. Demographic results: Nationality

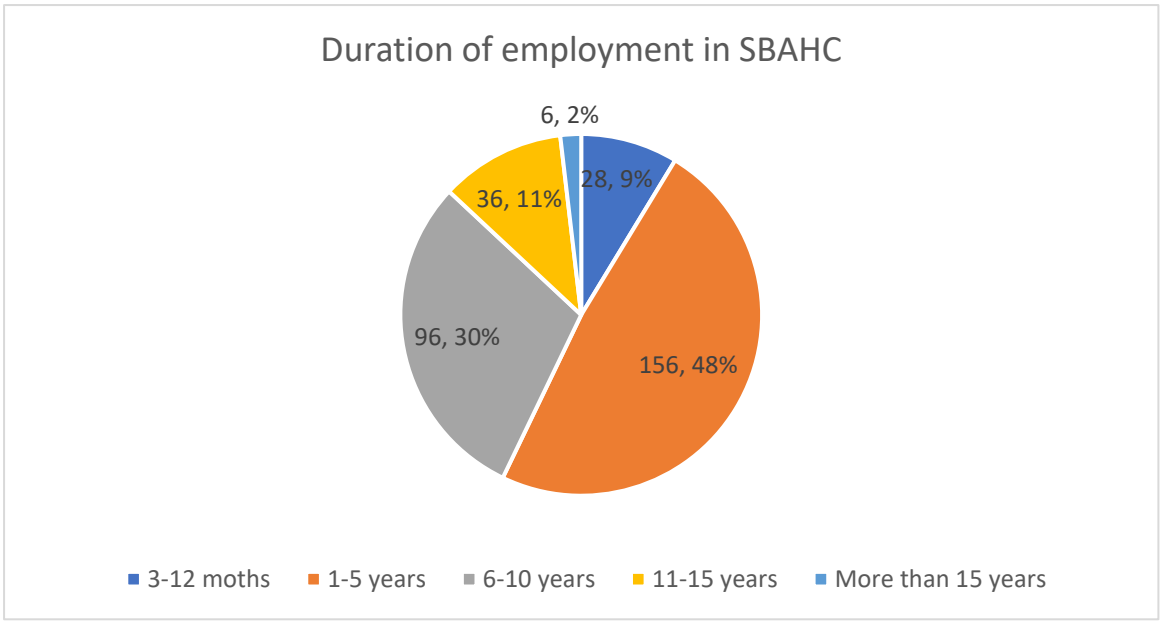


Graph 4. 6. Demographic results: English Language

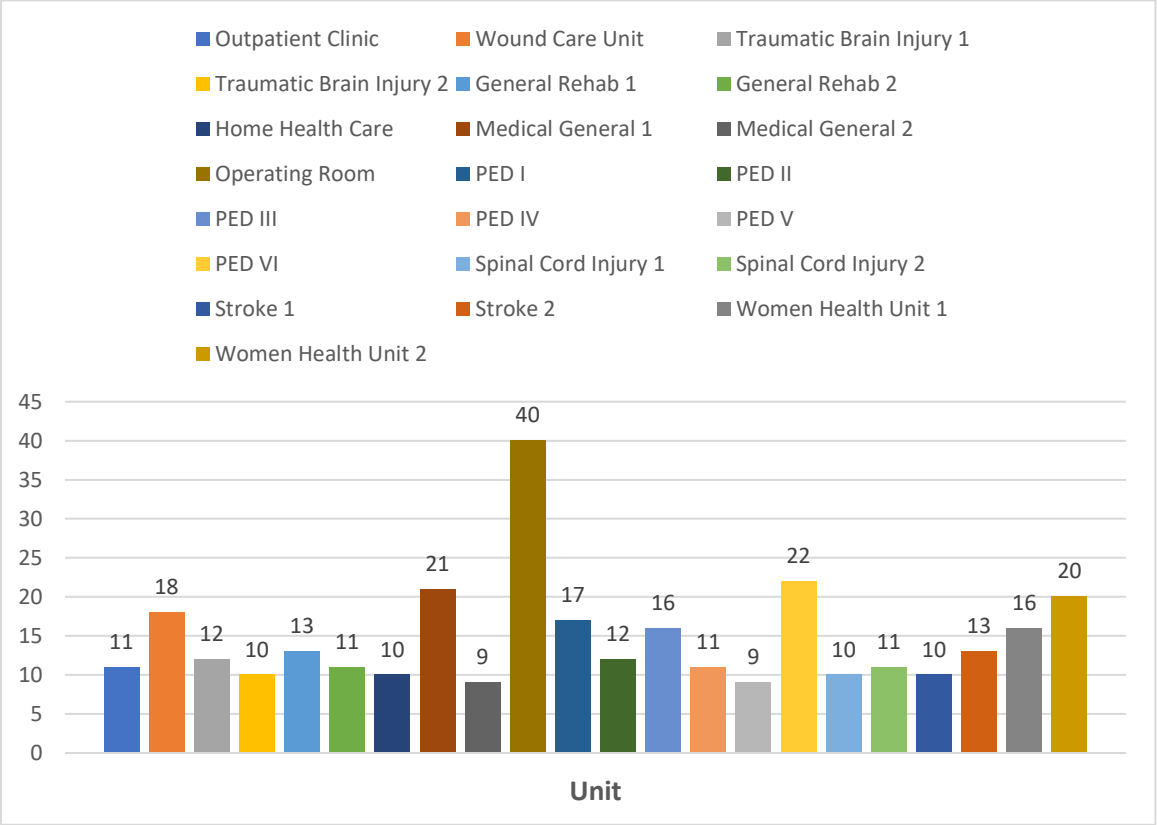
Graph 4. 7. Demographic results: Primary Role



Graph 4. 8. Demographic results: SBAHC work experience



Graph 4. 9. Demographic results: Nursing Units



Graph 4. 10. Mean distribution of all scale/subscale

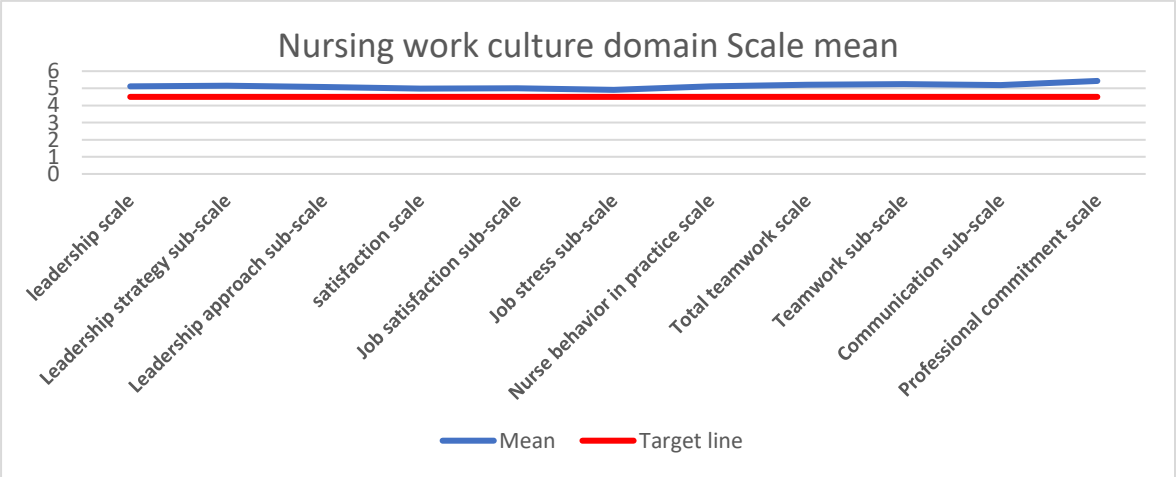


Table 4.7 The mean, median scores, and standard deviations of total and subscales.

	Mean	Standard Deviation	Median
Total leadership scale	5.11	.66	5.00
Leadership strategy sub-scale	5.16	.63	5.00
Leadership approach sub-scale	5.07	.72	5.00
Total satisfaction scale	4.98	.77	5.00
Job satisfaction sub-scale	5.01	.78	5.00
Job stress sub-scale	4.91	.86	5.00
Nurse behavior in practice scale	5.11	.70	5.00
Total teamwork scale	5.21	.68	5.09
Teamwork sub-scale	5.25	.74	5.00
Communication sub-scale	5.18	.66	5.00
Professional commitment scale	5.43	.63	5.50

The next 5 tables show individual responses, means, and standard deviations to the 5 domains and their sub-domains

Table 4. 8. Nurses individual responses to Leadership Strategy, Approach subscale.

(M: Mean; SD: Standard deviation).

	Strongly Disagree	Disagree	Tend to Disagree	Tend to Agree	Agree	Strongly Agree	M (SD)
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	
Leadership strategy sub-domain							
Nurse leaders are setting a defined standard of practice in nursing units	2 (0.6)	2 (0.6)	1 (0.3)	16 (5)	196 (60.9)	105 (32.6)	5.22 (.7)
Head Nurse/Manager is monitoring staff compliance of the Standards task rules	2 (0.6)	1 (0.3)	2 (0.6)	10 (3.1)	180 (55.9)	127 (39.4)	5.31 (.69)
Nurse Leaders' strategies are involving Nursing in the internal governance of the hospital	2 (0.6)	3 (0.9)	2 (0.6)	28 (8.7)	198 (61.5)	89 (27.6)	5.12 (.74)
Nurses in our unit have Career development/clinical ladder opportunities	2 (0.6)	4 (1.2)	3 (0.9)	24 (7.5)	193 (59.9)	96 (29.8)	5.14 (.77)
There are enough support services resources to get the job done	3 (0.9)	5 (1.6)	7 (2.2)	30 (9.3)	212 (65.8)	65 (20.2)	4.98 (.82)
Leadership approach sub-domain							
There are opportunities for nurses to participate in policy decisions	3 (0.9)	7 (2.2)	10 (3.1)	46 (14.3)	198 (61.5)	58 (18)	4.87 (.88)
Head Nurse/Manager is explaining the standards of task rules for staff	2 (0.6)	5 (1.6)	3 (0.9)	22 (6.8)	196 (60.9)	94 (29.2)	5.13 (.78)
Head Nurse/Manager is highly visible and accessible to staff	2 (0.6)	2 (0.6)	6 (1.9)	21 (6.5)	174 (54)	117 (36.3)	5.21 (.78)
Head nurse/Manager of staff is supportive of the nurses	5 (1.6)	2 (0.6)	6 (1.9)	26 (8.1)	178 (55.3)	105 (32.6)	5.12 (.87)
Nurses have plenty of opportunities to discuss patient care problems with head nurse/ manager on our unit	2 (0.6)	6 (1.9)	4 (1.2)	26 (8.1)	198 (61.5)	86 (26.7)	5.08 (.81)
Head Nurse/Manager use mistakes as learning opportunities, not criticism	4 (1.2)	5 (1.6)	11 (3.4)	29 (9)	198 (61.5)	75 (23.3)	4.97 (.89)

Table 4. 9. Nurses individual responses to Job satisfaction, Job stress subscale.

(M: Mean; SD: Standard deviation).

	Strongly Disagree	Disagree	Tend to Disagree	Tend to Agree	Agree	Strongly Agree	M (SD)
	N (%)	N (%)	N (%)	N (%)	N(%)	N(%)	
Job satisfaction sub-domain							
Nurses are satisfied with the nursing tasks assignment in our unit	5 (1.6)	5 (1.6)	8 (2.5)	37 (11.5)	207 (64.3)	60 (18.6)	4.91 (.88)
Nurses recommend our unit as a good place to work	5 (1.6)	1 (0.3)	5 (1.6)	22 (6.8)	199 (61.8)	90 (28)	5.1 (.82)
Nurses in our unit are satisfied with the nursing unit Leadership	5 (1.6)	2 (0.6)	5 (1.6)	32 (9.9)	200 (62.1)	78 (24.2)	5.03 (.84)
Nurses in our unit, satisfied with their jobs	4 (1.2)	4 (1.2)	S8 (2.5)	30 (9.3)	197 (61.2)	79 (24.5)	5.01 (.86)
Overall, I am satisfied with the culture of the workplace that helps staff Not to Leave work	4 (1.2)	3 (0.9)	9 (2.8)	37 (11.5)	193 (59.9)	76 (23.6)	4.98 (.86)
Job stress sub-domain							
I am comfortable with my work schedule and hours	5 (1.6)	4 (1.2)	10 (3.1)	24 (7.5)	195 (60.6)	84 (26.1)	5.02 (.9)
The burden of work does NOT affect the overall work practice	6 (1.9)	7 (2.2)	17 (5.3)	44 (13.7)	190 (59)	58 (18)	4.79 (.99)

Table 4. 10. Nurses individual responses to Nurse behavior in practice scale.

(M: Mean; SD: Standard deviation).

	Strongly Disagree	Disagree	Tend to Disagree	Tend to Agree	Agree	Strongly Agree	M (SD)
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	
Nurses in our unit have good control over the work tasks	2 (0.6)	4 (1.2)	6 (1.9)	33 (10.2)	207 (64.3)	70 (21.7)	5.01 (.77)
Nursing efficiently Managing their role and responsibilities timing	2 (0.6)	2 (0.6)	7 (2.2)	22 (6.8)	214 (66.5)	75 (23.3)	5.07 (.73)
Nurses effectively carry out their roles and responsibilities	4 (1.2)	2 (0.6)	1 (0.3)	16 (5)	198 (61.5)	101 (31.4)	5.18 (.77)
Nurses are enthusiastically performing their roles and responsibilities	4 (1.2)	1 (0.3)	4 (1.2)	14 (4.3)	205 (63.7)	94 (29.2)	5.16 (.76)
There is a respectful behavior among nurses in our unit	6 (1.9)	0 (1.2)	2 (0.3)	24 (7.5)	186 (57.8)	104 (32.3)	5.16 (.83)
There is an innovative and creative work practice in our unit	4 (1.2)	4 (1.2)	6 (1.9)	22 (6.8)	207 (64.3)	79 (24.5)	5.05 (.83)

Table 4. 11. Nurses individual responses to Teamwork, Communication subscale .

(M: Mean; SD: Standard deviation).

	Strongly Disagree	Disagree	Tend to Disagree	Tend to Agree	Agree	Strongly Agree	M (SD)
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	
Teamwork sub-domain							
Staff help each other in daily tasks	6 (1.9)	1 (0.3)	2 (0.6)	15 (4.7)	161 (50)	137 (42.5)	5.28 (.86)
There is a respectful relationship among staff	6 (1.9)	0 (0.0)	3 (0.9)	16 (5)	169 (52.5)	128 (39.8)	5.25 (.84)
There is a trust relationship among staff	5 (1.6)	0 (0.0)	2 (0.6)	19 (5.9)	183 (56.8)	113 (35.1)	5.21 (.79)
There is a collaborative relationship among Staff	4 (1.2)	1 (0.3)	0 (0.0)	18 (5.6)	190 (59)	109 (33.9)	5.22 (.75)
There is a good deal of teamwork among nurses in our unit	4 (1.2)	2 (0.6)	0 (0.0)	13 (4)	176 (54.7)	127 (39.4)	5.28 (.78)
Communication sub-domain							
Nurses I work with ask each other to pitch in and help when things get busy	4 (1.2)	1 (0.3)	1 (0.3)	12 (3.7)	190 (59)	114 (35.4)	5.25 (.75)
Nurses communicate with support to each other	4 (1.2)	2 (0.6)	1 (0.3)	12 (3.7)	188 (58.4)	115 (35.7)	5.24 (.77)
There is good communication between nursing and physician to get the job done	6 (1.9)	2 (0.6)	3 (0.9)	38 (11.8)	194 (60.2)	79 (24.5)	5.01 (.86)
Staff communicate appropriately with patients and families	4 (1.2)	1 (0.3)	2 (0.6)	13 (4)	204 (63.4)	98 (30.4)	5.19 (.74)
Staff documentation of the care plan is well communicated to get the job done	4 (1.2)	1 (0.3)	1 (0.3)	13 (4)	206 (64)	97 (30.1)	5.19 (.73)
Staff use appropriate language with other staff	3 (0.9)	0 (0.0)	1 (0.3)	14 (4.3)	218 (67.7)	86 (26.7)	5.18 (.66)

Table 4. 12. Nurses individual responses to Professional commitment and loyalty scale.

(M: Mean; SD: Standard deviation).

	Strongly Disagree	Disagree	Tend to Disagree	Tend to Agree	Agree	Strongly Agree	M (SD)
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	
I feel very loyal to the nursing profession	2 (0.6)	0 (0)	2 (0.6)	6 (1.9)	166 (51.6)	146 (45.3)	5.39 (.66)
For me, nursing is one of the best of all professions	2 (0.6)	1 (0.3)	3 (0.9)	14 (4.3)	144 (44.7)	158 (49.1)	5.39 (.73)
I am proud to tell others that I am part of this profession	2 (0.6)	0 (0)	1 (0.3)	8 (2.5)	140 (43.5)	171 (53.1)	5.47 (.66)
I really care about the nursing care profession	2 (0.6)	0 (0)	0 (0)	11 (3.4)	142 (44.1)	167 (51.9)	5.46 (.66)

Table 4. 13. Correlations between scales

Scale/subscale	Leadership Strategy	Leadership Approach	Job Satisfaction	Job Stress	Nurse Behavior	Teamwork	Communication	Professional Commitment
Leadership Strategy	1.00							
Leadership Approach	0.79	1.00						
Job Satisfaction	0.66	0.69	1.00					
Job Stress	0.58	0.56	0.70	1.00				
Nurse Behavior	0.65	0.63	0.74	0.71	1.00			
Teamwork	0.51	0.52	0.62	0.52	0.75	1.00		
Communication	0.61	0.60	0.69	0.61	0.78	0.79	1.00	
Professional Commitment	0.42	0.47	0.45	0.39	0.50	0.49	0.56	1.00

Note: All correlations are significant at the 0.01 level; values < 0.5 indicate low correlation, values of ≥ 0.5 and < 0.8 indicate moderate correlation; values > 0.8 indicate high correlation (Yap, Kennerly, & Flint, 2014).

Table 4. 14. Summary of association relationship of demographics and scale

	leadership scale			satisfaction scale			Nurse behavior in practice scale			teamwork scale			Professional Commitment scale		
	F	t	*p*	F	t	*p*	F	t	*p*	F	t	*p*	F	t	*p*
Age [a]	1.9		0.154	1.58		0.22	1.698		0.191	1.372		0.273	1.48		0.24
Gender		-1.94	0.053		-1.57	0.12		-2.36	0.019*		-2.01	0.046*		-1.25	0.22
Nationality [a]	7.88		0.000*	2.99		0.03*	7.145		0.005*	57.01		0.000*	0.72		0.61
English is your first language		2.24	0.026*		1.969	0.05*		1.517	0.13		1.044	0.297		0.533	0.59
Marital status	2.25		0.083	1.81		0.15	2.534		0.057	0.237		0.044*	0.53		0.67
Primary role		-0.1	0.923		-1.24	0.22		-0.47	0.641		-0.5	0.617		-0.11	0.91
Unit [a]	3.44		0.001*	1.56		0.08	-8.91		0.004*	-8.71		0.004*	1.48		0.08
Duration of employment in SBAHC	9.7		0.053	2.04		0.11	1.041		0.402	1.276		0.3	1.37		0.27
Highest degree of nursing education	0.42		0.657	1.47		0.23	0.477		0.621	0.42		0.657	3.09		0.08

a: Welch test is reported instead of one-way ANOVA; *: indicate statistical significance with *p*-value ≤ 0.05

The next tables show the association between demographic of General and work-related characteristics, and each of the main 5 domains.

Table 4. 15. The association between demographic General characteristics of Leadership scale

		Total leadership scale				
		M	SD	F	*t*	*p*
Age [a]	20-30 years	5.20	.51	1.899		0.154
	31-40 years	5.09	.62			
	41-50 years	5.17	.51			
	more than 50 years	3.78	1.98			
Gender	Male	5.00	.86		-1.94	0.053
	Female	5.15	.55			
Nationality [a]	Filipino	5.12	.57	7.88		0.000*
	Jordanian	5.14	.54			
	Saudi	3.50	2.89			
	Malaysian	5.94	.05			
	South African	4.96	.93			
English is your first language	Yes	5.24	.53		2.24	0.026*
	No	5.06	.69			
Marital status	Single	5.04	.75	2.247		0.083
	Married	5.17	.58			
	Divorced	4.27	.64			
	Widow	5.36	.64			

a: Welch test is reported instead of one-way ANOVA; *: indicate statistical significance with *p*-value ≤ 0.05

Table 4. 16. The association between demographic work-related characteristics of Leadership scale

		Total leadership scale				
		M	SD	F	*t*	*p*
Primary role	Staff Nurse	5.11	.70		-0.097	0.923
	Nurse Assistant	5.11	.50			
Unit [a]	Outpatient clinic	5.31	.49	3.437		0.001*
	Wound Care Unit	5.37	.38			
	Traumatic Brain Injury 1	5.14	.39			
	Traumatic Brain Injury 2	5.12	.27			
	General Rehab 1	5.02	.52			
	General Rehab 2	4.92	.42			
	Home Health Care	4.41	.91			
	Medical General 1	5.26	.50			
	Medical General 2	4.82	.86			
	Operating Room (OR, Anesthesia, pre-holding, recovery, Day surgery)	5.13	.61			
	PED I	5.36	.51			
	PED II	5.02	.61			
	PED III	5.30	.45			
	PED IV	5.40	.51			
	PED V	5.20	.60			
	PED VI	5.33	.42			
	Spinal Cord injury 1	4.93	.08			
	Spinal Cord injury 2	4.73	.88			
	Stroke 1	4.95	.43			
	Stroke 2	4.48	1.64			
	Women Health unit 1	5.02	.41			
	Women Health unit 2	5.30	.70			
Duration of employment in SBAHC	3-12 months	5.32	.42	9.7		0.053
	1-5 years	5.17	.54			
	6-10 years	5.03	.66			
	11-15 years	5.15	.58			
	More than 15 years	3.65	2.06			
Highest degree of nursing education	Diploma	5.12	.61	0.42		0.657
	Bachelor	5.11	.67			
	Master	4.88	.53			

a: Welch test is reported instead of one-way ANOVA; *: indicate statistical significance with *p*-value ≤ 0.05

Table 4. 17. The association between demographic general characteristics of Satisfaction scale.

([a]: Welch test is reported instead of one-way ANOVA; *: indicate statistical significance with *p*-value ≤ 0.05).

		Total satisfaction scale				
		M	SD	F	*t*	*p*
Age	20-30 years	5.07	.63	1.581		0.217
	31-40 years	4.95	.80			
	41-50 years	5.09	.53			
	more than 50 years	3.92	2.00			
Gender	Male	4.88	.99		-1.565	0.119
	Female	5.03	.66			
Nationality [a]	Filipino	4.99	.71	4.99		0.03*
	Jordanian	5.14	.54			
	Saudi	3.50	2.89			
	Malaysian	5.71	.25			
	South African	4.86	.98			
English is your first language	Yes	5.12	.60		1.969	0.05*
	No	4.93	.82			
Marital status	Single	4.88	.89	1.807		0.146
	Married	5.07	.65			
	Divorced	5.50	.51			
	Widow	4.86	.61			

Table 4. 18. The association between demographic work-related characteristics of Satisfaction scale.

([a]: Welch test is reported instead of one-way ANOVA; *: indicate statistical significance with *p*-value ≤ 0.05).

		Total satisfaction scale				
		M	SD	F	*t*	*p*
Primary role	Staff Nurse	4.96	.83		-1.237	0.218
	Nurse Assistant	5.06	.58			
Unit	Outpatient clinic	5.32	.55	1.555		0.078
	Wound Care Unit	5.21	.60			
	Traumatic Brain Injury 1	5.12	.46			
	Traumatic Brain Injury 2	5.11	.31			
	General Rehab 1	4.85	.55			
	General Rehab 2	4.68	.45			
	Home Health Care	4.53	.96			
	Medical General 1	5.12	.64			
	Medical General 2	4.95	.97			
	Operating Room (OR, Anesthesia, pre-holding, recovery, Day surgery)	5.08	.71			
	PED I	5.06	.60			
	PED II	5.01	.68			
	PED III	5.20	.46			
	PED IV	5.26	.51			
	PED V	4.79	.72			
	PED VI	5.14	.51			
	Spinal Cord injury 1	4.94	.10			
	Spinal Cord injury 2	4.30	1.64			
	Stroke 1	4.97	.37			
	Stroke 2	4.47	1.65			
	Women Health unit 1	4.69	.67			
	Women Health unit 2	5.08	.96			
Duration of employment in SBAHC	3-12 months	5.06	.50	2.043		0.112
	1-5 years	5.05	.66			
	6-10 years	4.86	.88			
	11-15 years	5.17	.47			
	More than 15 years	3.79	2.18			
Highest degree of nursing education	Diploma	4.98	.68	1.466		0.233
	Bachelor	5.00	.78			
	Master	4.49	1.01			

Table 4. 19. The association between demographic general characteristics of Nurse behavior in practice scale.

([a]: Welch test is reported instead of one-way ANOVA; *: indicate statistical significance with *p*-value ≤ 0.05).

		Nurse behavior in practice scale				
		M	SD	F	*t*	*p*
Age [a]	20-30 years	5.17	.58	1.698		0.191
	31-40 years	5.10	.68			
	41-50 years	5.22	.45			
	more than 50 years	3.81	1.96			
Gender	Male	4.97	.96		-2.355	0.019*
	Female	5.17	.55			
Nationality [a]	Filipino	5.13	.62	9.145		0.005*
	Jordanian	5.03	.38			
	Saudi	3.50	2.89			
	Malaysian	5.89	.19			
	South African	4.83	.96			
English is your first language	Yes	5.21	.48		1.517	0.13
	No	5.07	.76			
Marital status	Single	5.00	.86	2.534		0.057
	Married	5.21	.51			
	Divorced	5.33	.24			
	Widow	4.92	.12			

Table 4. 20. The association between demographic work-related characteristics of Nurse behavior in practice scale.

([a]: Welch test is reported instead of one-way ANOVA; *: indicate statistical significance with *p*-value ≤ 0.05).

		Nurse behavior in practice scale				
		M	SD	F	*t*	*P*
Primary role	Staff Nurse	5.10	.75		-.466	0.641
	Nurse Assistant	5.14	.49			
Unit	Outpatient clinic	5.33	.50	2.089		0.004*
	Wound Care Unit	5.25	.64			
	Traumatic Brain Injury 1	5.22	.38			
	Traumatic Brain Injury 2	5.17	.45			
	General Rehab 1	4.92	.44			
	General Rehab 2	4.77	.35			
	Home Health Care	4.78	.70			
	Medical General 1	5.12	.57			
	Medical General 2	4.91	.64			
	Operating Room (OR, Anesthesia, pre-holding, recovery, Day surgery)	5.17	.61			
	PED I	5.20	.47			
	PED II	5.10	.72			
	PED III	5.29	.46			
	PED IV	5.35	.50			
	PED V	5.37	.52			
	PED VI	5.39	.37			
	Spinal Cord injury 1	5.03	.17			
	Spinal Cord injury 2	4.48	1.58			
	Stroke 1	5.00	.30			
	Stroke 2	4.51	1.64			
	Women Health unit 1	4.90	.67			
	Women Health unit 2	5.43	.54			
Duration of employment in SBAHC	3-12 months	5.13	.48	1.041		0.402
	1-5 years	5.15	.57			
	6-10 years	5.09	.78			
	11-15 years	5.22	.43			
	More than 15 years	3.69	2.14			
Highest degree of nursing education	Diploma	5.11	.57	.477		0.621
	Bachelor	5.12	.72			
	Master	4.86	.59			

Table 4. 21. The association between demographic general characteristics of Teamwork scale.
([a]: Welch test is reported instead of one-way ANOVA; *: indicate statistical significance with *p*-value ≤ 0.05).

		Total teamwork scale				
		M	SD	F	*t*	*p*
Age [a]	20-30 years	5.26	.50	1.372		0.273
	31-40 years	5.22	.67			
	41-50 years	5.30	.48			
	more than 50 years	3.87	1.99			
Gender	Male	5.09	.94		-2.005	0.046*
	Female	5.26	.53			
Nationality [a]	Filipino	5.24	.57	59.01		0.000*
	Jordanian	5.15	.45			
	Saudi	3.50	2.89			
	Malaysian	5.97	.05			
	South African	4.69	1.42			
English is your first language	Yes	5.28	.57		1.044	0.297
	No	5.19	.71			
Marital status	Single	5.10	.84	1.237		0.044*
	Married	5.31	.48			
	Divorced	5.36	.39			
	Widow	5.27	.39			

Table 4. 22. The association between demographic work-related characteristics of Teamwork scale.
([a]: Welch test is reported instead of one-way ANOVA; *: indicate statistical significance with *p*-value ≤ 0.05).

		Total teamwork scale				
		Mean	SD	F	*t*	*p*
Primary role	Staff Nurse	5.20	.74		-.5	0.617
	Nurse Assistant	5.25	.46			
Unit [a]	Outpatient clinic	5.42	.47	2.288		0.004*
	Wound Care Unit	5.30	.54			
	Traumatic Brain Injury 1	5.22	.42			
	Traumatic Brain Injury 2	5.36	.48			
	General Rehab 1	5.08	.38			
	General Rehab 2	5.05	.30			
	Home Health Care	4.90	.48			
	Medical General 1	5.27	.43			
	Medical General 2	5.00	.48			
	Operating Room (OR, Anesthesia, pre-holding, recovery, Day surgery)	5.30	.51			
	PED I	5.27	.52			
	PED II	5.06	.97			
	PED III	5.44	.47			
	PED IV	5.41	.49			
	PED V	5.42	.60			
	PED VI	5.58	.42			
	Spinal Cord injury 1	5.07	.19			
	Spinal Cord injury 2	4.58	1.62			
	Stroke 1	5.09	.50			
	Stroke 2	4.63	1.70			
	Women Health unit 1	5.04	.41			
	Women Health unit 2	5.40	.47			
Duration of employment in SBAHC [a]	3-12 months	5.22	.44	1.276		0.3
	1-5 years	5.27	.54			
	6-10 years	5.16	.75			
	11-15 years	5.33	.45			
	More than 15 years	3.77	2.20			
Highest degree of nursing education	Diploma	5.20	.60	.42		0.657
	Bachelor	5.22	.70			
	Master	4.99	.49			

Table 4. 23. The association between demographic general characteristics of Professional commitments and loyalty scale.
([a]: Welch test is reported instead of one-way ANOVA; *: indicate statistical significance with *p*-value ≤ 0.05).

		Professional Commitment scale				
		M	SD	F	*t*	*p*
Age [a]	20-30 years	5.44	.52	1.482		0.242
	31-40 years	5.44	.55			
	41-50 years	5.57	.46			
	more than 50	4.29	2.29			
Gender	Male	5.35	.83		-1.246	0.215
	Female	5.47	.53			
Nationality [a]	Filipino	5.46	.51	.721		0.605
	Jordanian	5.31	.88			
	Saudi	3.50	2.89			
	Malaysian	5.75	.43			
	South African	5.55	.48			
English is your first language	Yes	5.46	.51		0.533	0.594
	No	5.42	.67			
Marital status	Single	5.42	.72	.525		0.665
	Married	5.44	.55			
	Divorced	5.75	.35			
	Widow	5.88	.18			

Table 4. 24. The association between demographic work-related characteristics of Professional commitments and loyalty scale.

([a]: Welch test is reported instead of one-way ANOVA; *: indicate statistical significance with *p*-value ≤ 0.05).

		Professional Commitment scale				
		Mean	SD	F	*t*	*p*
Primary role	Staff Nurse	5.43	.68		-.108	0.914
	Nurse Assistant	5.44	.48			
Unit	Outpatient clinic	5.48	.48	1.484		0.081
	Wound Care Unit	5.43	.45			
	Traumatic Brain Injury 1	5.48	.51			
	Traumatic Brain Injury 2	5.40	.47			
	General Rehab 1	5.52	.57			
	General Rehab 2	5.25	.49			
	Home Health Care	5.48	.62			
	Medical General 1	5.39	.62			
	Medical General 2	5.50	.53			
	Operating Room (OR, Anesthesia, pre-holding, recovery, Day surgery)	5.38	.67			
	PED I	5.49	.65			
	PED II	5.50	.46			
	PED III	5.64	.46			
	PED IV	5.66	.44			
	PED V	5.75	.43			
	PED VI	5.53	.42			
	Spinal Cord injury 1	5.00	.00			
	Spinal Cord injury 2	5.43	.50			
	Stroke 1	5.63	.41			
	Stroke 2	4.77	1.74			
	Women Health unit 1	5.27	.41			
	Women Health unit 2	5.59	.59			
Duration of employment in SBAHC	3-12 months	5.51	.46	1.37		0.267
	1-5 years	5.46	.55			
	6-10 years	5.40	.54			
	11-15 years	5.58	.45			
	More than 15 years	4.08	2.42			
Highest degree of nursing education	Diploma	5.35	.45	3.089		0.075
	Bachelor	5.47	.64			
	Master	4.71	1.00			

Total nursing work culture

Table 4. 25. All scale Mean, SD, Median for Nursing work culture

	Mean	Standard Deviation	Median	Minimum	Maximum
Total nursing work culture scale	5.14	.62	5.11	1.00	6.00

Table 4. 26. Multiple Linear Regression model for Scale/subscale with all nursing work culture scale.

([a]. Dependent Variable: Total nursing work culture).

Coefficients [a]

Scale/Model		Standardized Coefficients	Sig.	Correlations	
		Beta		Zero-order	Part
1	Leadership strategy sub-scale	.128	.000	.871	.058
	Leadership approach sub-scale	.146	.000	.867	.067
	Job satisfaction sub-scale	.157	.000	.923	.065
	Job stress sub-scale	.175	.000	.855	.089
	Nurse behavior in practice scale	.141	.000	.927	.053
	Teamwork sub-scale	.150	.000	.861	.065
	Communication sub-scale	.134	.000	.914	.051
	Professional Commitment	.128	.000	.665	.101

Table 4. 27. Hypotheses accepting/rejection based on the results.

Hypotheses	Accepted/ rejected
H1. The nurse's loyalty to the nursing profession enhances the work culture.	accepted
H2a(0). The Leadership strategy does not affect the nurse's unit work culture.	rejected
H2a(1). The Leadership strategy affects the nurse's unit work culture.	accepted
H2b(0). Leadership approaches do not affect the nurse's unit work culture.	rejected
H2b(1). Leadership approaches affect the nurse's unit work culture.	accepted
H3 Nurses' job satisfaction drives a positive work culture.	accepted
H4 A positive work culture reduces nurses' job stress.	accepted
H5. Nurses' work collaboration as a team is positively related to improving the work culture.	accepted
H6(0). Effective nursing team communication is not a key boost of work culture.	rejected
H6(1). Effective nursing team communication is a key boost of work culture.	accepted
H7. Positive nursing behavior in practice enhances the work culture.	accepted