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Stress levels amongst Phlebotomists in Malta: A study Amongst the phlebotomists working within Mater Dei Hospital.

Sarah Dimech

185891M

A dissertation submitted to Idea Academy in accordance with the requirements for award of the degree of Master of Sciencein Healthcare Management and Leadership.

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Abstract

Background: Phlebotomy services include interacting with both patients and with various employees, particularly other phlebotomists, who have varying opinions regarding their job satisfaction levels. Dissatisfaction among healthcare professionals can lead to increased absenteeism, decreased motivation for improvement, and a diminished sense of belonging. There is also a significant impact of the work environment and occupational stress on phlebotomists' quality of care. These observations have led to an exploration of the effects of work environment and stress levels among phlebotomists in the pathology department at Mater Dei Hospital.

Objectives: This study aims to explore the causes of work-related stress among Phlebotomists, the measures to mitigate it, and its effects on care quality. Specific objectives include assessing stress levels in Phlebotomists, identifying contributing factors, and examining their perceptions of stress's impact on care quality.

Design and Methods: A quantitative methodology employing a correlational design was implemented, which involved gathering data via questionnaires. All phlebotomists working at Mater Dei Hospital within the Pathology Department were invited to be part of this research project. A total of 42 questionnaires were distributed, resulting in a response rate of 71.43% (n=30).

Results: The study findings revealed Phlebotomists at Mater Dei Hospital, working within the Pathology Department have a more of a positive than negative feeling regarding stress ant that occupational stressors are perceived by phlebotomists, but they perceive them in a positive trend, and do not see it as having negative impact on the quality of care they provide. When provided

with the open ended questions different concerns that make them feel stressed were voiced, hence revealing other work-related stressors.

Conclusion: Phlebotomists perceive stress at work within their occupation, however, they seem to have a positive perception about it and seem to find a way to cope with the stress. Likewise, there are stressors that contribute to occupational stress, but from their perspective, this does not seem to affect the quality of care they provide.

Keywords: Stress Levels, Occupational Stress, Phlebotomists, Quality of Care

Dedication

This thesis is dedicated with heartfelt appreciation to my beloved family; My parents Emmanuel And Maria, My Brother Zaac, and his family, Nicole and baby Leah and to my better half, Amy. I am eternally thankful for their consistent support, encouragement and understanding. Their un-wavering faith in my abilities have been the source of my motivation and inspiration during this academic endeavour.

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I am grateful to al my colleagues at CommCare in the Health And Active Ageing Department, as well as my friends, for their patience, support, and encouragement.

Lastly, I would like to express my gratitude to my family and partner for their unwavering support, patience, encouragement and understanding throughout this journey.

Declaration of Authenticity

I, the undersigned Sarah Dimech declare that all material presented to Idea Academy is my work, except where specifically indicated by the text references, and has carried out in accordance with Idea Academy's Requirements. This work has not been submitted for any other academic award.

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Table of Contents

List of Tables

List of Figures

List Of Abbreviations

MDH	Mater Dei Hospital
NSS	Nursing Stress Scale
SCL	Stress Check List
PPE	Personal Protective Equipment
HCW	Health Care Workers
COVID	Coronavirus Disease
ACC	Anti – Coagulation Clinic
SAMOC	Sir Anthony Mamo Oncology Centre
SVPDR	Saint Vincent De Paul Residence
KGH	Karin Grech Hospital
GDPR	General Data Protection Regulation
CEO	Chief executive officer
MHA	Ministry for Health and Active Ageing
SPSS	Statistical Package for Social Science
NR	Not Reported
Q	Question
MQF	Malta Qualification Framework
PHLEBS	Phlebotomists'
WHO	World Health Organization
EHR	Electronic Health Record
RSI	Repetitive Strain Injury

Chapter 1

Introduction

1.1 Overview of the Research Problem

Over the past five years, the researcher has provided phlebotomy services within the community and has encountered a diverse range of employees, particularly phlebotomists, who have expressed varying levels of satisfaction with their job. It is evident that unsatisfied healthcare professionals may contribute to increased absenteeism, lack of motivation for improvement, and a diminished sense of belonging within the organization. The researcher has also noted the significant impact of the work environment and related occupational stress on the quality of care provided by phlebotomists. These observations have motivated the researcher to investigate and evaluate the role of work environment and stress in phlebotomists, particularly those working at Mater Dei Hospital within the pathology department.

Literature also provides evidence to support the findings of researchers. Herraiz-Recuenco, et al. (2022) emphasize that the roles of professional healthcare workers are not only challenging but also demanding. Additionally, Floreo (2024) highlights the often-overlooked importance of phlebotomists in the healthcare system, noting their crucial role in drawing blood accurately. Despite their calm demeanor, phlebotomists face an internal struggle - the constant stress associated with their vital responsibilities in patient care. Beheshtifar (2013) defines occupational stress as the pressure that arises from the demands, tensions, and challenges inherent in one's profession. This stress encompasses various aspects of the work environment, such as

workload, time constraints, responsibilities, interpersonal relationships, and the nature of the tasks performed.

Employee stress levels, particularly related to their occupation, impact employee performance, job satisfaction, teamwork, and patient care. Healthcare providers face challenges such as increased expenses, decreased quality care, higher turnover rates, and medical errors while striving to meet the growing need for better healthcare. Reduced work-related stress can lead to improved job satisfaction for phlebotomists, which directly affects turnover, healthcare quality, patient outcomes, and patient satisfaction (Dyrbye, et., al. 2016).

1.2 Overview on the work environment, occupational stress, and phlebotomy

The workplace environment includes a variety of physical and psychological elements that influence the daily experiences of employees, such as the layout and ergonomics of their work area, as well as the levels of noise and lighting. For phlebotomists, this entails working in clean, well-organized laboratories or patient spaces. The organizational culture, defined by shared values and behaviors, encourages teamwork, professional development, and mutual respect. (Sabady, 2020) Effective management, characterized by clear communication and supportive supervision, is crucial, particularly for healthcare professionals who require accessible and empathetic leaders. Maintaining a balance between work and personal life through flexible schedules and reasonable

hours is essential, especially in demanding roles. Employee well-being is enhanced by comprehensive health initiatives and mental health resources, while diversity and inclusion foster creativity and cohesion. Lastly, opportunities for professional growth through ongoing education and skill development are essential for ensuring employee engagement and satisfaction (Skillsforcare, 2020).

Occupational stress occurs when the demands of a job exceed an individual's abilities or available resources, resulting in physical and emotional strain. Factors such as heavy workloads, extended work hours, and inadequate staffing can overwhelm workers. Unclear job expectations and responsibilities, known as role ambiguity, often lead to confusion and anxiety. Feelings of frustration may arise from a lack of control over one's work and limited involvement in decision-making processes. Furthermore, conflicts with coworkers, supervisors, or clients can add to the overall stress in the workplace. The fear of job instability, or job insecurity, is also a significant source of stress. Moreover, environmental elements like noise, clutter, and lack of personal space can further intensify stress levels (Ruotsalainen, et al., 2015).

Phlebotomy is the process of drawing blood from individuals for a variety of purposes, such as medical examinations, transfusions, research, or donations, and it presents distinct challenges. (Remiszewski, 2023) Phlebotomists encounter stressors that include patient interactions, often having to manage anxious or uncooperative individuals. The profession requires precision and accuracy in blood collection and labeling, which can be stressful. Furthermore, there are health hazards linked to handling needles

and the potential exposure to bloodborne pathogens. The physical demands of the job, such as prolonged periods of standing and repetitive motions, can result in physical strain. Additionally, the emotional burden is substantial, particularly when dealing with patients in critical conditions or high-stress situations (CaringForCare, 2024).

To reduce work-related stress among phlebotomists, there are several strategies that can be implemented. Continuous training and education on the latest techniques and safety procedures can improve proficiency and self-assurance. Creating support networks like counseling services, peer groups, and debriefing sessions can efficiently handle emotional stress. Implementing ergonomic techniques and tools can reduce physical strain, and having sufficient staff and reasonable workloads can prevent exhaustion. Keeping lines of communication open with management can address issues and enhance job satisfaction. Moreover, acknowledging and incentivizing the hard work of phlebotomists can greatly enhance morale and motivation.

Ultimately, the well-being of phlebotomists is greatly influenced by the work environment, and it is essential to effectively address job-related stress in order to maintain a productive and healthy workforce. By addressing the specific challenges faced by phlebotomists, healthcare organizations can foster a more supportive and sustainable workplace environment.

1.3 Objectives and research questions

Among the scientific search platform used in this research, despite the extensive global research on stress among various healthcare professionals, there has been a noticeable lack of documentation on the subject specifically concerning phlebotomists, particularly within Mater Dei Hospital in Malta. As a result, the primary objective of this study is to investigate the effects of the work environment and work-related stress on phlebotomists at MDH.

The objective of this research is to investigate the factors that contribute to work-related stress among Phlebotomists, the strategies implemented to alleviate stress, and how these factors impact the quality of care they deliver.

The objectives of this research are:

1) To identify whether Phlebotomists feel stressed at work within their occupation.

2) To identify factors that contribute to occupational stress.

3) To identify how phlebotomists perceive the influence of occupational related stress on the quality of care they deliver.

Research study questions were prompted in accordance with the objectives of the study.

1) Which sources influence stress among Phlebotomists working within Mater Dei hospital in Malta?

2) What measures are in place, to help reduce stress among Phlebotomist?

3) Furthermore, how do the phlebotomists perceive stress to influence the quality of care they provide?

1.4 Research approach

This study employs a deductive approach, focusing on testing an exploratory theory with an emphasis on causality. Additionally, it commences with a hypothesis.

A quantitative methodology is utilized to collect data focusing on a specific phenomenon among a substantial number of participants, enabling the researcher to summarize characteristics within groups or relationships (Creswell, 2014). This method allows for the distribution of questionnaires to eligible participants for data collection, followed by the application of statistical tests to interpret the findings. The survey, divided into four parts, was distributed to eligible participants. The segments covered demographic information, qualifications and experience, work-related stress, and stress sources. The first two parts introduced

the independent variables, such as gender, age, education level, and years of experience, to examine differences in characteristics. This data was crucial in understanding their relationship with the dependent variables outlined in the Work-Related Stress section. The information gathered from these sections was essential for making comparisons, illustrating sample charts, and analyzing the data.

The Stress Checklist by Breakwell, G.M (1990) was used to evaluate the dependent variables associated with stress factors in the participants' lives. It identifies different stress sources and gauges the intensity of the stress experienced. By examining emotional, cognitive, physical, and behavioral responses to stress, this checklist offers insights into how stressors affect an individual's well-being and is an effective tool for developing strategies to manage and reduce stress. The adaptation of the 'Nursing Stress Scale' by Grey-Toft P. and Anderson, J.G (1981) simultaneously evaluated both independent and dependent variables. It played a critical role in identifying and measuring the diverse stressors specific to the phlebotomy field, offering valuable insights for creating strategies and resources aimed at improving the situation. The questionnaires have been consolidated into one single survey form that includes a Likert scale, enabling participants to express their level of agreement with different statements.

Phlebotomists encounter a distinct array of occupational stressors, which range from interactions with patients to the physical challenges associated with repetitive tasks. Although existing

literature predominantly addresses stress among nurses and physicians, there remains a considerable deficiency in our comprehension of how these stressors impact phlebotomists, an essential yet frequently neglected segment of the healthcare workforce. This quantitative investigation seeks to address this deficiency by systematically assessing stress levels in phlebotomists through the application of an adaptation of the Nursing Stress Scale and the Stress Check List. The relevance of this research is underscored by the escalating demands placed on healthcare systems worldwide, and the outcomes may have significant implications for workplace policies, thereby enhancing the well-being of phlebotomists and ultimately improving the quality of patient care.

1.5 Dissertation Layout

This Chapter has aimed to introduce the reader to the current research by outlining the research problem, objectives, and research approach. Additionally, an overview of the methodology used to address the research objectives was provided, along with a discussion of the study's limitations. The subsequent chapter, Chapter 2, will focus on the literature review, exploring stress, phlebotomy, and the relationship between the two. A review of existing literature on the impact of occupational stress on phlebotomists' stress levels and the quality of care they provide will follow. Chapter 3 will detail the methodology employed in this study, beginning with an explanation of the study's aims and objectives, followed by the research questions and hypotheses, and concluding with a description of the data analysis method. Chapter

4 will present the findings of the study, providing a comprehensive report on the data collected through questionnaires. The results will be analyzed section by section in alignment with the research objectives. Chapter 5 will consist of the discussion chapter, where each research question will be addressed based on the findings of the study. Finally, Chapter 6 will offer conclusions and recommendations for future research endeavors.

Chapter 2

Literature Review

2.1 Introduction

'Stress can be defined as a state of work or mental tension caused by a difficult situation. Stress is a natural human response that prompts us to address challenges and threats in our lives. Everyone experiences stress to some degree. The way we respond to stress, however, makes a big difference to our overall well-being.' (WHO, 2023)

Stress is a physiological reaction that occurs when an individual is faced with demands or pressures, resulting in emotional or physical tension. It can arise from various factors such as work-related pressures, personal relationships, or financial worries. If not properly managed, stress can have detrimental effects on one's health (WHO, 2023).

On the other hand, phlebotomy is a medical procedure that involves the extraction of blood from patients for diagnostic or therapeutic purposes. This procedure requires a high level of precision, skill, and a composed demeanour in order to ensure the comfort and safety of the patient. Despite its significance in the field of healthcare, phlebotomy can be a source of stress for practitioners due to the responsibility associated with obtaining accurate blood samples (Srikanth & Lotfollahzadeh, 2024).

Nevertheless, effectively managing stress is of utmost importance in this profession. It is essential for maintaining professionalism, ensuring optimal patient care, and upholding the overall quality of healthcare services.

2.2 Phlebotomist's Knowledge, Training and Practice

Phlebotomy involves the extraction of blood from individuals for a range of reasons, including diagnostic assessments, transfusions, research, and donations. A phlebotomist, a healthcare practitioner specialized in this field, employs safe methods to procure blood samples, commonly from arm veins. Subsequently, these samples are typically forwarded to a laboratory for further analysis or procedures. Phlebotomy stands as an essential component of healthcare and holds substantial importance in identifying and managing diverse medical ailments (Srikanth & Lotfollahzadeh., 2023).

Phlebotomists play a crucial role in the healthcare system as they are responsible for extracting blood from patients for various medical purposes, including diagnostic testing, transfusions, donations, and research (Staffing, 2024). These healthcare professionals are employed in general hospitals and their primary duty revolves around the extraction of blood from patients. By performing this essential task, phlebotomists contribute significantly to the overall functioning of the healthcare system (Pietro, 2023).

Blood Collection, patient interaction… are the key components of phlebotomists' role (Table 2.1)

Table 2.1 key Components Of Phlebotomists' Role

Key Components	***Role Description***	***Reference***
Blood Collection	Phlebotomists are specially trained to safely perform blood extractions for all age groups, adhering to strict protocols to ensure sample accuracy and integrity.	WHO, 2010
Patient Interaction	Phlebotomists are essential in patient interaction, explaining procedures, easing anxiety, and ensuring comfort during blood collection. Strong communication and interpersonal skills are crucial for addressing patients' fears.	Campbell, 2023
Specimen Handling	Phlebotomists label blood samples for accurate identification, store them properly to maintain integrity, and ensure timely delivery to the laboratory for analysis.	DPLM, 2024
Compliance and Safety	Phlebotomists follow safety protocols and infection control practices to reduce needle-stick injuries and disease spread, while adhering to regulatory standards and institutional policies.	Carli, et al., 2022
Documentation	Precise documentation is crucial in healthcare. Phlebotomists must record details of each blood collection, including time, date, patient information, and relevant notes.	Demsash, et al., 2023

Team Collaboration	Phlebotomists collaborate with healthcare professionals, such as nurses and physicians, to ensure blood collection aligns with patient care strategies.	Taberna, et al., 2020
Continuous Education	Phlebotomy is continually evolving due to technological advancements and healthcare improvements. Phlebotomists engage in ongoing education to stay current with the latest techniques, safety protocols, and regulations.	Campbell, 2023

Phlebotomists working in hospitals are exposed to a diverse patient population with varying medical conditions. Their primary responsibility lies in ensuring the accurate and prompt collection of blood samples, which are indispensable for diagnosing illnesses and monitoring treatment progress. Ultimately, phlebotomists are indispensable in the healthcare sector for their role in facilitating the collection of blood samples crucial for diagnosing and managing a wide range of medical conditions.
Following is a summary of their expertise, education, and practical experience.

Anatomy and Physiology: Phlebotomists must possess a comprehensive comprehension of human anatomy, specifically focusing on the circulatory system, veins, arteries, and capillaries. A profound understanding of the location and composition of veins is imperative to ensure proficient blood extraction (Srikanth & Lotfollahzadeh, 2023).

Infection Control: Phlebotomists are obligated to follow rigorous protocols to prevent the dissemination of infections. This encompasses understanding sterilization techniques, practicing appropriate hand hygiene, and employing personal protective equipment (PPE) (Mathur, 2011).

Venepuncture Techniques: Healthcare professionals undergo training in a range of venepuncture techniques to effectively extract blood samples. These techniques include utilizing a needle and syringe, employing the vacutainer system, or utilizing a butterfly needle. Through their training, they acquire the knowledge and skills necessary to determine the most suitable method based on the patient's specific condition and the accessibility of their veins (WHO, 2010).

Patient Interaction and Communication: Phlebotomists engage in patient interaction prior to, during, and following the process of blood collection. Proficiency in effective communication is crucial as it enables them to elucidate procedures, alleviate the concerns of apprehensive patients, and gather pertinent details regarding the patient's medical background or current condition (Saunsbury & Howarth, 2016).

Specimen Handling and Labelling: Trained in appropriate specimen handling techniques, they possess the necessary skills to accurately label tubes, maintain sample integrity, and safely transport specimens to the laboratory (DHHS, 2014).

Quality Assurance and Compliance: Phlebotomists must follow quality assurance standards and regulatory requirements in healthcare settings. This involves keeping accurate records, adhering to established protocols, and participating in quality control measures (WHO, 2010).

Medical Terminology: It is essential for individuals to possess knowledge of medical terminology pertaining to blood collection, laboratory tests, and prevalent medical conditions in order to facilitate clear communication with fellow healthcare professionals (King & Hoppe, 2013).

In essence, phlebotomists are essential in healthcare for ensuring the safe and accurate collection of blood samples for diagnostic and therapeutic purposes.

2.2.1 Phlebotomist Experience and Patient Safety

The expertise of phlebotomists is crucial for ensuring patient safety during blood collection, as shown in Table 2.2 below.

Table 2.2 Patient Safety Measures

Key Area	***Explanation***	***Reference***
Skill and Technique	Skilled phlebotomists use refined techniques to minimize discomfort and reduce the risk of complications such as bruising, hematoma, or nerve damage.	WHO, 2012
Knowledge of Anatomy	A deep understanding of human anatomy allows phlebotomists to accurately identify veins, reducing the risk of accidental arterial puncture or damage to other blood vessels.	Tucker et al., 2023

Adherence to Protocols	Experienced phlebotomists follow established procedures for patient identification, specimen labeling, and handling to prevent errors and ensure accurate test results.	Bölenius et al., 2014
Communication Skills	Effective communication helps to alleviate patient anxiety, gather necessary medical history, and provide clear instructions for pre- and post-procedural care.	Berman and Chutka, 2016
Recognition of Complications	Phlebotomists are trained to recognize and manage potential complications that may arise during the procedure.	Kwame and Petrucka, 2021
Infection Control	Phlebotomists implement infection control measures, including hand hygiene, personal protective equipment, and equipment disinfection, to prevent pathogen transmission and ensure safety	Alhumaid et al., 2021

Overall, the proficiency of phlebotomists in these areas is essential for maintaining patient safety and ensuring effective blood collection procedures.

2.2.2 Phlebotomist Work Related Stress

In the complex landscape of the healthcare industry, phlebotomists are often overlooked despite playing a crucial role in drawing blood with precision. Despite their composed exterior, phlebotomists face a hidden battle - the constant stress that comes with their essential duties in patient care (FLOREO, 2024). While the

struggles of doctors and nurses are frequently highlighted, the specific stressors affecting phlebotomists deserve further scrutiny.

Piazza, et al. (2019) explore the nuances of stress experienced by healthcare workers in phlebotomy, uncovering the various factors that contribute to the intricate web of pressure within this underappreciated field.

The field of phlebotomy is susceptible to the manifestation of stress caused by a multitude of factors. Within a hospital setting, stress can have a significant impact on phlebotomists in various ways (Piazza, et al., 2019). Similar to professionals in other occupations, phlebotomists may encounter stress due to several factors that are inherent to their work environment.

Some potential sources of stress for phlebotomists might include;

Patient Anxiety: Patients experiencing anxiety may exhibit fear or apprehension towards needles, blood, or medical procedures as a whole. Effectively managing anxious patients necessitates possessing empathy, strong communication abilities, and the capacity to alleviate their concerns (House & Stark, 2022).

Technical Skills: Novice phlebotomists may experience anxiety when it comes to executing procedures accurately due to the need for precise technical skills in order to conduct a successful blood draw without causing any unnecessary discomfort or harm to the patient (Lorenz, 2021).

Time Pressure: Phlebotomists frequently operate in fast-paced healthcare environments where time limitations are common. This time constraint can intensify stress levels, especially when coupled with the necessity for precision and ensuring patient comfort

(Staffing, 2024). The need to perform tasks efficiently without compromising precision can lead to heightened levels of stress.

Work Environment: Phlebotomists might come across demanding work environments, for instance, overcrowded clinics or emergency departments that could contribute to heightened stress levels. Phlebotomists face potential exposure to infectious diseases and other risks when drawing blood samples. Worries about personal safety and well-being can further elevate their stress levels (Upson, 2022). During periods of heightened alertness like disease outbreaks, the stress levels can ride as they handle bodily fluids and potentially hazardous materials.

Workload: Phlebotomists are frequently faced with a large number of patients to care for, particularly in bustling hospital environments. Managing a continuous flow of patients can result in feelings of being overwhelmed and stressed. Similar to other healthcare settings, shortages in staffing or high patient volumes can result in heightened stress and workload for phlebotomists (Baisch, 2018). Operating in a fast-paced setting, phlebotomists often encounter a demand for blood draws that exceeds their capacity. The constant influx of patients, each with their own unique requirements and obstacles, can be daunting. Balancing multiple blood draws within strict time constraints not only challenges the physical capabilities of phlebotomists but also exacerbates the mental strain as they strive to uphold accuracy amidst the disorder (Portoghese, et al., 2014).

Shift Work: Hospital phlebotomists often have to work non-traditional hours, such as nights, weekends, and holidays. This type of shift work can disturb their normal sleep schedules and

daily routines, resulting in heightened levels of stress and fatigue (Jehan, et al., 2017).

Workplace Dynamics: The dynamics within a workplace, including interactions with colleagues, supervisors, and other healthcare professionals, have the potential to influence an individual's stress levels (O'Daniel & Rosenstein, 2008). Factors such as conflict, communication challenges, or a lack of support from co-workers may all play a role in contributing to feelings of stress and frustration (Koinis, et al., 2015).

Safety Concerns: Phlebotomy encompasses the handling of blood, which poses potential risks of exposure to infectious diseases for both the phlebotomist and the patient. Adherence to safety protocols and precautions is crucial in mitigating concerns associated with health hazards (CLSI, 2023).

Difficult Venepunctures: Some blood draws may proceed smoothly, while others can be quite challenging. Phlebotomists often face difficulties when dealing with elusive veins or fragile vessels, which can be a major source of stress (NHS, 2011). The pressure to successfully perform these procedures, combined with the concern of causing discomfort or harm to patients, intensifies anxiety levels and diminishes confidence (Ialongo & Bernardini, 2016).

Technical Skill Requirement: Phlebotomy necessitates a high level of accuracy and technical expertise in order to extract blood samples from patients in a safe and efficient manner. The demand for precise execution of these tasks may lead to heightened stress levels, particularly among inexperienced phlebotomists or individuals operating in fast-paced settings with minimal margin for error (Min, 2022).

Dealing with difficult situations: Phlebotomists may face challenging circumstances, including patients who are uncooperative, veins that are difficult to access, or unexpected complications during the process of drawing blood. It is of utmost importance for phlebotomists to possess the ability to handle these situations with composure and professionalism (Remiszewski, 2023).

Emotional Toll: In addition to the technical aspects of their profession, phlebotomists face the emotional challenges that come with interacting with patients who may be experiencing anxiety, uncooperativeness, or distress (Murphy, 2005). The ability to empathize and show compassion is crucial to their role, but prolonged exposure to the emotional distress of others can result in compassion fatigue and burnout. Furthermore, the unpredictable nature of patient reactions adds an extra layer of stress, as phlebotomists must constantly adjust their approach in order to ensure the comfort and cooperation of their patients (Lönn, et al., 2023).

Physical Demands: Phlebotomists allocate a substantial amount of time on their feet, transitioning between patients and frequently working extended shifts. The physical tiredness from the job demands can heighten stress levels (AGRQ, 2007).

Professional responsibility: Phlebotomists are responsible for the precise collection of blood samples, ensuring the safety of patients, and maintaining accurate documentation, all of which can lead to increased stress levels (LTG, 2023).

Addressing Healthcare Worker Stres: Acknowledging the importance of stress among healthcare workers in the field of phlebotomy is the initial stride towards cultivating a workforce that

is both supportive and resilient (Marine, et al., 2006). Implementing measures that aim to alleviate stress and enhance the well-being of phlebotomists is crucial in ensuring the provision of high-quality patient care (Joshi, et al., 2022).

Training and Education: It is essential to provide thorough training programs for phlebotomists that focus on developing their ability to handle stress and overcome difficult situations (Silva, et al., 2023). By integrating mindfulness practices, effective communication strategies, and stress management techniques into their training, phlebotomists can enhance their capacity to manage the pressures associated with their profession (Campbell, 2023).

Workplace Support: It is crucial to establish a supportive culture in healthcare settings in order to reduce stress among phlebotomists. By introducing peer support programs, conducting regular debriefing sessions, and offering access to counselling services, phlebotomists can find avenues to seek help and exchange their experiences in a nurturing atmosphere (Agarwal, et al., 2020).

Resources and Tools: Equipping phlebotomists with advanced tools, such as vein visualization devices and ergonomic equipment, can enhance workflow and reduce physical stress, contributing to their overall health and productivity (WHO, 2010). Effective stress management is crucial in a hospital setting, as stress levels vary among individuals. Employers should support phlebotomists by providing stress management tools, relaxation opportunities, clear communication, and a supportive workplace culture (Spilsbury, 2004).

Phlebotomy, while often perceived as routine, involves significant psychological elements affecting both patients and phlebotomists.

Patients may experience anxiety and fear due to pain anticipation, past experiences, or needle phobia, while phlebotomists face stress from managing patient needs and procedural demands. This underscores the need for a supportive environment that addresses these psychological factors (Gerceker et al., 2018).

Patients' experiences with phlebotomy are influenced by the setting, staff behaviour, and communication, which can affect their anxiety and overall perception of the procedure (Merkel et al., 2022). Phlebotomists, meanwhile, may encounter psychological challenges such as managing patient fears and experiencing compassion fatigue, highlighting the need for robust support systems (MacNeill et al., 2021). Understanding the psychological dimensions of phlebotomy enhances the comprehension of patient-provider interactions and emphasizes the need for holistic care addressing both physical and emotional aspects.

2.2.3 The Journey of a Phlebotomist in Malta: Regulation, Career and Challenges

Phlebotomy, a common medical procedure in Malta as well as in many other countries, involves the extraction of blood from patients for various purposes such as disease testing, blood level monitoring, or blood donation. In Malta, this procedure is typically carried out by trained professionals known as phlebotomists or by nurses who have undergone specialized training in venepuncture techniques.

To ensure the safety and well-being of both the patient and the healthcare provider, phlebotomy procedures in Malta strictly adhere to international standards of safety and hygiene. This includes the use of sterile equipment, adherence to proper protocols for sample collection and handling, and ensuring the comfort of patients throughout the process (AACC, 2021).

Apart from being available in traditional healthcare settings such as hospitals and clinics, phlebotomy services in Malta may also be provided through mobile blood collection units or specialized blood donation centres.

Phlebotomy services are an essential component of the healthcare system at Mater Dei Hospital, the primary public hospital in Malta. Within the hospital, there are dedicated phlebotomy departments staffed by highly trained professionals who possess expertise in venepuncture techniques and blood collection procedures (Servizzi.Gov, 2024).

Patients at Mater Dei Hospital may necessitate blood tests for a variety of reasons, such as diagnostic purposes, monitoring of medical conditions, or prior to undergoing specific medical procedures. The phlebotomists at the hospital play a pivotal role in ensuring the accurate and safe collection of blood samples. They meticulously follow stringent protocols to minimize the risk of contamination or infection (Health.Gov, 2021).

The phlebotomy departments at Mater Dei Hospital are equipped with state-of-the-art facilities and adhere to international standards of quality and safety in blood collection and handling.

During the phlebotomy process, patients can expect to receive efficient and professional care, with a strong emphasis on their comfort and overall well-being.

The phlebotomist's path in Malta encompasses manoeuvring through diverse regulations, establishing a professional trajectory, and confronting distinctive obstacles.

2.2.3.1 Regulation

Phlebotomists in Malta are typically supervised by the Maltese Health Department or other regulatory bodies. They are usually required to obtain specific certifications or licenses to practice legally. These regulations are in place to ensure that phlebotomists meet certain standards of competency and professionalism, thereby protecting the welfare of both patients and practitioners (Health.Gov, 2021).

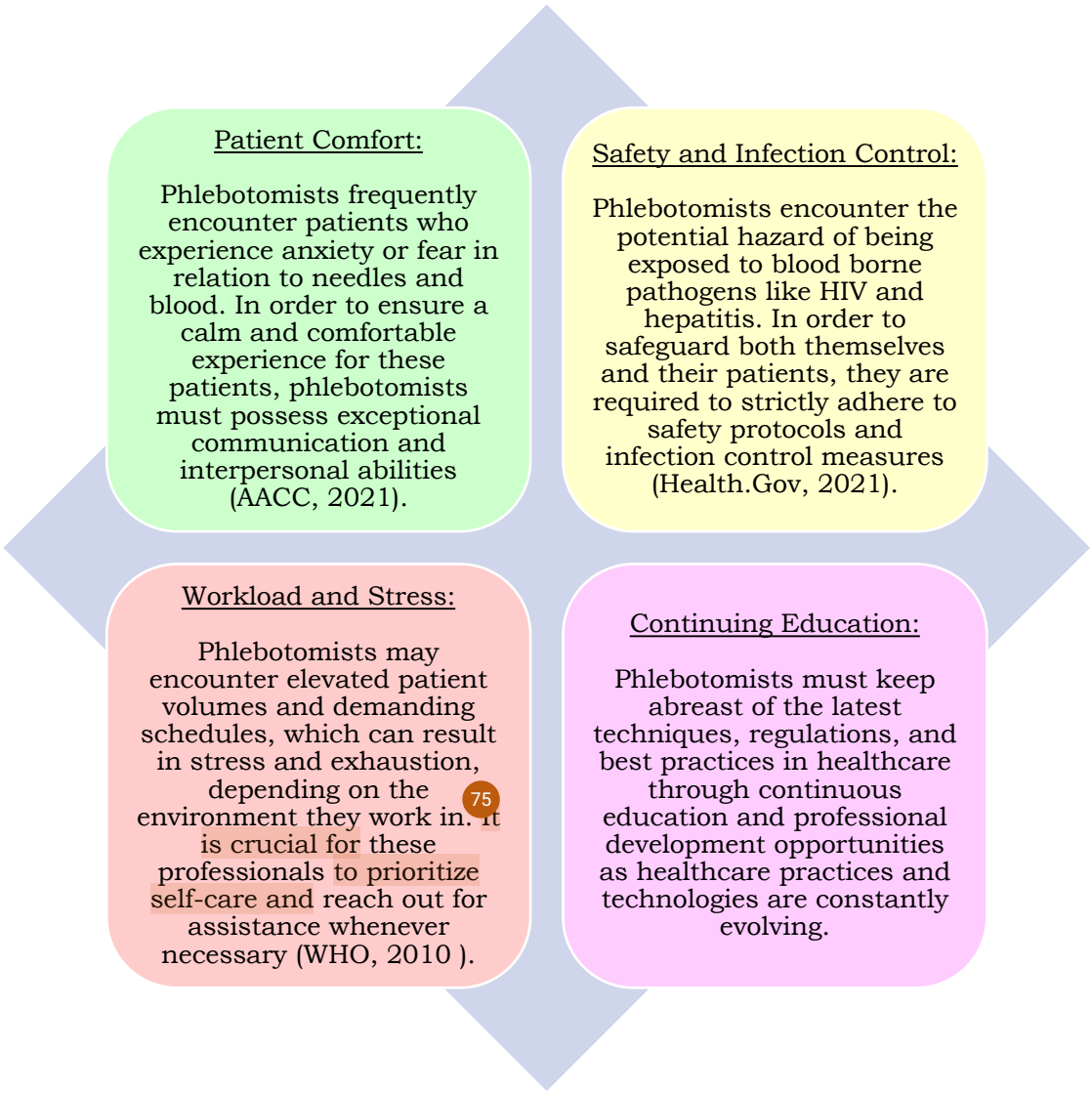
2.2.3.2 Career

Figure 2.1 offers a detailed explanation regarding phlebotomists' career in Malta.

Figure 2.1 Career

2.2.3.3 Figure 2.2 offers a detailed explanation regarding phlebotomists' career in Malta.

Figure 2.2 Challenges



In Malta, the role of a phlebotomist encompasses a dedication to maintaining high standards of professionalism, continuous education, and delivering exceptional patient care. This journey also entails successfully navigating through the intricacies of

regulatory obligations and surmounting obstacles within the healthcare sector.

2.3 Work, Stress, Coping and Stress Management Among Healthcare Professionals

Extensive research has been conducted on the topics of work, stress, coping, and stress management within the healthcare profession. This research is crucial due to the challenging and demanding nature of healthcare professionals' roles (Herraiz-Recuenco, et al., 2022). Factors contributing to high levels of stress among healthcare professionals include long working hours, heavy workloads, emotionally draining situations, and the weighty responsibility of safeguarding the health and well-being of others (Odigie, 2016).

Work: Healthcare practitioners commonly operate in dynamic and rapidly evolving settings, including hospitals, clinics, and various healthcare establishments. Their responsibilities encompass providing direct care to patients, managing administrative duties, making critical decisions, and engaging in collaborative efforts with fellow professionals (Gordon & Nelson, 2017).

Stress: Healthcare professionals are exposed to a variety of stressors in their line of work, which include time constraints, handling critically ill patients, making life-or-death decisions, managing personal and professional duties, and witnessing suffering and death. Persistent stress may lead to burnout, emotional exhaustion, and diminished job satisfaction (Søvold, et al., 2021).

Coping: Coping strategies encompass the methods that individuals employ to effectively handle stress and navigate difficult circumstances. Healthcare practitioners can utilize a range of coping strategies, including problem-solving, seeking assistance from social networks, participating in self-care activities like exercise and hobbies, practicing mindfulness or relaxation techniques, and maintaining an optimistic mind-set (Millacci, 2024).

Stress Management: Stress management interventions have the primary objective of diminishing stress levels and augmenting coping abilities among healthcare professionals. These interventions encompass a range of strategies, such as implementing organizational modifications to enhance work conditions, providing stress management training programs, offering counselling services, establishing peer support groups, and fostering a culture of well-being within healthcare organizations (Nwobodo, et al., 2023).

Successful stress management techniques for healthcare professionals frequently require a blend of personalized interventions and backing from the organization. It is crucial for healthcare institutions to emphasize the welfare of their employees, offer tools for handling stress, cultivate a nurturing workplace atmosphere, and tackle underlying systemic factors that contribute to work-related stress (Baumann, et al., 2023).

According to the European Commission (2024), research in this area continues to evolve, exploring innovative approaches to mitigate stress and enhance the resilience and well-being of healthcare professionals, ultimately improving patient care outcomes and overall healthcare delivery.

2.3.1 Occupational Stress versus Work-Related Stress

Occupational stress and work-related stress are frequently utilized synonymously, although they may possess subtly distinct implications.

2.3.1.1 Occupational Stress

Occupational stress refers to the strain arising from job-related demands, pressures, and challenges, encompassing various aspects like workload, time constraints, obligations, interpersonal relationships, and duties (Beheshtifar, 2013). Factors contributing to occupational stress include long working hours, high job demands, lack of control, job insecurity, and conflicts with colleagues or superiors (Kendall, et al., 2000).

Table 2.3 shows the origins of occupational stress.

Table 2.3 Origins Of Occupational Stress Factors

Stress Factor	***Definition***	***Reference***
Workload	Excessive workloads and tight deadlines increase stress as individuals struggle with their responsibilities	Macdonald, 2003
Lack of Control	Feeling powerless or lacking autonomy in tasks contributes to stress, leading to frustration and anxiety	Santini, 2023
Interpersonal Conflict	Conflicts with colleagues, supervisors, or clients due to differing opinions or bullying add to workplace stress	Lindner, 2024

Job Insecurity	Concerns about job stability and potential layoffs cause significant stress	Mindy Shoss et al., 2022
Role Ambiguity	Unclear roles and expectations lead to stress as individuals struggle to understand their requirements	Mañas, et al., 2018
Poor Work – Life Balance	Long hours and irregular shifts erode the line between work and personal life, increasing stress	Boamah, et al., 2022
Physical Environment	Unfavourable conditions like excessive noise or poor lighting contribute to stress	Hassard & Cox, 2020

Addressing work-related stress requires a comprehensive strategy involving both employees and employers, including stress-relief methods, improved communication, flexible schedules, employee support resources, and tackling organizational issues that increase stress (Giga, et al., 2003; Bhui, et al., 2016).

2.3.1.2 Work-Related Stress

Work-related stress extends beyond job duties to include other stressors from the work environment that influence job performance. Contributing factors include commuting, work-life balance, organizational culture, job dissatisfaction, and conflicts between work and personal life, emphasizing the impact of external stressors on overall well-being and effectiveness at work (Cox, et al., 2000).

Work-induced stress affects many individuals across various sectors and can result from excessive demands, tight deadlines,

interpersonal conflicts, job instability, and poor work-life balance (Gilbertsten, 2023). Prolonged stress can lead to decreased efficiency, exhaustion, physical ailments, and psychological issues such as anxiety and depression.

Employers are responsible for creating a supportive work environment that promotes employee well-being by providing adequate resources, flexible schedules, transparent communication, and advocating for work-life balance (Schawbel, 2023). Employees can manage their stress through self-care, setting boundaries, and seeking help when needed.

Addressing work-related stress requires a comprehensive strategy involving collaboration between employers and employees to identify and mitigate stressors in the workplace.

In summary, occupational stress focuses on job-specific stressors, while work-related stress encompasses a broader range of factors affecting stress levels within the employment context. Both are crucial in creating a supportive work environment that promotes well-being and support.

2.3.1.3 Eustress and Distress

Stress manifests in various forms, including both positive and negative types:

Eustress

This positive form of stress, or "beneficial" stress, provides extra energy and resilience, enhancing performance and productivity. Eustress arises from motivating or rewarding situations like

promotions, new jobs, marriages, or challenging activities. Typically short-lived, it boosts accomplishment and satisfaction (Selye, 1975).

Distress

The negative form of stress, distress, leads to fatigue and negatively impacts physical and mental health. It occurs when demands exceed the body's ability to maintain balance, causing discomfort and tension. Distress can result from work demands, financial struggles, conflicts, or traumatic events and can lead to depression, anxiety, and chronic illnesses (Roberts & Grubb, 2013).

Stress affects both physical and mental health, causing symptoms like fatigue, sickness, cognitive decline, racing thoughts, excessive worry, irritability, and irrational behavior. For example, stressed nurses may deliver lower-quality patient care (Li, et al., 2016).

Table 2.4 shows the different types of stress.

Table 2.4 Different Types Of Stress.

Stress Type	***Definition***	***Reference***
Acute Stress	Short-term stress from specific events, triggering the "fight or flight" response.	Segan & Kistler, 2022
Chronic Stress	Long-term stress from ongoing issues like financial problems or work challenges, leading to serious health effects if unmanaged.	Rasheed, 2016

Environmental Stress	Stress from external factors like noise, pollution, overcrowding, or natural disasters.	Gatersleben & Griffin, 2017
Psychological Stress	Stress from cognitive and emotional factors, including worries, fears, sadness, or distressing events.	Schneiderman, et al., 2005
Physiological Stress	The body's response to physical stressors like illness, injury, sleep deprivation, poor diet, or intense activity.	Ramos, et al., 2023
Work Related Stress	Stress from workplace pressures, such as tight deadlines, heavy workloads, interpersonal conflicts, and job insecurity.	Kabat-Zinn, 1990
Family Stress	Stress from family dynamics, including spousal conflicts, parenting challenges, caregiving burdens, and financial pressures.	Malia, 2007
Financial Stress	Stress from economic concerns, such as debt, job loss, low income, or financial insecurity.	Guan, et al., 2022
Social Stress	Stress from social interactions and circumstances, including loneliness, social isolation, peer pressure, or discrimination.	Woods & Bhatnagar, 2015
Traumatic Stress	Stress from traumatic events, leading to conditions like PTSD.	NHS, 2022

Understanding eustress and distress helps individuals recognize stress sources and develop effective coping strategies to manage them.

2.3.1.4 Factors of Stress.

Numerous theories explain stress and its impacts on the body and mind. One key hypothesis is the General Adaptation Syndrome (GAS) by Hans Selye, describing the body's stress response in three stages: alarm, resistance, and exhaustion.

Another significant model is the Transactional Model of Stress and Coping by Richard Lazarus and Susan Folkman, emphasizing cognitive appraisal in determining whether a situation is stressful, and the coping strategies used to manage it (Long, 2017).

Stress is influenced by various factors as shown in Table 2.5

Table 2.5 Factors Influencing Stress

Factor	***Explanation***	***Reference***
Life Events	Major life changes like relocating, starting a new job, getting married, or losing a loved one can induce stress.	Shine, 2015
Work Environment	Stressors include demanding workloads, job insecurity, limited autonomy, interpersonal conflicts, and long hours.	Vallasamy, et al., 2023
Financial Stress	Concerns about debt, unemployment, financial instability, and the pressure to maintain a certain standard of living contribute to stress.	Manuel Sánchez de Miguel, et al., 2020

Environmental Stressors	Noise, pollution, overcrowding, natural disasters, high-crime areas, and discrimination can lead to chronic stress.	Baum, et al., 2010
Societal and Cultural Factors	Social inequality, discrimination, political unrest, and cultural expectations impact stress levels. The pressure to conform to societal norms and navigate complex social dynamics can contribute to stress.	Alkhawaldeh, et al., 2023
Life Habits	Unhealthy lifestyles, such as poor diet, lack of exercise, substance abuse, or inadequate sleep, increase susceptibility to stress.	Alkhawaldeh, et al., 2023
Exposure to Technology	Information overload from emails, social media, and news updates can lead to stress.	Alkhawaldeh, et al., 2023
Personal Expectations	Unrealistic expectations in career, relationships, or personal achievements can cause stress.	Goswami, 2020
Genetic and Biological Factors	Some individuals are genetically predisposed to stress or have imbalances in neurotransmitters or hormones contributing to stress reactions.	Alkhawaldeh, et al., 2023

Lack of effective coping strategies or resilience can heighten stress levels. Understanding these factors helps individuals identify stress sources and develop effective management strategies (Alkhawaldeh, et al., 2023).

2.3.1.4.1 Signs and Symptoms for Stress.

The human body's response to stress involves a complex interaction among the nervous, endocrine, and immune systems, commonly known as the "fight or flight" response, which aims to facilitate swift reactions to perceived dangers or obstacles. Stress can manifest both physically and psychologically (Yaribeygi, et al., 2017).

Common signs and symptoms of stress include:

Physical Symptoms: Headaches, muscle tension, fatigue, digestive problems, changes in appetite, insomnia, rapid heartbeat, sweating, shallow breathing, and frequent illnesses. These indicate stress impacting overall health and well-being (APA, 2023).

Emotional Symptoms: Anxiety, irritability, moodiness, depression, restlessness, feeling overwhelmed, lack of motivation, heightened anger, and emotional outbursts. These affect an individual's mental well-being and need proper management (Gotlib & Joormann, 2010).

Cognitive Symptoms: Rapid thoughts, lack of focus, impaired memory, difficulties in decision-making, pervasive negative thoughts, persistent worry, and excessive preoccupation (Shahsavarani, et al., 2015).

Behavioral Symptoms: Increased use of stimulants (alcohol, tobacco, drugs), changes in sleep habits, social isolation, procrastination, nervous habits (nail biting, pacing), hostility, and changes in activity level or motivation (Schneiderman, et al., 2005).

Other Symptoms: Sweating, shaking, dizziness, light-headedness, chest tightness, difficulty breathing, panic attacks, and feelings of impending doom.

Stress is a personal experience with varied symptoms among individuals. While the body's response to stress helps confront difficulties and hazards, prolonged or excessive stress can harm physical and mental health, highlighting the importance of stress management and coping strategies.

2.3.1.5 Stress and Work.

Job stress, as defined by the National Institute for Occupational Safety and Health (1999), refers to the harmful physical and emotional responses that occur when job demands do not match the worker's abilities, resources, or needs. This mismatch can negatively affect an individual's well-being, leading to compromised health and potential physical injury (Evenson, 2003).

Several factors contribute to work-related stress, including inadequate pay, lack of social support, unclear performance expectations, and excessive work pressure (Varak, 2023). Stress tends to accumulate over time, and unaddressed issues can lead to negative health outcomes (APA, 2015). Going to work in an unhealthy state can further complicate matters, as individuals may feel too tired to perform their duties effectively, affecting their mood and the quality of care they provide.

NIOSH conducted three surveys on stress across various professions. The North-Western National Life survey found that 40% of participants felt 'very or extremely stressful. The Families

and Work Institutes survey revealed that 26% of participants felt 'often or very often burned out' due to work-related stress. Additionally, Yale University's survey found that 29% of participants experienced varying levels of stress at work (NIOSH, 1999). These surveys highlight the prevalence and impact of stress in the workplace (Parousidou, 2023).

2.3.1.5.1 Working in a Health Care Setting.

Healthcare professionals face significant stress due to a variety of factors (Phan & Vo, 2016) as shown in Table 2.6 below.

Table 2.6 Work Related Stress Factors

Factor	***Explanation***	***Reference***
High Stakes	Hospitals often deal with life-and-death situations, requiring quick, critical decisions.	Kunreuther, et al., 2002
High Workload	Heavy workloads, long hours, and demanding schedules contribute to stress.	Raja, 2023
Long Hours	Irregular shifts, including nights, weekends, and holidays, can disrupt personal lives and lead to fatigue.	Rheaume & Mullen, 2017
Communication Challenges	Effective communication is vital but challenging due to the fast-paced environment and diverse teams.	Murugesu, et al., 2022
Emotional Demands	Caring for suffering or critically ill patients can be emotionally exhausting.	Kinman & Leggetter, 2016

Responsibility and Decision-Making	High responsibility and decision-making pressure increase stress, especially when outcomes are uncertain.	Légaré, et al., 2018
Violence and Harassment	Instances of violence or harassment from patients or their families add to stress.	Liu, et al., 2019
Traumatic Events	Witnessing traumatic incidents impacts mental and emotional health.	Converso, et al., 2021
Work-Life Balance	Irregular shifts and on-call duties challenge maintaining a work-life balance, leading to burnout.	Barnová, et al., 2023
Interpersonal Conflicts	Tensions with colleagues, patients, and their families create workplace stress.	Ramsay, 2001
Pressure to Perform	High performance standards and productivity goals, along with fear of errors, intensify stress.	Saparniene, et al., 2023
Lack of Resources	Inadequate staffing and resources contribute to feeling overwhelmed.	Lippi, et al., 2006
Ethical Dilemmas	Ethical challenges in patient care lead to moral distress.	Thomas, 2022
Physical Demands	Physically demanding tasks and prolonged standing cause additional strain and fatigue.	Garzaro, et al., 2022
Risk of Burnout	Continuous exposure to stress can result in burnout, affecting work effectiveness and overall health.	Ahad, et al., 2023

Lack of Support	Insufficient support from supervisors and colleagues heightens stress.	Rothwell, et al., 2021
Stigma and Mental Health	Mental health stigma prevents healthcare workers from seeking necessary support, perpetuating stress, and burnout.	Knaak, et al., 2017

A comprehensive approach is essential to help healthcare professionals cope with stress. This includes organizational support, access to resources, stress management education, and self-care. Hospitals must recognize the impact of stress and take proactive measures to promote employee well-being and resilience (Catapano, et al., 2023). Healthcare professionals should prioritize self-care, seek support, practice stress management techniques, and consider professional help if needed (Agarwal, et al., 2019). Additionally, hospitals should provide resources and support systems to assist their staff in managing stress effectively.

2.3.1.5.2 Stress amongst healthcare workers.

Stress among healthcare workers has intensified due to factors such as the COVID-19 pandemic, increased work demands, extended shifts, emotional fatigue, and instances of aggression or mistreatment from patients or their relatives.

Key aspects of stress in healthcare professionals include:

COVID-19 Pandemic: The pandemic has significantly heightened stress levels among healthcare workers globally. They face increased patient numbers, fear of contracting the virus, limited

personal protective equipment (PPE), and high mortality rates (Alhouri, et al., 2023).

Addressing stress in healthcare professionals requires a comprehensive approach that includes organizational support, mental health resources, effective workload management, and initiatives to promote a culture of wellness and support within the healthcare sector. Recognizing the essential role of healthcare workers and prioritizing their well-being is crucial for ensuring they can provide high-quality patient care (Rink, et al., 2023; Deger, 2024).

2.3.1.5.3 Stress in allied health care professions.

Stress is a significant issue for health professionals, including those in allied health fields such as phlebotomists, occupational therapists, physical therapists, and others. Allied health professionals play a crucial role in patient care, distinct from medicine, dentistry, and nursing (Maassen, et al., 2021).

Key stressors for allied health professionals include:

Time Pressure: Allied health workers often face strict deadlines for assessments, treatments, and documentation, leading to elevated stress and anxiety (Dinh, et al., 2019).

Interdisciplinary Collaboration: Effective collaboration among diverse healthcare professionals can be challenging due to communication issues, conflicting agendas, and differing viewpoints, which can contribute to stress (Warren & Jimmie S. Warren, 2023).

Job Insecurity: Economic factors, changes in healthcare policies, and organizational restructuring can lead to job insecurity, causing stress and job dissatisfaction (Witte, et al., 2015).

Addressing stress among allied health professionals requires a comprehensive approach that includes personal coping strategies, organizational support, and systemic changes. This might involve providing stress management resources, fostering a supportive work environment, and offering opportunities for career development and self-care (Sietske J Tamminga, et al., 2023). Additionally, increasing awareness of mental health and reducing stigma around seeking help can encourage professionals to seek support when needed (EuropeanCommission, 2021).

2.3.2 Strategies to prevent Suffering and Improve Well-Being

Stress is a common issue in professional settings, arising from factors like heavy workloads, tight deadlines, interpersonal conflicts, limited task autonomy, or job dissatisfaction. Managing workplace stress is crucial for maintaining mental and physical health (NHS, 2022). Addressing stress involves a combination of physical, mental, emotional, and social strategies.

Below, in Table 2.7 are effective strategies for coping with work-related stress.

Table 2.7 Strategies For Coping With Stress

Strategy	***Explanation***	***Reference***
Training and Education	Enhancing skills and confidence through proper training can reduce stress related to job performance.	Winarsunu et al., 2023
Effective Communication	Improving communication skills helps manage patient anxiety and handle difficult situations more effectively.	Kwame & Petrucka, 2021
Time Management	Prioritizing tasks and managing time efficiently can alleviate stress caused by time constraints.	Aeon et al., 2021
Self-Care	Incorporating regular exercise, a healthy diet, and stress-reduction techniques like mindfulness or meditation can help manage stress outside of work.	NIH, 2020
Peer Support	Building a supportive professional network can provide emotional support and effective stress management strategies.	Shalaby & Agyapong, 2020
Seeking Help	Reaching out to supervisors, counsellors, or healthcare professionals is crucial if stress becomes overwhelming.	NIMH, 2024
Identify Stressors	Recognizing what causes stress—be it work, relationships, finances, or health—can help in addressing these issues.	Ames, 2023
Healthy Lifestyle	Engaging in regular physical activity, eating well, getting sufficient rest, and avoiding	Yi, 2022

	harmful substances are important for managing stress.	
Positive Thinking	Focusing on gratitude and challenging negative thoughts can foster a more positive outlook.	Ismail, 2023
Engage in Hobbies	Spending time on enjoyable activities like reading, gardening, or playing music can provide relaxation and satisfaction.	Pressman et al., 2009
Take Breaks	Regular breaks throughout the day can help you recharge and maintain productivity.	Webstrer, 2024

Incorporating these strategies into daily life can help manage stress and improve overall well-being. Prioritizing self-care and seeking assistance when needed are essential for effectively dealing with life's challenges.

2.4 Studying the Stress Levels among Phlebotomists

Phlebotomists have a vital function within healthcare environments as they are responsible for extracting blood for a range of medical purposes, such as testing, transfusions, donations, and research. However, their occupation exposes them to heightened risks, such as in the midst of the COVID-19 pandemic. Consequently, the constant increased risk brings the necessity of alterations in protocols, resulting in elevated stress levels, anxiety, and emotional difficulties among phlebotomists (Piazza, et al., 2018).

Phlebotomists experience elevated levels of stress and anxiety amidst the diseases they encounter, and as a result of the uncertainties associated with illnesses and diseases, the fear of contracting any viruses or bacteria and worries regarding their personal well-being and the well-being of their loved ones. The emotional burden stemming from these risks has resulted in burnout, emotional exhaustion, and mental health difficulties among phlebotomists. Moreover, the necessity to adjust to new protocols while upholding exceptional patient care has intensified their stress levels even more (Lorenz, 2021).

The elevated levels of stress encountered by phlebotomists can directly influence the provision of patient care. When feeling overwhelmed or anxious, phlebotomists may exhibit a higher susceptibility to errors in blood collection, miscommunication with patients or healthcare personnel, and reduced job satisfaction. These variables can undermine the calibre of healthcare services delivered and impact patient outcomes (Piazza, et al., 2019).

In order to tackle the difficulties brought about by such issues and alleviate the negative effects on their mental well-being, it is advised that phlebotomists give priority to self-care practices such as mindfulness, seeking counselling support, and participating in activities that foster emotional resilience. Understanding the significance of mental health in managing stress and anxiety is vital for phlebotomists to uphold their well-being while carrying out indispensable healthcare services (Piazza, et al., 2019).

2.5 Conclusion

The existing body of research on the stress levels among phlebotomists presents a substantial amount of evidence suggesting that phlebotomists encounter elevated levels of stress in their profession.

Various factors contribute to this stress, including the apprehension of causing harm to patients, dealing with challenging patients, time constraints, and the potential for needlestick injuries. The elevated susceptibility to potential harm, alterations in procedural guidelines, apprehension of contracting diseases, and psychological burden have collectively resulted in escalated levels of stress among phlebotomists.

It is imperative to prioritize the provision of mental health assistance and the adoption of effective coping mechanisms in order to safeguard the overall welfare of phlebotomists as they navigate through these strenuous circumstances. The reviewed studies consistently emphasize the significance of addressing these stressors in order to enhance the well-being and job satisfaction of phlebotomists.

To alleviate the stress levels among phlebotomists, it is recommended to implement strategies such as providing comprehensive training, establishing support systems, fostering a positive work environment, and offering stress management programs.

Chapter 3

Methodology

3.1 Introduction

In this section, the goals and purposes of the research titled 'Examining Stress Levels among Phlebotomists in Malta: The Impact of the Work Environment on Mater Dei Hospital's Phlebotomists' will be outlined. The methodology for data collection will be outlined, along with a discussion on the chosen sample population. Additionally, an overview of the research tools, as well as the study's reliability and validity, will be provided. Lastly, a thorough analysis will be presented.

3.2 Research Approach and Design

The goal of a quantitative investigation is to achieve enhanced understanding and insight into the social environment by creating impartial data that can be clearly communicated through statistical figures and numerical data.

Quantitative research utilizes measurements to quantify variables and attributes, providing numerical representations for statistical analyses, group comparisons, and intervention or treatment assessments. The objective of quantitative studies is to offer precise and objective data that can be analysed using statistical methods (Creswell, 2017). These measures enable researchers to test hypotheses, identify patterns, and draw conclusions based on numerical data.

Furthermore, quantitative design is employed to examine variables, test hypotheses, replicate results, and generate statistical data.

Correlation design is a research approach that centres on examining the connections between variables without the

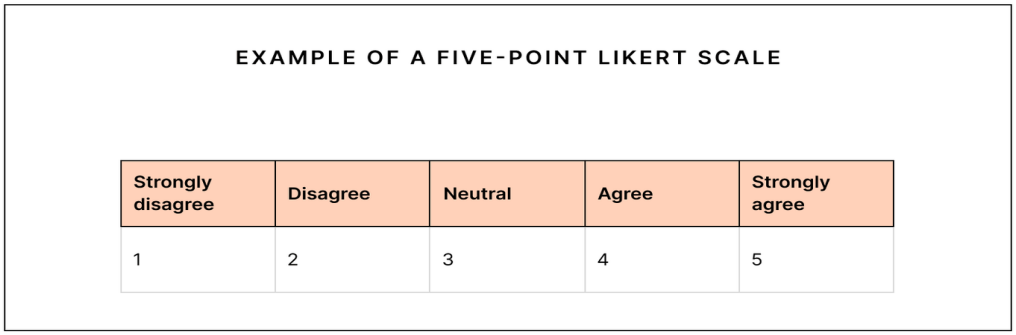
researcher exerting influence or control over them (Cohen, et. Al., 2013). This particular research design seeks to ascertain the magnitude and orientation of the relationship between two or more variables. It is employed to comprehend the manner in which alterations in one variable correspond with alterations in another variable, whether in a positive or negative manner.

Therefore, a correlation design employs a descriptive approach to determine the relationship between variables.

In an effort to find a resolution, an online questionnaire was administered to the phlebotomists to explore the research questions posed in this study.

The data collection process involved the utilization of a Likert Scale questionnaire, which consisted of questions designed in accordance with the Likert Scale format. This format proves to be advantageous as it facilitates participants' comprehension of the questions. Likert-type scales employ predetermined response options and are specifically designed to gauge attitudes or opinions, which aligns with the researcher's objectives. Additionally, La Marca (2015), asserts that the Likert Scale format holds another advantage in that it is widely applicable across various survey collection methods. Unlike a simple 'yes' or 'no' response, the Likert Scale format allows participants to express their level of agreement on a continuum, as depicted in Figure 3.1 below.

Figure 3.1 Likert Scale



The inclusion of multiple options for participants to choose from enhances their ability to provide responses, as they are not limited with only two choices (La Marca, 2015). Moreover, this format proves advantageous for the researcher as it facilitates the evaluation of questions on a standardized scale and enables the comparison of results.

Presenting a 'Neutral' option to the participants has its drawbacks such as respondents choosing it as a safe option or choosing it as a default or socially acceptable response especially if they feel pressured to avoid expressing strong opinions. This option might have tempted participants to choose this option instead of choosing the answer they intend (FluidSurveys, 2014). The 'Neutral' option was still presented as this way the participants could feel more comfortable in taking part in the survey, knowing they are given the option to express how they feel even if not strongly positive or negative. Also, the 'neutral' option is a way to ensure that the data collected reflects the range of options within the targeted population is accurate hence making the analysis more insightful and reliable (Pallant, 2020). Moreover, the validated tools utilized for this research did not include the neutral option.

Utilizing the Likert Scale, despite its advantages, is not without its drawbacks, one of which is its inability to accurately measure genuine attitudes. This is because participants may feel compelled to respond in a manner, they believe is socially desirable, rather than providing honest answers, thereby avoiding the selection of the 'extreme' options (Joshi et. al., 2015)

The utilization of a Likert Scale was intended to facilitate the establishment of correlations between variables through the use of quantifiable and measurable data.

The findings of the study are contingent upon the information gathered from the completed questionnaires.

Statistical tools were employed to quantify and examine the resultant variables.

3.2.1 Research Questions

A series of three inquiries was developed and constructed to ultimately examine the correlation between stress factors and the perceived level of care among phlebotomists employed at Mater Dei Hospital in Malta. Particular attention was given to the perceived impact of occupational stress, the existing measures implemented to alleviate stress, and the phlebotomists' perception of how stress affects their work quality.

The research questions that guided this study encompassed:

1. Which sources influence stress among Phlebotomists working within Mater Dei hospital in Malta?

2. What measures are in place, to help reduce stress among Phlebotomist?

3. Furthermore, how do the phlebotomists perceive stress to influence the quality of care they provide?

3.2.2 Study Hypothesis

The three hypotheses have been formulated based on the aforementioned research questions.

The initial hypothesis pertains to the stress perspective amongst phlebotomists working at Mater Dei Hospital.

The null hypothesis (H1O) and alternative hypothesis (H1A) can be articulated as follows:

H1O - There is more of a negative than a positive trend in the way phlebotomists working a Mater Dei hospital perceive stress, because it is hard to work as a phlebotomist.

H1A – There is more of a positive than a negative trend in the way phlebotomists working at Mater Dei Hospital perceive stress, because even though it is hard, they manage to get used to the routine.

The second hypothesis examines the potential occupational factors that may contribute to stress among phlebotomists employed at Mater Dei Hospital.

H2O – There is not a high level of occupational stress factors (negative trend) perceived by phlebotomists working at Mater Dei Hospital.

H2A – There is a high level of occupational stress factors (positive trend) perceived by phlebotomist working at Mater Dei Hospital.

The third hypothesis seeks to explore whether phlebotomists perceive stress as affecting the quality of care they offer.

H3O – Phlebotomists do not perceive occupational stress as having an impact on the quality of care they provide.

H3A – Phlebotomists perceive occupational stress as having an impact on the quality of care they provide.

3.3 Data Collection

3.3.1 Sample Population

Phlebotomists can be located in various government departments, including the Pathology Department at Mater Dei Hospital, the Anti-Coagulation Clinic at Outpatients Mater Dei Hospital, the Sir Anthony Mamo Oncology Centre Wards, the Sir Anthony Mamo Oncology Centre Outpatients Clinic, Saint Vincent De Paul Residence, Karin Grech Hospital, and Community Care. The total number of Phlebotomists employed across all departments is estimated to be 68.

Data was obtained from a sample of forty-two phlebotomists who are employed at Mater Dei Hospital. These healthcare professionals cater to all wards within Mater Dei Hospital, with the exception of the outpatient Anti-Coagulation Clinic (ACC) and Sir Anthony Mamo Oncology Centre (SAMOC).

There were no specific criteria used to identify which phlebotomists were eligible to participate in the survey, except for their affiliation with the pathology department at Mater Dei Hospital. In addition, individuals of all genders and nationalities were welcome to take part. All phlebotomists employed in government departments undergo training at Mater Dei Hospital and receive certification from there.

There are two distinct status levels within the field of phlebotomy: Phlebotomists and Senior Phlebotomists. The difference in status is typically determined by the individual's level of education upon entry into the profession or by the amount of experience they have accumulated over the years.

The researcher chose to conduct surveys with the phlebotomists in the pathology department at Mater Dei Hospital for various reasons, one of which is the size of the team. Additionally, the study's time constraints, the presence of different departments, and varying management structures necessitated obtaining multiple permissions, which would have been time-consuming. Furthermore, the diverse work environments and shift schedules of the teams would have resulted in varying experiences, potentially impacting their survey responses. These differences in leadership and work settings could lead to different coping mechanisms for work-related stress, affecting teams in distinct ways.

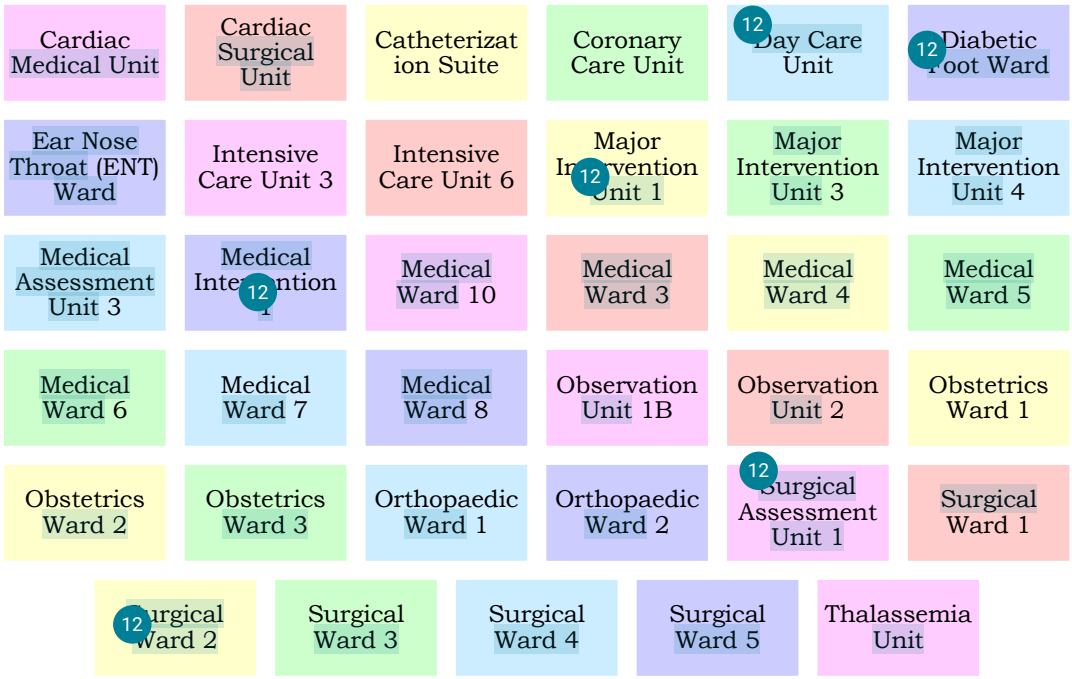
3.3.2 Research Setting

Phlebotomy plays a crucial role in the healthcare system at Mater Dei Hospital, the main public hospital in Malta. The hospital houses specialized phlebotomy departments with skilled professionals who are proficient in venepuncture techniques and blood collection procedures (Servizzi.Gov, 2024).

Patients at Mater Dei Hospital may require blood tests for a range of reasons, including diagnostic purposes, monitoring of medical conditions, or prior to undergoing specific medical procedures. The phlebotomists at the hospital have a crucial role in guaranteeing the precise and safe collection of blood samples. They carefully adhere to strict protocols to reduce the risk of contamination or infection (Health.Gov, 2021).

As indicated in previous chapters, this study was done with the phlebotomists working at Mater Dei Hospital, within the Pathology Department. Data was obtained from a sample of forty phlebotomists. These healthcare professionals cater to almost all wards within Mater Dei Hospital, as can be seen in Figure 3.2.

Figure 3.2 Wards in Mater Dei Hospital, Phlebotomists Provide service to



The exception of the wards they do not cater for include the outpatient Anti- Coagulation Clinic (ACC) and Sir Anthony Mamo Oncology Centre (SAMOC) as they have their own phlebotomists there. Other wards not catered by the pathology phlebotomists include: Central Delivery Suite, Cardiac Intensive Care Unit, Disneyland, Fairyland, Intensive Therapy Unit (ITU), Neo-natal and Paediatric Intensive Care Unit, Ophthalmic Day Unit, Paediatric Day Care, Wonderland and Rainbow Unit, Sleep Lab, Psychiatry Unit and Hyperbaric Unit.

In total, Mater Dei Hospital accommodates 1243 beds for inpatients and approximately eighty-six beds for day care patients.

3.3.3 Research Instrument

Since the study is a deductive one, as previously indicated, the tool used would be a questionnaire separated into sections. Ensuring the anonymity of respondents is of utmost importance when conducting an anonymous survey. This allows participants to feel comfortable providing honest and candid feedback without the fear of facing any negative consequences or being judged. One effective method to maintain anonymity is by utilizing online surveys (Dillman, et. al., 2014). By using an online survey platform, participants can access the survey link anonymously, without having to reveal their identities.

The quantitative research opted for a questionnaire survey design. Rubin and Babbie (2005) argue that surveys are cost-effective and can be carried out quickly. Surveys are also easy to administer through various channels like mail, email, and telephone, making them efficient in gathering responses from a large number of participants. Due to the time limitations of this study, a survey design was deemed suitable because of its benefits and relevance to the research topic. According to Rubin and Babbie (2005), survey research is likely the most appropriate method for examining a population that is too vast to observe directly. The authors further state that surveys are well-suited for gauging attitudes within a large population, which corresponds with the researcher's aim of investigating attitudes through questionnaires (Rubin & Babbie, 2005).

Wyse (2012) suggests that individuals have a higher likelihood of participating in a questionnaire survey as opposed to an interview. This preference is attributed to the anonymity provided by surveys, which makes participants feel more at ease when sharing their

opinions. On the other hand, interviews involve the presence of a researcher, which can lead to participants feeling uncomfortable and tense. However, it is important to recognize that the survey method has its limitations. Respondents may lack the motivation to provide accurate and honest answers, resulting in data errors due to non-responses to questions. Moreover, the decision to respond to a survey question may vary among individuals, introducing bias into the data. Additionally, respondents may not have a clear understanding of their reasons for a particular answer due to memory constraints or even boredom (Heri, 2014). Despite these limitations, the researcher opted to use the survey method as it provided the most convenient way to reach a significant number of phlebotomists.

The research methodology involved gathering data on the participants' demographics while ensuring their identities were not disclosed, as well as utilizing two modified versions of established survey tools: 'The Stress Checklist' by Breakwell, G.M (1990) and 'The Nursing Stress Scale' by Grey-Toft P. and Anderson, J.G (1981).

A questionnaire Appendix 1 that had been prepared in advance was given to all eligible participants. This questionnaire consisted of four sections, which included;

- Demographic Data
- Qualifications and Experience
- Let's Measure Your Stress Levels!!
- How Does Your Job make You Feel?
- Factors Of Stress

The initial two segments introduce the independent variables. By utilizing demographic information, qualifications, and experience, it became possible to analyse the variations in characteristics such as gender, age, educational level, years of experience, etc. These factors are crucial, particularly when considering their correlation with the dependent variables outlined in the Occupational Stress section. The data obtained from these two segments proved to be valuable not just in the interpretation of comparisons and the description of sample charts, but also in the analysis of the data.

The use of 'The Stress Checklist' by Breakwell, G.M (1990) measured dependent variables where the participants identified factors from their life that might consider them stress. Glynis Breakwell's stress checklist is a valuable tool for evaluating the different stressors affecting individuals. It not only identifies the various sources of stress, such as personal, professional, social, or environmental factors, but also measures the intensity of the stress experienced. By assessing emotional, cognitive, physical, and behavioural reactions to stress, this checklist provided insight into how stressors are impacting an individual's well-being. Ultimately, it serves as a useful instrument for developing effective strategies for stress management and reduction.

Furthermore, the adaptation for the 'Nursing Stress Scale' developed by Grey-Toft P. and Anderson, J.G (1981) assessed both independent and dependent variables simultaneously. Primarily, it presented the dependent variable along with various options for the independent variables, allowing participants to indicate their level of agreement with the given statements. Overall, the adaptation of the Nursing Stress Scale played a crucial role in pinpointing and measuring the diverse stressors specific to the phlebotomy field,

offering valuable information for creating strategies and resources aimed at enhancing the overall welfare of phlebotomists.

As indicated further above, most answers were measured using the Likert Scale. The Likert scale, developed by Rensis Likert in 1932, is commonly used to measure attitudes or opinions in surveys and research. Participants are asked to rate their level of agreement or disagreement with a series of statements, providing a range of response options to indicate the strength of their feelings.

The questionnaire options are organized in the following manner: "Never" represents absence of engagement or opinion, "Almost Never" signifies rare occurrence or expression, "Occasionally" denotes infrequent manifestation, "Frequently" indicates regular occurrence, and "Very Frequently" suggests almost constant experience. On the scale of agreement, "Strongly Agree" expresses complete endorsement, "Agree" indicates lesser but positive agreement, "Neutral" signifies neither agreement nor disagreement, "Disagree" reflects partial disagreement, and "Strongly Disagree" conveys strong opposition to the statement (Boone & Boone, 2012). It is important to note that the questionnaire was developed using tools adapted from original sources without incurring costs or requiring written consent for this research.

3.3.4. Ethical Considerations

The study focused on phlebotomists employed at Mater Dei Hospital. The target population refers to the specific group of individuals that the researcher aims for the research findings to be relevant to (Vonk, 2015). The study population consists of those individuals who fit the operational definition of the target population, whereas the research sample comprises the individuals

from the study population from whom the researcher gathers data (Vonk, 2015).

The target population for this study included Phlebotomists working within Mater Dei hospital, at the pathology department. The survey was distributed to the Phlebotomy professionals working within the pathology department only.

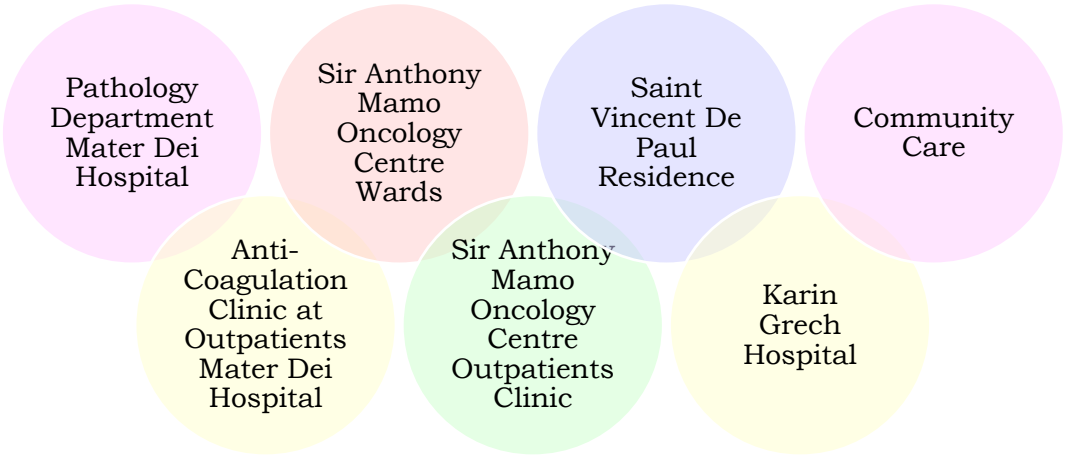
The data received to work on, is only that received via the questionnaires therefore no additional explanations as there was no contact with any of the respondents while the study is being conducted.

The pathology department distributed a total of forty surveys to the phlebotomists working within their department. Convenience sampling was chosen as the sampling method for this study, as it provided the most suitable approach in terms of accessibility to participants.

To ensure that the phlebotomists were not coerced into participating, the researcher utilized an intermediary who distributed the surveys via email. An e-mail with an attached consent form and the link to the survey was sent to one of the managers responsible for the phlebotomists. He is the individual who acted as an intermediary between the researcher and the phlebotomists. This approach maintained the anonymity of the participants, as the researcher did not obtain any personal information from them. To complete the survey, the phlebotomists simply needed to access the email containing a link that directed them to the survey. Since making use of an online tool, once the participant finishes the survey, the researcher would receive them automatically, with the participant remaining anonymous. Figure

3.3 shows in which government departments, Phlebotomists are found.

Figure 3.3 Departments in Which Phlebotomy Services is Given



The total number of Phlebotomists employed throughout all departments is approximately that of sixty-eight.

For this study, the researcher opted to do the surveys with the phlebotomists who work within the pathology department at Mater Dei Hospital for several reasons including them being the largest team. Other reasons include the time constraint of this study, being in different departments and having different management hence the need of acquiring more permissions which take time, not all teams work in same environments hence they will not have same experiences and not all work on same shift basis. Having these differences would have made a difference in the responses of the survey as different people in charge and working in different fields mean that they would meet different circumstances and have them dealt with in different ways therefore if there is any work-related stress it might affect different teams in different ways.

The distribution of questionnaires was determined using a sample size calculator, which took into account a confidence level of 95% and a confidence interval of 10 for a population of forty-two phlebotomists. The calculated sample size required was thirty eight phlebotomists. The confidence level represents the percentage of all possible samples that can be expected to include the true population parameter (Trek, 2014). On the other hand, a confidence interval is utilized to indicate the level of uncertainty associated with a sample statistic. It provides an interval estimate along with a probability statement (Lane, 2012).

Only thirty surveys were utilized for data analysis as the researcher was unable to collect all forty-two surveys that were required. To ensure that the phlebotomists had ample time to complete the questionnaires comfortably, the researcher forwarded the link as early as possible and asked the intermediary to forward it to the phlebotomists as quickly as possible.

The researcher utilized SurveyMonkey as an online survey tool to facilitate the creation, collection, and analysis of questionnaires in a straightforward manner. This platform offers a user-friendly interface that simplifies the development of a concise and captivating questionnaire. SurveyMonkey provides a range of question types, including multiple-choice, rating scales, and open-ended questions, all of which are crucial for the study. Moreover, the tool is designed to be participant-friendly, ensuring that users face no obstacles that might discourage them from completing the survey (Waclawski, 2012). SurveyMonkey prioritizes data security and privacy by implementing industry-standard encryption and security measures to protect sensitive information.

In summary, the researcher aimed to employ a combination of methods, tools, and processes to achieve two main objectives. Firstly, the goal was to establish a sense of comfort among participants, ensuring their willingness to take part in the study. This was achieved by prioritizing confidentiality and anonymity. Secondly, the researcher diligently gathered all the necessary data required for the study.

The survey process was characterized by a lack of direct communication between the researcher and the participants, which consequently led to a complete dependence on the information presented in the survey responses. This absence of interaction prevented the researcher from seeking additional clarification, thereby impeding their ability to conduct a thorough analysis of the data (Creswell & Plano Clark, 2017). As a result, the researcher was unable to inquire about the participants' responses or gain a deeper understanding of their thought processes. Consequently, this limitation poses a significant constraint on the analysis of the data, as it precludes any insight into the participants' underlying thoughts and perspectives.

Analysing data using Survey Monkey encompasses a series of procedures aimed at comprehending the data gathered through surveys.

After the completion of data analysis and visualization, the next step was to extract meaningful insights from the obtained results. This entails interpreting the analysis outcomes in connection with the research objectives or questions presented in the survey. By doing so, the researcher could pinpoint crucial patterns, correlations, anomalies, or any other noteworthy discoveries that arise during the data analysis procedure. Upon completion of data

analysis and extraction of valuable insights, the researcher was able to communicate her findings through the reporting capabilities offered by Survey Monkey. These reports could have been tailored to individual preferences by incorporating text summaries, visual representations, and emphasizing key discoveries to facilitate comprehension for stakeholders and decision-makers. After completing data analysis and visualization, the next step was to extract significant insights related to the research objectives. This involved interpreting the results to identify patterns, correlations, and anomalies. Once the analysis was finalized, the researcher communicated her findings using Survey Monkey's reporting features, customizing reports with textual summaries and visuals to enhance understanding for stakeholders and decision-makers (Davis, 2013).

Ultimately, the process of examining data using Survey Monkey encompasses a methodical approach that includes gathering responses, refining the data, performing analysis, presenting results visually, deriving insights, and communicating findings to facilitate informed decision-making rooted in survey results.

The research was conducted in accordance with ethical protocols and limitations to ensure the preservation of human dignity, while also adhering to the Helsinki Declaration of Human Rights (1989). Confidentiality and anonymity were upheld in accordance with the guidelines and provisions set forth by the General Data Protection Regulation (GDPR) of 2018. The researcher ensured that the data collected remains strictly confidential, as mandated by GDPR Article 76. The collected data is solely utilized for its intended purpose, which is to investigate the various sources that contribute to work-related stress and assess phlebotomists' perception of the quality of care they provide.

Both the researcher and the supervisor are responsible for handling the data, and it will be retained only for the necessary duration and solely used for the study's objectives. Ethical considerations are duly considered to ensure the well-being of all participants involved.

The selected approach for this investigation entailed conducting a questionnaire survey. To uphold confidentiality, anonymity was maintained throughout the survey process. Consequently, the researcher remained unaware of the participants' identities. This approach aimed to foster a comfortable environment for survey respondents, enabling them to express their genuine thoughts and opinions. Moreover, participants had the freedom to omit any questions or withdraw from the survey at any point. To prioritize the preservation of anonymity, the researcher ensured that the survey did not request any personal information such as names, addresses, or personal identification numbers (Sennett and Cobb, 2013). By omitting these details, the participants' identities remained undisclosed.

In order to conduct the survey with the phlebotomists, the researcher had to obtain permits and fill in required forms.

Permits were to be obtained from;

- CEO of Mater Dei Hospital
- Head of Pathology Department
- Data Protection Office within Mater Dei Hospital

Additionally, after all permits were obtained, an individual from pathology management had to agree to act as an intermediary

between the researcher and the phlebotomist. This had to be obtained by writing as well.

In order to obtain these permissions, consent letters and necessary documents had to be presented. The consent forms clearly outlined the purpose, scope, and duration of the study, as well as any potential benefits or impacts that may arise from it. The researcher has meticulously prepared these attached forms to as to provide a comprehensive description of the study and to ensure compliance with all relevant regulations, ethical guidelines, and institutional policies. Furthermore, it has been recognized that proper documentation of permissions and consent forms is essential for maintaining the validity and integrity of the research. Other necessary documents required were also presented to the Data Protection Office in Mater Dei Hospital.

After doing so, an agreement for Data Protection had to be signed and presented. Once completed the go ahead to start the research was given.

Other permits, from the CEO of Mater Dei Hospital, from the Ministry for Health and Active Ageing. Additionally, another permit from the chief executive officer (CEO) of Mater Dei Hospital is required to carry out the study within the hospital premises. These permits will serve as evidence that the collected data will solely be used for the study and will only be accessible to the researcher and their supervisor. These letters are specifically addressed to the relevant individuals or organizations, seeking their consent to conduct the research.

Once the necessary permits are acquired, the researcher collaborated with the designated intermediary and distributed the consent forms and surveys to the phlebotomists, ensuring that

there is no direct contact between the researcher and the participants. This approach aimed to eliminate any potential bias and guarantee that participation is voluntary, without any form of coercion.

In line with previous statements, in light of this being a quantitative study, participant anonymity was ensured from the outset, ensuring that when the research findings are shared, the data remains both anonymous and confidential. Furthermore, the outcomes presented in the dissertation will be aggregated in charts rather than individually, thus eliminating any potential clues as to which participant provided specific responses. The data collected remained completely anonymous throughout the entire process. Any physical copies of the data are securely stored and accessible only to the researcher and supervisor. As for the digital copies, they are stored on a laptop that is password protected. No third parties will have access to any of the data.

It is important to note that the identities of the participants were already safeguarded even before any information is shared.

The soft copies of the data were obtained through an online platform and downloaded onto a computer. The online tool that was utilized adheres to the regulations set forth by the General Data Protection Regulation (GDPR), ensuring that the data remains anonymous, confidential, and secure. To further safeguard the data, the laptop used for this purpose is protected with a password, granting access only to the researcher and supervisor. In the event that hard copies need to be printed, they will be stored securely under lock and key. After a period of two years, all the data will be appropriately disposed of.

The complete set of documentation and permits essential for conducting this research study is located in Appendix 2.

3.4 Data Analysis

The study findings presented the necessary data to evaluate the connections between stress and phlebotomists employed at Mater Dei Hospital.

In Appendix 3, the researchers show how the questions from the questionnaire were tabulated as to be inputted as data into SPSS version29.

The demographic characteristics of the sample were analyzed using descriptive statistics, which included frequency distributions and percentages. Additional information was examined in the data analysis section of the research study, with Microsoft Excel serving as the codebook and SPSS Version29 software aiding in the calculation of both descriptive and inferential statistics.

The purpose of the data analysis was to interpret and derive meaning from the information gathered via questionnaires. The initial step in quantitative research data analysis involves organizing and preparing the data. The researcher commenced by scoring the data and establishing a coding system to streamline data entry and analysis. Subsequently, the collected data was entered into an Excel spreadsheet and then transferred to SPSS Version29 for further analysis.

Following the initial step, the original electronic files were not retrieved from SurveyMonkey, requiring a password for access. Nevertheless, the findings were saved onto an Excel spreadsheet

for the purpose of importing them into SPSS Version29. The software was exclusively utilized on a single laptop, which also required a username and password for entry. The evaluation of the data aided in addressing the research inquiries and hypotheses.

3.4.1 Descriptive Analysis

This activity delineates the characteristics of the data acquired, enabling the researcher to condense, summarize, and expound upon the quantitative data derived from empirical observations and measurements (Mills, 2003; Christensen et al., 2011). The study results were examined using descriptive statistics, which included age, gender, phlebotomy position, educational attainment, years of experience, years in the current position, and work schedule, to better comprehend the demographic profile of the participants and to facilitate comparison of responses.

The survey evaluated each concept using a predefined scale, as outlined earlier. Questions 12 to 19 were organized into five distinct scales based on their respective sectors.

3.4.2 Inferential Analysis

Inferential analysis facilitates the assessment of variances or associations among variables that can be extrapolated from sample data, allowing researchers to make inferences about the broader population from which the sample was derived (Leedy & Ormrod, 2013). This method was employed to evaluate the hypotheses pertinent to the primary research inquiries. As a fundamental

component of hypothesis testing, inferential analysis serves as a robust approach to elucidate insights regarding the population (Delaney, 2011).

The choice of suitable inferential statistical tests for the purpose of testing assumptions is essential in empirical quantitative research studies, as highlighted by Bettany-Saltikov and Wittaker (2014). In the analysis of the data for this research study, the Spearman correlation was employed due to the non-normal distribution of the data.

The chi-square test is classified as an inferential statistical method. Inferential statistics entails drawing conclusions about a broader population from a subset of data, and the chi-square test specifically assesses the presence of a significant relationship between categorical variables within a sample. By comparing the observed frequencies to the expected frequencies, this test aids in determining whether the differences noted are attributable to random variation or indicative of a genuine association within the population. In the realm of inferential statistics, the chi-square test assists researchers in deciding whether to accept or reject the null hypothesis, guided by the robustness of the evidence derived from the sample data.

The χ^2 chi-square distribution was employed as a statistical hypothesis test to evaluate the likelihood of stress experiences, occupational stressors, and the perceived quality of care among phlebotomists. This analytical method is instrumental in assessing whether the influences of various factors—such as stress levels in relation to workplace feelings, occupational stressors, and the interplay between stressors and care quality—exhibit significant differences. Despite the original data derived from the

questionnaires being ordinal in nature, which the chi-square test does not account for, the responses were categorized into three distinct groups: positive trend (responses indicating a favorable interpretation), neutral, and negative trend (responses indicating an unfavorable interpretation). Overall, the chi-square test serves as a crucial statistical instrument for examining the relationships between categorical variables and uncovering significant trends within categorical datasets, thereby providing valuable insights that can inform decision-making regarding the effects of stress and occupational factors on phlebotomists' work and the quality of care they deliver.

3.4.3 Validity and Reliability

Validity and reliability are crucial factors in upholding the quality of quantitative research. According to Taherdoost (2016), the utilization of a valid and reliable questionnaire during a research investigation is vital for minimizing measurement errors and enhancing the credibility of data.

The researcher distributed the surveys to the intermediary within the pathology department. Employing the survey method enhances the study's reliability. Rubin and Babbie (2011) argue that using survey methods minimizes the risk of unreliable observations by the researcher. Furthermore, Rubin and Babbie (2005) recommend using measurements with proven reliability and validity.

According to Chong (2011), subsequent to this, the authors assert that the Likert scale formatting, being a more dependable measurement, is associated with fewer random errors. The survey's scale options were carefully balanced to ensure participants had a

diverse range of choices, encompassing both positive and negative aspects, even though a neutral option was not provided. This approach aims to minimize bias and enhance the reliability of the results.

The study demonstrates strong reliability and validity, as indicated by Rubin and Babbie (2005), due to its inclusion of participants from a sizable population, lack of unique or continuous connections between the researcher and the subjects, and verification that each respondent fills out just a single survey.

Another strength for this study is the standardized worded questions which reduce the chance of then study being unreliable form the participant's side (Arshad, 2014)

The study's reliability and validity are also significantly high, as proposed by Rubin and Babbie (2005). Firstly, the respondents were drawn from a substantial sample size, ensuring a representative group. Secondly, the researcher maintained no special or ongoing connections with the participants, minimizing potential biases. Lastly, each participant only completed a single survey, enhancing the study's reliability. Additionally, the utilization of standardized worded questions in this research serves as another strength, as it diminishes the likelihood of unreliability from the participants' perspective (Arshad, 2014).

The external validity of this quantitative research is robust due to the involvement of healthcare professionals, specifically phlebotomist working directly with patients at Mater Dei Hospital. The random selection of phlebotomists further enhances the study's validity (Shuttleworth, 2012). Moreover, the study's validity and reliability are bolstered by the ability to accurately identify the target population for calculating the sample size.

The research instruments utilized in this study underwent thorough evaluation to ensure their reliability and validity. Both have been confirmed to be reliable and valid.

The Nursing Stress Scale (NSS) by Gray-Toft and Anderson is widely used to assess stress levels in nurses. When evaluating its effectiveness, it is important to consider validity and reliability. Content validity refers to how well the items in a scale represent the concept being studied. The NSS has strong content validity, covering a wide range of nursing-specific stressors. Construct validity assesses whether a scale accurately measures the intended theoretical concept, and studies have shown that the NSS is associated with various stress-related measures (Gelsema et al., 2006). Research has also shown strong connections between NSS scores and factors such as burnout and job satisfaction, indicating strong criterion validity.

Internal consistency reliability measures how well items in a scale reflect the same underlying variable consistently. The National Stress Survey (NSS) has high internal consistency, indicating that all items effectively measure stress. Test-retest reliability examines score stability over different testing sessions, with the NSS showing strong reliability. Inter-rater reliability, which assesses agreement among different raters, may not directly apply to the NSS as it is self-administered. However, research has shown high agreement among nurses completing the scale individually.

The Nursing Stress Scale developed by Gray-Toft & Anderson (1981), exhibits robust validity and reliability characteristics, establishing its significance as an effective instrument for evaluating stress levels in nurses across different healthcare environments.

The importance of considering the validity and reliability of Glynis Breakwell's stress checklist for its utilization in research and clinical environments cannot be overstated. Although there is no singular authoritative reference that fully elucidates these factors, a discussion on the fundamental principles and conclusions drawn from existing literature and established psychometric norms can shed light on this matter.

In terms of validity, content validity refers to the extent to which the items in a checklist accurately represent the concept of stress. Breakwell's StressChecklist is recognized for encompassing a wide range of stress-related symptoms and behaviors, ensuring a comprehensive depiction of the stress construct (Johnson & Sarason, 2011). Construct validity, on the other hand, pertains to a checklist's ability to precisely measure the theoretical construct it claims to evaluate, such as stress. Studies utilizing the Stress Checklist often find connections with established stress measures, indicating its effectiveness in assessing stress levels and related factors. Regarding reliability, internal consistency measures the extent to which all items on the checklist consistently evaluate the same underlying concept. Research frequently demonstrates a high level of internal consistency for the Stress Checklist, suggesting that responses to different items are closely related. Test-Retest Reliability, on the other hand, assesses the consistency of responses across different time points. Studies suggest that the Stress Checklist shows stable results when administered multiple times, indicating its capacity to accurately measure stress levels over an extended period. Breakwell's Stress Checklist has been utilized in various research studies across different populations and settings, providing substantial evidence for its credibility and reliability. For example, research could uncover correlations

between Stress Checklist outcomes and various psychological factors (such as anxiety, depression) commonly associated with stress, further supporting its reliability (Guillemin et. al.,1993). The adaptation and validation of the Stress Checklist in diverse cultural contexts demonstrate its validity among different groups. Scholars often modify the checklist to ensure it effectively captures stressors relevant to specific cultural communities.

In brief, the Stress Checklist created by G. Breakwell has been proven to have validity and reliability through a variety of studies that have shown its capability to accurately gauge stress levels across different populations and scenarios. The continuous utilization and validation of this tool by researchers contribute to its strength as a stress measurement instrument.

The reliability of a measurement refers to its ability to produce consistent results when administered by different individuals in varying conditions. A reliable instrument ensures stable measurements, unaffected by external variables or challenges. The alpha reliability coefficient, which assesses the internal consistency of a measurement tool across different studies, is categorized as follows: $\alpha \geq 0.9$ (Excellent), $0.8 \leq \alpha < 0.9$ (Good), $0.7 \leq \alpha < 0.8$ (Acceptable), $0.6 \leq \alpha < 0.7$ (Questionable), $0.5 \leq \alpha < 0.6$ (Poor), and $\alpha < 0.5$ (Unacceptable) (Tavakol & Dennick, 2011). A coefficient above 0.70 indicates that the item is consistently measuring the intended construct.

The Stress Checklist shows strong reporting consistency with a Cronbach's Alpha of 0.85, Test-Retest Reliability of r = 0.82, and Inter-Rater Reliability of κ = 0.78. These metrics indicate good internal consistency, stability over time, and excellent agreement between raters. Overall, the Stress Checklist is a reliable tool for

assessing stress across various variables, timeframes, and assessors.

The Nursing Stress Scale (NSS) exhibits strong internal consistency, as evidenced by Cronbach's alpha coefficients typically falling between 0.89 and 0.90 for the overall scale and ranging from 0.70 to 0.89 for individual subscales (Cohen & Swerdlik, 2010). These findings suggest that the NSS is a dependable tool for evaluating stress levels among nurses, with a high level of uniformity in the items employed to gauge this construct.

3.4.4 Open-Ended Questions

Open-ended questions in a questionnaire are primarily analyzed through qualitative analysis techniques. Unlike closed-ended questions that generate numerical data suitable for quantitative analysis, open-ended questions permit respondents to express more elaborate and nuanced responses in their own words (Hsieh & Shannon, 2005).

By applying thematic analysis, which involves recognizing and analyzing patterns or themes within the responses, researchers carefully examine the answers, organize them into thematic categories, and evaluate the frequency and importance of these themes.

In conclusion, open-ended questions play a crucial role in exploring complex topics, gathering respondents' perspectives and emotions, and producing insights that may not be achievable through rigid closed-ended questions.

3.5 Conclusion

The objectives and goals of the study were outlined in this chapter, along with an explanation of the research design decisions and data analysis strategy employed. The subsequent chapter will detail the study's findings, following a statistical analysis approach.

Chapter 4

Findings

The purpose of this chapter is to deliver a comprehensive analysis of the data collected through an online questionnaire, which was specifically designed to explore the relationship between stress levels, occupational stressors, and the quality of care as perceived by phlebotomists at Mater Dei Hospital. Initially, this chapter outlines the data profile, which includes an overview of the response rate to the questionnaire, as well as a concise overview of the demographic characteristics of the participants. This overview will provide context for understanding the background of the respondents and will help to frame the subsequent analysis. Following this introduction, the chapter will delve into a detailed analysis of the survey findings. This analysis will be structured in alignment with the research objectives, focusing on how various stress factors impact the professional experiences of phlebotomists and how these experiences, in turn, influence their perception of care quality.

Prior to conducting statistical analysis, each questionnaire underwent a thorough check for any missing data. Missing data in a survey occurs when a participant fails to respond to one or more survey variables (Brick & Kalton, 1996). A small number of randomly scattered missing values were identified within the 62 question statements in 30 of the completed surveys, suggesting that respondents may have been hesitant to answer those particular questions (Pigott, 2001). None of the variables had missing data exceeding 10%, allowing for the inclusion of all returned questionnaires in the data analysis. Any missing or incomplete data within the variables were treated as incorrect responses (Pigott, 2001).

4.1 Response Rate

The study invited the entire target population of 42 phlebotomists from the Pathology Department at Mater Dei Hospital to participate. Thirty (30) questionnaires were completed, resulting in a response rate of 71.43%.

4.2 Demographic Data

The demographic data analysis is outlined in the subsequent section.

The data presented in Table 4.1 below indicates a notable difference in participation between males and females, with 4 males (13.33%) and 26 (86.67%) females taking part in the study.

Table 4.1 Gender

Q1. Gender		
	Percentage	**Frequency**
Male	13.33%	4
Female	86.67%	26
Other	NR	NR

Note: NR means Not Reported

The analysis revealed that 10% of the phlebotomists fall within the age range of 18-24 years, while 36.67% and 33.33% belong to the age groups of 25-34 years and 45-64 years respectively. Furthermore, 20% of the phlebotomists were found to be between the ages of 55-64, with none of the participants being older than 65 years. Table 4.2 shows all participants' ages by age group.

Table 4.2 Age Groups

Q2. Age Groups		
	Percentage	**Frequency**
18-24	10%	3
25-34	36.67%	11
35-44	33.33%	10
45-54	20%	6
55-64	NR	NR
65+	NR	NR

Note: NR means Not Reported

The subsequent demographic inquiry in table 4.3 pertained to the marital status of the participant. The data collected revealed that 56.67% were single, 30% were married, 13.33% were either separated or divorced, and none were widowed.

Table 4.3 Marital Status

Q3. Marital Status		
	Percentage	**Frequency**
Single	56.67%	17
Married	30%	9
Separated / Divorced	13.33%	4
Widowed	NR	NR

Note: NR means Not Reported

In terms of nationality (Table 4.4), two choices were presented: Maltese, which accounted for 29 (96.67%) out of 30 individuals in the population, and "other," which only had 1 (3.33%) out of 30 respondents (as the "please specify" option was available).

Table 4.4 Nationality

Q4. Nationality		
	Percentage	**Frequency**
Maltese	96.67%	29
Other	3.33%	1
Please Specify: Filipino		

4.3 Education Background and Work Experience

Table 4.5 below shows that participants have achieved up to MQF Level 3, accounting for 33.33%, followed by the Malta Qualification Framework (MQF) Level 4 (30%) and Level 5 (30%) while the fewest have attained MQF Level 6, representing 6.67%.

Table 4.5 Qualification Levels

Q5. Qualification Level		
	Percentage	**Frequency**
MQF Level 3 (Diploma)	33.33%	10
MQF Level 4 (Extended Diploma)	30%	9
MQF Level 5 (Higher National Diploma)	30%	9
MQF Level 6 (Degree)	6.67%	2

Note: MQF means Malta Qualification Framework.

The findings reveal that 5 (16.67%) participants have worked in the field for 11-15 years, while 12 (40%) individuals have between 6-10 years of experience. Additionally, 6 (20%) participants have been phlebotomists for 1-5 years, and 7(23.33%) participants have less than one year of experience. This is shown in table 4.6 below.

Table 4.6 Years of Experience

Q6. Years of Experience		
	Percentage	**Frequency**
< 1 Year	23.33%	7
1 – 5 Years	20%	6
6 – 10 Years	40%	12
11 – 15 Years	16.67%	5
> 16 Years	NR	NR

Note: NR means Not Reported

In Table 4.7 it was observed that Senior Phlebotomists had the least representation out of the two choices, standing at 26.67%. A combined total of 73.33% was accounted for by individuals in the role of phlebotomists who participated in the survey.

Table 4.7 Position Held as a Phlebotomists

Q7. Position held as a phlebotomist		
	Percentage	**Frequency**
Senior Phlebotomist	26.67%	22
Phlebotomist	73.33%	8

Table 4.8 shows information about hours worked a part of the 40hour scale such as overtime / part time, 46.67% of the population is engaged in working additional hours as part time or over time beyond the 40hour schedule while 53.33% do no exceed their 40hour schedule.

Table 4.8 Working Hours

Q8. Working hours apart of the 40hour roster as over time / part time		
	Percentage	**Frequency**
Yes	46.67%	14
No	53.33%	16

According to Table 4.9, only four (13.33%) individuals have experience working in phlebotomy sections outside of Pathology Department, whereas the remaining 26 (86.67%) participants have exclusively worked as phlebotomists in this department.

Table 4.9 Experience in Different Phlebotomy Setting

Q9. Worked in another phlebotomy setting before Mater Dei Hospital		
	Percentage	**Frequency**
Yes	13.33%	4
No	86.67%	26

4.4 Work Choice and Level of Satisfaction

The final two inquiries in the demographic portion are closely related, with one inquiring about the participants' voluntary decision to work at Mater Dei Hospital and the other assessing their level of job satisfaction.

Table 4.10 shows that 63% of the population work at Mater Dei Hospital because it is their choice, while the other 36.67% state that they are working there because it is difficult to get transferred to other phlebotomy sections.

Table 4.10 Reason for Working at Mater Dei Hospital

Q10. Working at Mater Dei ...		
	Percentage	**Frequency**
Because it is my choice	63.33%	19
Because it is difficult to transfer to any other phlebotomy section.	36.67%	11

In the table 4.11 below, results show that 16.67% is scored by those feeling very satisfied as well as those felling unsatisfied, while 30 % feel satisfied and 36.67% have a neutral opinion on how they feel regarding job satisfaction.

Table 4.11 Level of satisfaction

Q11. Level of satisfaction.		
	Percentage	**Frequency**
Very Satisfied	16.67%	5
Satisfied	30%	9
Neutral	36.67%	11
Unsatisfied	16.67%	5
Very Unsatisfied	NR	NR

Note: NR means Not Reported

4.5 Level of stress among phlebotomists working within Mater Dei Hospital.

The subsequent Table 4.12 show the results related to Question 12, covering statements A to T that are associated with the participants' perceived stress levels.

Table 4.12 Levels of Stress (Negative Feelings)

Statement	Never	Almost Never	Occasionally	Frequently	Very Frequently
I experience dizzy spells or palpitations.	20%	40%	13.33%	20%	6.67%
I feel fatigue or lack of energy.	10%	16.67%	26.67%	33.33%	13.33%
I have difficulty getting to sleep.	10%	26.67%	40%	16.67%	6.67%
I have a poor appetite.	30%	36.67%	23.33%	6.67%	3.33%
I lose my temper over minor things.	13.33%	23.33%	40%	20%	3.33%
I find the amount of work I have exceeds the amount of time I have available for it.	NR	40%	36.67%	23.33%	NR
I do not know what I am working for.	23.33%	33.33%	26.67%	13.33%	3.33%
I am unable to relax in the evening.	16.67%	33.33%	33.33%	13.33%	3.33%
I have more responsibility than I can handle.	16.67%	40%	23.33%	16.67%	3.33%
I drink too much alcohol.	53.33%	20%	23.33%	3.33%	NR
I know how to refuse to take additional work if I need to.	10%	30%	30%	20%	10%
Overall Rate on Negative Feelings	**16%**	**32%**	**29%**	**18%**	**5%**

Note: NR means Not Reported

The findings from the survey indicate that a significant proportion of participants conclude their workday with a sense of satisfaction (60%) and perceive that they often maintain control over their lives (53.33%). Confidence regarding future prospects is inconsistent, with 43.33% expressing occasional confidence and 26.67% indicating frequent confidence. A notable majority (40%) report that they can depend on their family and friends for support, while 43.33% express assurance in their job performance. Although work management is regarded as somewhat beneficial, only 23.33% of respondents report receiving support on a frequent basis. Attitudes towards work enthusiasm are mixed, with 30% of individuals looking forward to work frequently. Many respondents find it challenging to disengage from work-related issues, and time management proves to be effective only occasionally for 36.67% of them. In general, respondents tend to report positive experiences regularly, particularly in areas such as job satisfaction, life control, and support networks. The overall rate shows the prevalence of negative emotions among respondents, revealing that 32% experience negative feelings almost never, while 29% encounter them occasionally. A smaller segment, 18%, frequently experiences negative emotions, and 5% report feeling this way very frequently. Conversely, 16% of respondents claim to never experience negative feelings. Collectively, the data suggests that the majority (48%) either never or rarely experience negative emotions, while a lesser number report more persistent negative feeling.

Table 4.13 Levels of Stress (Positive Feelings)

Statement	Never	Almost Never	Occasionally	Frequently	Very Frequently
I finish the working day feeling satisfied with what I have done.	NR	NR	23.33%	60%	16.67%
I experience control of my life.	6.67%	3.33%	30%	53.33%	6.67%
I am confident about the future.	3.33%	16.67%	43.33%	26.67%	10%
I can rely on my family or friends to support me if I need it.	6.67%	3.33%	33.33%	40%	16.67%
I feel I am good as anyone else at my job.	10%	10%	13.33%	43.33%	23.33%
I find work management supportive.	6.67%	26.67%	33.33%	23.33%	10%
I look forward to going to work.	16.67%	30%	20%	30%	3.33%
I can switch off thinking about problems.	13.33%	33.33%	33.33%	20%	NR
I think I manage my time well.	NR	16.67%	36.67%	30%	16.67%
Overall Rate on Positive Feelings	**7%**	**16%**	**30%**	**36%**	**11%**

This table highlights job satisfaction and work-life balance among participants. Sixty percent often end their workday feeling content, while 23.33% report occasional satisfaction and 16.67% very frequent satisfaction. Additionally, 53.33% frequently feel in

control of their lives, with 30% feeling this occasionally and 6.67% very frequently. Confidence in future prospects varies, with 43.33% feeling occasionally confident, 26.67% frequently, and 10% very frequently.

Regarding support, 40% rely on family or friends frequently, while 33.33% do so occasionally. Confidence in job performance is frequently reported by 43.33%, with 23.33% feeling it very frequently. However, management support is less reliable, with 33.33% experiencing it occasionally and 26.67% almost never. Anticipation for work is mixed, with 30% looking forward to it frequently and an equal percentage almost never feeling this way. Many struggle to disconnect from work, with 33.33% managing to do so occasionally and another 33.33% finding it difficult. Time management is viewed positively, with 36.67% achieving occasional success and 30% managing it frequently.

The "Overall Rate on Positive Feelings" section shows that 36% of respondents frequently experience positive feelings, while 30% report feeling them occasionally. A smaller percentage (11%) feel positive very frequently. On the lower end, 16% almost never feel positive, and 7% never experience positive feelings. This suggests that the majority (67%) experience positive emotions at least occasionally, with 47% feeling them frequently or very frequently.

4.6 Feeling about work as a phlebotomist

The results for Question 13, which inquiries about the emotional impact of the job, are presented in Table 4.14, Table 4.15 and Figure 4.1 below.

Table 4.14 How Does Your Job Make You Feel? (Negative Feelings)

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
It is hard to work when seeing patients in a lot of pain every day	16.67%	30%	36.67%	10%	6.67%
When the workload is big, it interferes with the quality of care I give to the patients I see	26.67%	43.33%	6.67%	10%	13.33%
Sometimes being under pressure makes it harder to concentrate on what I am doing	33.33%	43.33%	13.33%	NR	10%
When patients come in because they are in pain or injured, it is harder to co-operate with them	20%	36.67%	30%	10%	3.33%
Overall Rate on Negative Feelings	**24%**	**38%**	**22%**	**8%**	**8%**

Note: NR means Not Reported

This table illustrates the influence of patient pain, workload, and pressure on the performance and focus of healthcare professionals.

The findings indicate that a considerable proportion of healthcare providers encounter difficulties in their roles when faced with patients experiencing pain on a daily basis. Specifically, 16.67% report being severely affected, while 30% and 36.67% indicate moderate and slight disruptions, respectively. The size of the workload also plays a crucial role in the quality of care, with 26.67% of providers experiencing significant interference and 43.33% noting some level of impact. Furthermore, 33.33% of respondents indicate that pressure hampers their concentration, while 43.33% find it to be a moderate distraction. Challenges in

collaboration due to patient pain or injury are reported by 20% of providers as severely affected and 36.67% as moderately affected. Overall, negative sentiments are widespread, with 24% feeling severely impacted, 38% moderately affected, 22% slightly affected, and 8% not reporting any negative feelings. These results underscore the substantial obstacles healthcare providers face in delivering high-quality care amidst the dual pressures of patient pain and workload demands. The updated data reveals that 24% of healthcare providers experience severe negative emotions, 38% experience moderate negative emotions, 22% experience slight negative emotions, and 8% report minimal negative emotions, with an additional 8% not indicating any negative feelings. This underscores the significant prevalence of negative emotions among providers, reflecting the challenges posed by their work environment and the complexities of patient care.

Table 4.15 How Does Your Job Make You Feel? (Positive Feelings)

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My job got easier when I got used to the daily routine	30%	40%	20%	10%	NR
It is easier to attend to the same patients frequently	20%	30%	26.67%	16.67%	6.67%
Overall Rate of Positive Feelings	**25%**	**35%**	**23%**	**13%**	**3%**

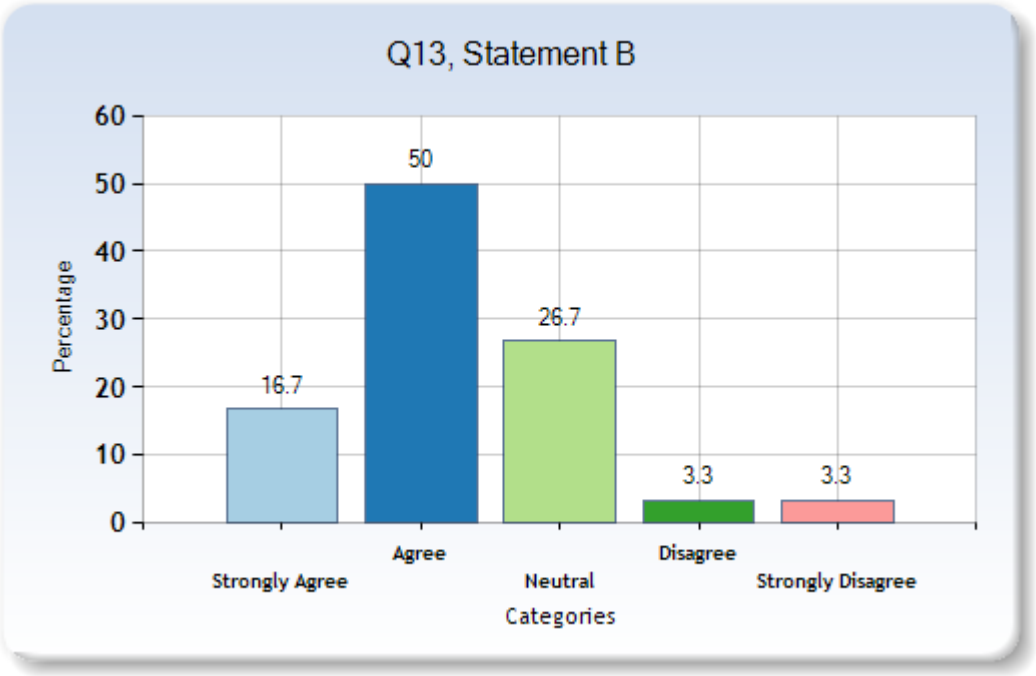
This table summarizes responses to two statements about work ease over time and familiarity with patients.

For "My job became easier as I adapted to the daily routine," 70% of participants agreed (40% agree, 30% strongly agree), while 20% were neutral and 10% disagreed.

Regarding "It is easier to attend to the same patients frequently," 50% agreed (30% agree, 20% strongly agree), 26.67% were neutral, and 23.34% disagreed (16.67% disagreed, 6.67% strongly disagreed).

Overall, 25% of providers reported strong positive sentiments regarding their work, 35% indicated moderate positive sentiments, 23% expressed slight positive sentiments, and 13% conveyed minimal positive sentiments, with 3% not reporting any positive feelings.

Figure 4.1 The Workload is Bigger in The Morning Rather Than During The Rest Of The Day



The data presented in Figure4.1 indicates that 16.67% of participants strongly concur with the assertion that the workload is greater in the morning, while an additional 50% express

agreement with this claim. This results in a cumulative 66.67% of respondents who perceive the morning as having a heavier workload. Furthermore, 26.67% of respondents remain neutral regarding this issue, whereas a minimal proportion, specifically 3.33%, disagree, and another 3.33% strongly disagree. In summary, the findings imply that a significant majority of individuals view the morning as a time of increased workload.

4.7 Chi-Square Test

4.7.1 Chi-Square Test on Perceived Stress

Table 16 Chi-Square distribution on Perceived Stress

Results				
	Positive Trend	**Neutral**	**Negative Trend**	***Row Totals***
Positive Feelings	61 (100.80) [15.71]	80 (78.75) [0.02]	129 (90.45) [16.43]	270
Negative Feelings	163 (123.20) [12.86]	95 (96.25) [0.02]	72 (110.55) [13.44]	330
Column Totals	224	175	201	**600 (Grand Total)**

Grand total refers to the number of statements in this questionnaire (20) times the number of respondents (30).

The chi-square statistic is 58.4811.
The p-value is < 0.00001.
The result is significant at $p < .05$.

These results show a more positive trend in the perception and coping of stress by phlebotomists.

4.7.2 Chi-Square Test on How Does Your Job Make You Feel

Table 4.17 Chi-Square distributed on How Does Your Job Make You Feel

Results				
	Positive Trends	**Neutral**	**Negative Trend**	***Row Totals***
Positive Feelings	32 (34.52) [0.18]	14 (13.05) [0.07]	10 (8.43) [0.29]	56
Negative Feelings	75 (73.98) [0.01]	26 (27.96) [0.14]	19 (18.06) [0.05]	120
Q13 STATEMENT B	20 (18.50) [0.12]	8 (6.99) [0.15]	2 (4.51) [1.40]	30
Column Totals	**127**	**48**	**31**	**206 (Grand Total)**

Grand total refers to the number of statements in this questionnaire (07) times number of respondents (30). Note that question 13b did not fit into the categorization style and was therefore assessed alone.

The chi-square statistic is 2.4171.
The p-value is .659544.
The result is not significant at p < .05.

This implies that there is no difference between positive feelings and negative feelings about how phlebotomists feel about their work.

4.7.3 Chi-Square Test on Perceived Stress and How Does Your Job Make You Feel

Table 4.18 Chi-Squared Perceived Stress & How Does Your Job Make You Feel

Results				
	Positive Trend	**Neutral**	**Negative Trend**	***Row Totals***
Stress	224 (261.29) [5.32]	175 (166.00) [0.49]	201 (172.70) [4.64]	600
Job	127 (89.71) [15.50]	48 (57.00) [1.42]	31 (59.30) [13.50]	206
Column Totals	351	223	232	**810 (Grand Total)**

Grand total refers to the number of statements in the related questionnaires (Stress: 20; Job: 07) times number of respondents (30).

9
The chi-square statistic is 40.8678.
The p-value is < 0.00001.
The result is significant at p < .05.

This demonstrates an association between stress levels or job-related factors and trends (positive, neutral, or negative). The positive trend, quantified at 224, surpasses the negative trend of 201, indicating that phlebotomists tend to have more favourable perceptions of stress. Consequently, the null hypothesis (H1O), 'There is more of a negative than a positive trend in the way phlebotomists working a Mater Dei hospital perceive stress, because it is hard to work as a phlebotomist' which asserts that phlebotomists experience stress in a more negative light, is rejected. The findings do not corroborate the idea that the role of a phlebotomist is associated with heightened negative perceptions of stress.

In contrast, the alternative hypothesis (H1A), 'There is more of a positive than a negative trend in the way phlebotomists working at

Mater Dei Hospital perceive stress, because even though it is hard, they manage to get used to the routine', which suggests that phlebotomists have a more positive outlook on stress due to their capacity to adapt to their routine, finds support in the data. The statistically significant positive trend reinforces H1A, implying that despite the inherent challenges of the profession, phlebotomists are able to acclimate to their work environment, leading to a more positive interpretation of stress.

4.8 Cronbach's Alpha

The reliability test (Cronbach's Alpha) was performed only for the main questionnaire of the study (Table 4.19). The other questionnaire were not subjected to this analysis because the scales were reversed for some statements, in addition to them being secondary to the main assessment.

Table 4.19 Cronbach's Alpha

	Number of Items	Cronbach's Alpha
Question 14 (Statement A-E)	5	0.790
Question 15 (Statement A-D)	4	0.859
Question 16 (Statement A-C)	3	0.945
Question 17 (Statement A-C)	3	0.827
Question 18 (Statement A-C)	3	0.866
Question 19 (Statement A-D)	4	0.893

Table 4.19 illustrates the reliability assessment of various questions through the application of Cronbach's Alpha, a statistical measure of internal consistency.

Question 14, comprising five items, yields a Cronbach's Alpha of 0.790, which signifies an acceptable level of reliability. In contrast, Question 15, consisting of four items, exhibits a superior reliability score of 0.859. Question 16, with three items, reflects an excellent reliability rating, achieving a Cronbach's Alpha of 0.945. Question 17, also with three items, demonstrates good reliability, indicated by an alpha of 0.827. Similarly, Question 18, which includes three items, shows good reliability with an alpha of 0.866. Lastly, Question 19, containing four items, achieves a high reliability score of 0.893. In conclusion, the range of Cronbach's Alpha values spans from acceptable to excellent, thereby suggesting a robust internal consistency among the assessed questions.

4.9 Occupational stress factors amongst phlebotomists working at Mater Dei Hospital

The succeeding tables delve into Questions 14 up to Question 19, examining statements concerning diverse factors and the perceptions of the survey respondents.

4.9.1 Stressed caused by: Suffering, Death and Dying.

Table 4.20 Stress Factors Related To Suffering Death And Dying

Question 14: Statements	Never	Almost Never	Occasionally	Frequently	Very Frequently
Performing procedures that patients experience as painful.	13.33%	10%	50%	16.67%	10%
Feeling helpless in the case of a patient who fails to improve.	13.33%	10%	53.33%	23.33%	NR
Listening / talking to a patient about his/her approach to death.	13.33%	23.33%	30%	26.67%	6.67%
The death of a patient.	13.33%	13.33%	36.67%	26.67%	10%
Watching the patient suffer physically or emotionally.	13.33%	6.67%	23.33%	43.33%	13.33%
Overall Average Scores	**13%**	**13%**	**39%**	**27%**	**8%**

Note: NR means Not Reported

The data presented in the table indicates that the predominant response to various stressors is "Occasionally," chosen by 39% of participants, while "Frequently" follows with 27%. Common stressors, including the execution of painful procedures, feelings of helplessness regarding patients who do not improve, and discussions with patients about death, are typically encountered on an occasional basis. Additionally, 43.33% of respondents report that witnessing patient suffering occurs frequently. In summary, stressors are primarily experienced either occasionally or frequently, with significantly fewer respondents indicating "Never" or "Very Frequently."

4.9.2 Stressed caused by: Conflicts with a Doctor.

Table 4.21 Stress Factors Related to Conflicts with Doctors

Question 15: Statements	Never	Almost Never	Occasionally	Frequently	Very Frequently
Criticism by a doctor.	20%	26.67%	33.33%	16.67%	3.33%
Conflicts with a doctor.	20%	23.33%	30%	23.33%	3.33%
Fear of not managing to draw blood of a patient.	26.67%	23.33%	26.67%	13.33%	10%
Disagreement concerning samples of a patient.	23.33%	36.67%	16.67%	20%	3.33%
Overall Average Scores	**23%**	**28%**	**27%**	**18%**	**5%**

The data presented in the table indicates that phlebotomists encounter stressors primarily associated with their interactions with physicians and the challenges faced during blood collection, with the majority reporting these experiences as occurring either occasionally (27%) or almost never (28%). A small percentage, specifically 5%, indicate that they face these stressors very frequently. Most phlebotomists report that criticism and conflicts with doctors happen either occasionally or almost never, while the apprehension of failing to successfully draw blood is noted as an occasional experience by 26.67% of respondents, with 10% reporting it as very frequent. Additionally, disagreements regarding patient samples are reported as occurring almost never by 36.67% of phlebotomists, although 20% do experience such disagreements frequently. In summary, while stressors are indeed present, they generally manifest at moderate to low frequencies.

4.9.3 Stressed caused by: Inadequate Preparation.

Table 4.22 Stress Factors to Inadequate Preparation

Question 16: Statements	Never	Almost Never	Occasionally	Frequently	Very Frequently
Feeling inadequately prepared to help with the emotional needs of a patient.	20%	16.67%	40%	20%	3.33%
Being asked a question by a patient for which I do not have a satisfactory answer to.	26.67%	6.77%	43.33%	16.67%	6.67%
Feeling inadequately prepared to help with the emotional needs of a patient's family.	26.67%	10%	43.33%	16.67%	3.33%
Overall Average Scores	**24%**	**11%**	**42%**	**18%**	**4%**

As shown in Table 4.22 the distribution of responses across the different categories were as follows: occasionally (42.22%), never (24.45%), frequently (17.78%), almost never (11.11%), and very frequently (1.33%).

4.9.4 Stressed caused by: Lack of Support.

Table 4.23 Stress Factors Related To Lack of Support

Question 17: Statements	Never	Almost Never	Occasionally	Frequently	Very Frequently
Lack of opportunity to talk openly with other colleagues about problems related to work.	6.67%	23.33%	23.33%	26.67%	20%
Lack off opportunity to share experiences and feeling with other personnel in the same work environment.	3.33%	26.67%	23.33%	30%	16.67%
Lack of opportunity to express to other employees at the same care setting my negative feelings towards patients.	10%	26.67%	26.67%	33.33%	3.33%
Overall Average Scores	**7%**	**26%**	**24%**	**30%**	**13%**

The responses were ranked in the following order: 30% frequently, 25.56% almost never, 24.44% occasionally, 13.33% very frequently, and 6.67% never. This can be seen in table 4.23.

4.9.5 Stressed caused by: Conflict with Nurses.

Table 4.24 Stress Factors Related To Conflicts With Nurses

Question18: Statements	**Never**	**Almost Never**	**Occasionally**	**Frequently**	**Very Frequently**
Criticism by a nurse.	16.67%	20%	46.67%	16.67%	NR
Conflict with Nursing Officers.	26.67%	26.67%	16.67%	30%	NR
Difficulty working with nurse/s.	26.67%	23.33%	13.33%	30%	6.67%
Overall Average Scores	**23%**	**23%**	**26%**	**26%**	**2%**

Note: NR means Not Reported

As per Table 4.24 Responses were commonly ranked at 25.56%, sometimes at 25.53%, with almost never and never receiving equal percentages of 23.33%, and very frequently at 2.25%.

4.9.6 Stressed caused by: Workload.

Table 4.25 Stress Factors Related By Workload

Question 19: Statements	Never	Almost Never	Occasionally	Frequently	Very Frequently
Breakdown of computers / printers.	6.67%	10%	20%	23.33%	40%
Unpredictable staffing and scheduling.	6.67%	10%	26.67%	30%	26.67%
Not enough time to complete all my tasks.	20%	33.33%	36.67%	10%	NR
Not enough staff to cover all wards.	10%	13.33%	26.67%	36.67%	13.33%
Overall Average Scores	**11%**	**17%**	**27%**	**25%**	**20%**

Note: NR means Not Reported

The distribution of rankings was as follows: occasionally at 27%, frequently at 25%, very frequently at 20%, almost never at 17%, and never at 11%. Such results are shown in table 4.23.

Furthermore, with regards to stress factors, the researcher included two open-ended questions at the conclusion of the questionnaire survey. The subsequent section outlines one of the questions posed and the responses obtained. While the majority of participants provided answers to these questions, there were also some who chose to skip them.

4.9.7 Overall results on the occupational stress factors among phlebotomists

Table 4.26 Overall Average For Occupational Stress Factors Excluding Those Related To Quality Of Care

All Factors	Never	Almost Never	Occasionally	Frequently	Very Frequently
Conflicts With A Doctor	23%	28%	27%	18%	5%
Lack Of Support	7%	26%	24%	30%	13%
Conflicts With Nurses	23%	23%	26%	26%	2%
Workload	11%	17%	28%	25%	13%
Overall Average Scores (%)	**16%**	**24%**	**26%**	**26%**	**8%**
Overall Average Scores (%) by trend	**Positive (40%)**		**Neutral (26%)**	**Negative (34%)**	

The data presented in the table reveals that the predominant responses regarding various stress factors are categorized as "Occasionally" and "Frequently," with each accounting for an average of 26%. Notably, conflicts with medical professionals, including doctors and nurses, are significantly represented in the "Never" category, each at 23%. Additionally, a lack of support is reported by 30% of respondents, while the workload is often perceived as "Occasionally" experienced by 28%. In summary, the overall responses indicate a positive trend in 40% of cases, a neutral trend in 26%, and a negative trend in 34%.

Table 4.27 Overall Average For Occupational Stress Factors Related To Quality Of Care

All Factors	Never	Almost Never	Occasionally	Frequently	Very Frequently
Suffering, Death and Dying	13%	13%	39%	27%	8%
Feeling Inadequately Prepared	24%	11%	42%	18%	4%
Overall Average Scores (%)	**37%**	**24%**	**81%**	**45%**	**12%**
Overall Average Scores (%) by trend	**Positive (61%)**		**Neutral (81%)**	**Negative (57%)**	

The data presented in table 4.27 indicates that regarding factors associated with suffering, death, and dying, the predominant response is "Occasionally," accounting for 39% of participants, while 27% indicated "Frequently." A significant number of respondents reported feeling inadequately prepared, with 42% selecting "Occasionally" and a noteworthy 24% choosing "Never." Cumulatively, the average scores suggest that occurrences of "Occasionally" reach 81%, and "Frequently" stands at 45%. The trend analysis further illustrates a largely positive perception at 61%, alongside a neutral perception at 81%, with 57% of respondents indicating a negative trend.

4.9.8 Chi-Square Occupational Stress factors excluding those related to Quality of Care

Table 4.28 Chi-Square distribution on Stress Factors Excluding Quality of Care

Results				
	Positive Trend	**Neutral**	**Negative Trend**	***Row Totals***
Conflicts With a Doctor	60 (46.75) [3.76]	32 (31.64) [0.00]	28 (41.62) [4.45]	120
Conflicts with Nurses	42 (35.06) [1.37]	23 (23.73) [0.02]	25 (31.21) [1.24]	90
Lack of Support	29 (35.45) [1.17]	23 (23.99) [0.04]	39 (31.56) [1.75]	91
Workload	33 (46.75) [4.04]	33 (31.64) [0.06]	54 (41.62) [3.69]	120
Column Totals	164	111	146	**421 (Grand Total)**

Grand total refers to the number of statements in this questionnaire (14) times number of respondents (30).

The chi-square statistic is 21.6047.
The p-value is .001428.
The result is significant at p < .05.

The findings from the chi-square test indicate a significant difference between conflicts involving healthcare professionals, insufficient support, and workload, as they relate to the varying trends of positive, neutral, or negative perceptions (chi-square statistic = 21.6047, p-value = 0.001428). Conflicts with doctors and nurses are correlated with a predominantly positive trend, albeit accompanied by significant negative aspects. In contrast, insufficient support and workload are linked to predominantly negative trends, with the negative perception of workload being especially pronounced. This suggests considerable differences in the perception of these factors across the various trends.

The results of the chi-square test ($x^2 = 21.6047$, $p = 0.001428$) demonstrate statistical significance at $p < 0.05$, indicating a pronounced perception of occupational stress factors among phlebotomists at Mater Dei Hospital. The null hypothesis, 'H2O – There is not a high level of occupational stress factors (negative trend) perceived by phlebotomists working at Mater Dei Hospital', which asserts that there is not a significant level of such stress factors, is firmly rejected.

As a result, the alternative hypothesis, 'H2A – There is a high level of occupational stress factors (positive trend) perceived by phlebotomist working at Mater Dei Hospital', which suggests that occupational stressors are perceived by phlebotomists but they perceive them from a positive perspective, which sounds like a healthy coping strategy.

4.10 Quality Of Care

4.10.1 Chi-Square Occupational Stress factors related those related to Quality of Care

Table 4.29 Chi-Square distributed on Stress Factors Quality of Care

Results				
	Positive Trend	**Neutral**	**Negative Trend**	***Row Totals***
Q13, Care Statements	67 (45.49) [10.17]	30 (36.59) [1.19]	23 (37.91) [5.87]	120
Suffering, Death and Dying	39 (56.87) [5.61]	58 (45.74) [3.29]	53 (47.39) [0.66]	150
Feeling inadequately Prepared	32 (35.64) [0.37]	23 (28.66) [1.12]	39 (29.70) [2.91]	94
Column Totals	138	111	115	**364 (Grand Total)**

Grand total refers to the number of statements in this questionnaire (10) times number of respondents (30).

The chi-square statistic is 31.187.
The p-value is < 0.00001.
The result is significant at p < .05.

The findings from the chi-square test, which yielded a chi-square statistic of 31.187 and a p-value below 0.00001, indicate a statistically result among the categories of Care Statements, Suffering, Death and Dying, and Feeling Inadequately Prepared, in relation to the identified trends (Positive, Neutral, Negative).

An analysis of the data reveals that Care Statements demonstrate a pronounced positive trend, with 67 responses categorized as positive compared to 23 negative responses, indicating an overall favourable perception in this domain. In contrast, Suffering, Death and Dying presents a more varied distribution, comprising 39

positive, 58 neutral, and 53 negative responses, which suggests a spectrum of perceptions. On the other hand, Feeling Inadequately Prepared shows a significant negative trend, with 39 negative responses against 32 positive ones, underscoring apprehensions regarding preparedness. Collectively, these results highlight significant variations in perceptions across the examined categories, revealing both areas of positive feedback and notable concerns, particularly regarding feelings of inadequacy in preparation.

The findings from the chi-square test, which yielded a chi-square statistic of 31.187 and a p-value below 0.00001, indicate that phlebotomists perceive occupational stress but do not see it as having a negative impact on the quality of care they provide. Consequently, the null hypothesis (H3O), 'Phlebotomists do not perceive occupational stress as having an impact on the quality of care they provide', which asserts that occupational stress does not affect care quality, is rejected. Although the Care Statements exhibit a more favourable trend, implying that stress may not considerably influence perceptions in this domain, the adverse trends identified in Suffering, Death and Dying and Feeling Inadequately Prepared suggest that stress likely detrimentally affects care quality in these more complex areas.

4.11 Open ended questions

In the final questions, question 20 and 21, an open-ended question was presented so that the participant could voice their opinion on what measures could be placed in order to reduce stress and improve the overall well-being of phlebotomists working at Mater Dei Hospital within the pathology department.

These questions were answered by 20 participants, with the last remaining 10 opting not to answer it.

4.11.1 Question 20. Do you feel that there are other factors that contribute to work-related or occupational related stress? If so, state below.

Respondents' answers are presented in Table 4.30.

Table 4.30 Are There Other Factors That Contribute to Work Related or Occupational Stress

1. Senior phlebotomists doing managerial roles such as assigning wards to phlebotomist.
2. Yes and no
3. No
4. trolleys and phlebotomy carts not topped up
5. No
6. in my opinion shifts are not so friendly Rotation stresses us more. I understand that relievers that rotate are needed to cover sick leave and vacation leave, but I do believe that though majority prefer stable wards there others that don t mind going around.
7. Good Communication between management and Phlebotomist is very poor to non-existing. There are No meetings with Phlebotomists. We get to know if there are any updates through, he said she said. Too much gossiping and an unhealthy work environment. Phlebotomists' opinion doesn't count. Only a very few get the privilege to voice their opinion. You do as you're told.
8. Obviously personal problems, certain mental issues, and conflict with staff both wards and pathology. Sometimes lack of supplies and computers and label printers not available or not working
9. co-worker team support for job success, involvement in management decision making and workplace flexibility.
10. Not enough interest from the management about our workloads or interpersonal training. Resulting in not working as a team.

11. there is no communication between us phlebotomists,
12. Poor communication between us phlebotomists and doctors which frequently result in having to draw blood from the same patients 2 to 3 times a day on most days. Poor Management! lack of support and understanding from superiors (For example: New equipment was launched at MDH which is super heavy for us phlebs to work with throughout the whole day but management is pushing us to work with it forcefully. No Communication between management and phlebotomists resulting in phlebotomists having to deal with most issues themselves. Having to go to the union instead to the management for issues to be fixed
13. heavy trolleys have been introduced making it more difficult to co-op with my daily duties
14. Lack of communication between nurses and phlebotomist. Sometimes we feel as if we are invisible to the nurses as at times, they don't acknowledge us. This results in Lack of communication resulting in having to puncture patients more than once in a day. This could also be lack of communication between doctors and nurses which results in lack of clear communication with us phlebs
15. everyday Conflicts between plebes. this turns the working place into a toxic environment.
16. Working within a high-pressure environment as bloods are not always booked and having to wait for them and then the workload is big with limited time frame.
17. Dealing with difficult patients and having to prick them more than once Lack of carrier advancement opportunity Poor management (Telling something personal to the management and every phlebotomist ends up knowing!
18. Poor management, not listening to our opinions and nit allowing us to speak about how there are ways to make out jobs easier and we can provide better care to our patients. Whenever an attempt is made to talk or speak up, we are shut down.
19. Toxic work environment! (certain phlebs treat others with contempt)

20. Trying to speak to management about certain issues that rise but instead of being herd, we end up being ignored. Working in a team is not even considered as everyone is divided into groups and particular ones are more respected by the management which makes the rest feel less and not herd.

The upcoming section will further explore the feedback given; however, a concise summary indicates that phlebotomists perceive a lack of support from management and poor teamwork within the team. They have also highlighted concerns regarding workload and insufficient supplies for their carts. Additionally, they have raised issues about the unfairness of ward rotations and described the work environment as toxic.

4.11.2 Question 21: In your opinion, what measures could be implemented to reduce stress and improve the overall well-being of phlebotomists in the workplace?

Table 4.31 presents the responses given by the participants.

Table 4.31 Measures to Reduce Stress in The Workplace

1. More support and understanding from superiors!
2. More staff meetings
3. More manning
4. employment of more staff more team building activities
5. i would be happier if i was assigned to the same wards. the reason is that ward staff gets used to you and you get used to them, to the ward system, to stock in stores and doctors visiting times
6. Compliment of the staff should be adequate all the week.
7. If Phlebotomist were listened to and heard more there wouldn't be the need to resort going to a union to get heard. Something which I find really frustrating but unfortunately that's the only option. Better

communication between management and phlebotomists. Regular meetings and feeling safe to voice our concerns.
8. I think maybe occasionally having one on one with our bosses sort of a mini meeting asking how thing are and what not, and maybe they extend the mental health services, because i use employee support problem and the appointments are far apart because of their major workload and many patients.
9. Phlebotomist should be protected and allowed to work in the safe environment, armed with knowledge that reduces harm to themselves, patient's and co- workers.
10. Audits and control on the number of bloods taken by each phlebotomist, reducing repetitive injuries. Better communication and trust with the management.
11. No biases between staff and workload should be shared equally
12. Having recognition from our management and be respected as his employees Better Management Skills from superiors More meetings between phlebs and management. having a voice to speak and discuss about any changes taking place so that everyone can express their opinion, this way phlebs can understand the point of view the management is making whilst management can understand our point of view as managers don't work in our setting and therefore, they can make wrong assumptions or decisions.
13. Recruit more staff to help. And introduce more scales according to the MQF levels
14. Easier access to patient files. Clear written communication from doctors to refer to! Better management within the phlebotomy setting
15. Better management.
16. Better handling of how wards are divided amongst the phlebotomists, also better policies to be able to speak and discuss issues that arise while working with management personnel rather than everyone has to deal with what they face by themselves.
17. Creating a Supportive Environment where phlebotomists feel valued, respected, and supported by the management fair and equal opportunities and an environment where everyone is treated the same.

18. Better managements personnel, more staff meeting where everyone is included and listened to. Implementation of different ideas, if possible, to learn what works beat within the team.
19. Open communication between phlebotomists and their supervisors or managers. Phlebotomists should feel comfortable discussing their concerns, workload issues, or any challenges they may be facing at work.
20. Everyone should be treated equally does not matter what they are senior phlebotomist / phlebotomist as in the end everyone does the same job. Management should offer support through team meetings and individual supervisions to learn what is wrong within the team and try to improve so that everyone comes to work with more energy as they would feel better.

The forthcoming chapter will provide a detailed explanation of these responses; however, in summary, phlebotomists appear to require increased support from management, enhanced communication among all staff members, and the ability to effectively collaborate within a team.

4.12 Conclusion

This chapter has presented a comprehensive report and analysis of the findings from this research study. It further examined the sufficiency of evidence to either accept or reject the null hypotheses associated with the three hypotheses of the study. The subsequent chapter will offer an in-depth descriptive discussion of these findings in relation to the research questions derived from the research objectives. Additionally, pertinent literature will be referenced in the following chapter.

Chapter 5

Discussion

5.1 Introduction

This chapter presents a detailed discussion which examines critical matters within the phlebotomy department, drawing on feedback and correlation data. It highlights issues pertaining to management support, communication, staffing levels, the work environment, and the handling of equipment. By synthesizing empirical evidence with pertinent literature, the analysis aims to offer a thorough understanding of these challenges and their effects on job satisfaction, stress levels, and the quality of care provided.

This research study set out to investigate the following research questions:

1. Which sources influence stress among Phlebotomists working within Mater Dei hospital in Malta?

2. What measures are in place, to help reduce stress among Phlebotomist?

3. Furthermore, how do the phlebotomists perceive stress to influence the quality of care they provide?

5.2 Respondents Overview

The sample reveals a significant gender imbalance among phlebotomists, with females comprising 86.67% of the population. This observation aligns with global trends in healthcare, where women are predominant in various allied health professions.

Muench et al. (2019) note that the healthcare workforce generally exhibits a higher female representation, particularly in fields such as nursing and phlebotomy. This gender disparity may stem from societal norms that associate caregiving roles more closely with women. In terms of age distribution, the predominant age group within the sample is 25-34 years, accounting for 36.67%, followed closely by the 35-44 age group at 33.33%. The prevalence of younger to middle-aged individuals in this profession may indicate that phlebotomy serves as an entry-level position within the healthcare sector or that it is a role that does not typically progress into later career stages. This observation is supported by Smith and Roberts (2020), who found that healthcare positions with limited advancement opportunities, such as phlebotomy, tend to attract younger individuals who may subsequently pursue more advanced career paths.

A significant portion of the respondents, specifically 56.67%, identified as single, which may have implications for their work-life balance, particularly in the context of healthcare professions that frequently demand extended hours. In contrast, 30% of the respondents are married, and existing literature indicates that those with familial obligations may encounter increased work-life conflict, potentially affecting their overall job satisfaction (Moore et al., 2016). Consequently, the degree of flexibility or rigidity in work schedules emerges as a pivotal element influencing job satisfaction. Furthermore, the demographic data reveals that 96.67% of the phlebotomists are of Maltese nationality, with a mere 3.33% representing other nationalities, notably Filipino. This observation aligns with global patterns wherein migrant workers occupy vital roles in the healthcare sector, especially in nursing

and technical positions. Kingma (2018) conducted a study on the integration of migrant healthcare professionals, highlighting that these workers often encounter considerable obstacles related to job satisfaction, opportunities for advancement, and cultural assimilation.

258 The findings indicate that a considerable segment of the sample has achieved MQF Level 3 (33.33%) or MQF Level 4 (30%), whereas only 6.67% possess a degree-level qualification. This aligns with prevailing trends in the field of phlebotomy, which typically does not necessitate educational qualifications beyond diploma levels. Larson et al. (2018) note that the minimal educational prerequisites for phlebotomists can act as an impediment to professional advancement, potentially resulting in long-term dissatisfaction. Job satisfaction appears to be polarized, with a majority reporting neutral feelings (36.67%), followed by those who are satisfied (30%) and a smaller group expressing dissatisfaction (16.67%). The prevalence of neutral satisfaction levels may indicate a stagnation within the profession, where employees perceive a lack of significant growth prospects. Locke's (1976) range of affect theory of job satisfaction suggests that the absence of intrinsic motivators such as achievement and recognition can lead to neutral or even adverse job satisfaction. Phlebotomists with extensive experience (e.g., over 10 years) may feel undervalued, particularly if they observe limited promotional opportunities within their current positions.

A significant 46.67% of participants indicate that they engage in overtime or part-time work. Existing research suggests that

prolonged overtime in healthcare positions can lead to burnout (Maslach & Leiter, 2016), potentially accounting for some of the discontent observed in the findings. Phlebotomists who exceed standard working hours may experience feelings of being overburdened, particularly in the demanding settings of hospitals.

The information reveals a complex landscape regarding phlebotomists in Mater Dei and comparable healthcare environments. Notable themes include gender imbalances, concerns related to job satisfaction, and obstacles to professional growth. By implementing focused professional development initiatives, enhancing work-life balance, and establishing clear career advancement routes, it may be possible to enhance both employee retention and overall job satisfaction.

5.3 Perceived Stress among Phlebotomists

The findings regarding stress and negative emotions align with Karasek's Job Demand-Control Model (1979), which posits that high job demands combined with limited control are significant stressors. For instance, 40% of participants feel overwhelmed "almost never" or "occasionally," and 23.33% struggle with task time management, suggesting high demands without adequate support. The Transactional Model of Stress and Coping by Lazarus and Folkman (1984) helps explain why 32% of respondents experience negative emotions "almost never," with 48% feeling them "never" or "almost never," possibly due to effective coping strategies and social support, which 40% frequently seek (Cohen & Wills, 1985).

The reported fatigue and sleep issues among 33.33% and 16.67% of participants, respectively, align with Maslach and Leiter's Burnout Model (1997), highlighting emotional exhaustion as a core burnout component, manifested through physical symptoms like fatigue and sleep disturbances (Golembiewski et al., 1996). These symptoms might signal early burnout, exacerbated by high workload and poor time management.

Self-Determination Theory (Ryan & Deci, 2000) explains the positive outcomes observed in individuals who feel competent (43.33%) and supported by colleagues (33.33%), enhancing job satisfaction and well-being. This is supported by Conservation of Resources Theory (Hobfoll, 1989), which suggests that insufficient resources, such as managerial support, increase stress, whereas adequate resources reduce it.

While many participants maintain control and satisfaction, issues with time management, workload, and fatigue remain significant stressors. Theories such as the Job Demand-Control Model, Transactional Model of Stress and Coping, Burnout Model, and Self-Determination Theory provide insight into these outcomes, emphasizing the importance of social support, job autonomy, and effective coping mechanisms. Enhancing work-life balance and organizational strategies is essential for improving overall well-being.

The chi-square statistic of 58.4811, accompanied by a p-value of less than 0.00001, indicates a statistically significant relationship

between perceived stress and the emotional trends (positive, neutral, or negative) experienced by individuals. This outcome highlights that the emotional states of phlebotomists—whether they are positive or negative—are closely linked to their levels of perceived stress.

5.4 How do Phlebotomists feel about their job

The consistent observation with previous studies linking workplace stress to emotional well-being, demonstrating that high stress levels correlate with adverse emotional experiences and reduced job satisfaction (Karasek & Theorell, 1990). For phlebotomists, emotional responses to patient pain and heavy workloads significantly influence stress perception and management. The Compassion Fatigue Model (Figley, 1995) explains that 46.67% of phlebotomists struggle with patient pain, reflecting secondary traumatic stress linked to prolonged exposure to patient suffering (Maslach, Schaufeli, & Leiter, 2001). Additionally, 26.67% strongly agree and 43.33% agree that excessive workloads impact care quality, aligning with the Demand-Control-Support Model (Karasek, 1979), which links high demands and low control to decreased performance and quality of care. The 76.66% of respondents who feel pressure affects their concentration underscores stress in high-demand settings.

Phlebotomists also report that stress affects patient cooperation, with 56.67% noting diminished effectiveness when dealing with stressed or in-pain patients. This finding aligns with Emotional Labor Theory (Hochschild, 1983), highlighting the emotional strain

of managing empathy under stress. Despite these challenges, 70% of phlebotomists find their job less demanding with routine, and 50% feel that attending to the same patients improves manageability. This fits Lazarus and Folkman's Stress and Coping Theory (1984), suggesting that familiarity and experience enhance job performance and satisfaction.

The benefits of routine and familiarity are also supported by Continuity of Care models (Saultz & Lochner, 2005) and Self-Efficacy Theory (Bandura, 1997), which propose that sustained patient relationships and repeated successful task execution boost confidence and reduce stress. Overall, the Dual-Process Model of Work Stress and Job Satisfaction (Bakker & Demerouti, 2007) reflects that while high job demands contribute to negative emotions, job resources like experience and routine foster positive feelings, with 60% of respondents reporting moderate to strong positive sentiments despite 62% experiencing moderate to severe negative emotions.

The second chi-square test revealed a statistic of 2.4171 and a p-value of 0.659544, indicating no statistically significant association between job-related emotions and perceived trends (positive, neutral, or negative). This suggests that phlebotomists' emotional responses, whether positive or negative, do not significantly vary across different emotional trends. This outcome may reflect a consistent emotional response among phlebotomists, despite daily fluctuations, a phenomenon observed in high-stress roles where individuals adapt to routine challenges (Cooper, 2013).

Phlebotomists' emotional experiences are shaped by both negative factors like workload and patient discomfort and positive aspects such as routine and familiarity. The significant negative feelings reported highlight the need for enhanced organizational support and coping strategies, while positive experiences suggest that routine and patient rapport can improve job satisfaction. To better support healthcare professionals, initiatives should focus on reducing job demands and increasing resources, including emotional support and manageable workloads.

Figure 4.1 shows that 66.67% of phlebotomists find morning hours more hectic, aligning with trends where mornings are typically busier due to scheduled patient appointments and procedures (Gawron et al., 2016). This peak activity may also be influenced by circadian rhythms and productivity cycles (Folkard & Tucker, 2003). Understanding these peak periods can aid in better staffing and resource allocation during high-demand times.

The third chi-squared analysis revealed a statistic of 40.8678 and a p-value below 0.00001, indicating a strong link between stress perception and job satisfaction. The data shows a positive inclination (224) towards stress perception compared to a negative inclination (201), suggesting that phlebotomists at Mater Dei Hospital view stress more favourably over time. This supports the hypothesis (H1A) that, despite stress, phlebotomists adapt and develop a positive perception of it, consistent with Lazarus and

Folkman's (1984) findings on stress adaptation and coping strategies.

The chi-squared analyses reveal a significant connection between stress perceptions and emotional responses among phlebotomists. The support for hypothesis; 'There is more of a positive than a negative trend in the way phlebotomists working at Mater Dei Hospital perceive stress, because even though it is hard, they manage to get used to the routine', indicates that, despite stress, phlebotomists show resilience and a positive perspective on stress, highlighting the importance of supportive environments and routine in mitigating negative stress perceptions in healthcare settings.

5.5 Occupational Stress Factors

The Cronbach's Alpha coefficients, which range from 0.790 to 0.945, suggest that the survey items designed to evaluate phlebotomists' job stress and work satisfaction demonstrate a strong level of internal consistency. A score of 0.790 for Question 14 is deemed acceptable, whereas higher scores such as 0.859 for Question 15, 0.945 for Question 16, and values between 0.827 and 0.866 for Questions 17 and 18 indicate good to excellent reliability. This implies that the items within each question are closely interconnected and effectively measure the constructs they are intended to assess. Nonetheless, excessively high values may signal redundancy among the items. While high internal consistency is a positive indicator, it does not inherently confirm the validity of the survey. Consequently, it is crucial to conduct

validity assessments and consider additional forms of reliability to ensure that the survey accurately captures the intended constructs.

The examination of stress among phlebotomists at Mater Dei Hospital reveals significant stressors including emotional pressure, interpersonal conflicts, insufficient support, and excessive workload, aligning with existing research on healthcare worker stress (Sonnentag et al., 2010; Groves et al., 2017).

Tables 4.21 and 4.24 show that conflicts with physicians and nursing staff occur but are relatively infrequent, with 23% of respondents reporting no disputes. This contrasts with literature suggesting that such conflicts contribute to stress and burnout (Sonnentag et al., 2010; Groves et al., 2017). Stress related to performance and criticism from physicians (33.33%) and task execution worries (26.67%) reflect the high-pressure nature of healthcare settings (French et al., 2011).

Chi-square analysis ($x^2 = 21.6047$, $p = 0.001428$) confirms that, despite occasional conflicts, phlebotomists manage these within a functioning hierarchical framework. Conflicts, while present, are navigated with positive and negative dynamics, echoing findings by Leiter et al. (2010) and Van Bogaert et al. (2014). Tables 4.22 and 4.23 highlight stress from insufficient preparation and support, with 42% feeling unprepared for patient emotional needs and 43% lacking readiness for patients' families, aligning with Shanafelt et al. (2012).

The chi-square analysis shows a predominantly negative perception linked to insufficient support, consistent with Halbesleben (2006) and Shanafelt et al. (2012). Stress from workload is notably high, with 25% of participants experiencing stress "frequently" and 20% "very frequently," influenced by staff shortages and scheduling issues (McVicar, 2003; Aiken et al., 2002). The chi-square analysis highlights workload as a primary stress source, corroborating Aiken et al. (2002) and McVicar (2003).

Despite significant stressors, 40% of participants report a positive trend in stress perception, with 26% neutral and 34% negative. This distribution suggests that stress is managed effectively by many respondents, consistent with Lazarus and Folkman's (1984) stress-coping framework.

Phlebotomists at Mater Dei Hospital experience stress primarily from emotional demands, conflicts, insufficient support, and workload. The chi-squared analysis supports the hypothesis that these stressors contribute to high levels of occupational stress, although most are experienced occasionally. Targeted interventions in workload management, support systems, and conflict resolution could enhance job satisfaction and reduce stress in this vital healthcare role.

The chi-squared analysis provides a statistical basis for examining stress factors among phlebotomists at Mater Dei Hospital. It

confirms the alternative hypothesis 'There is a high level of occupational stress factors perceived by phlebotomist working at Mater Dei Hospital', that phlebotomists experience significant occupational stress. The p-value of 0.001428 indicates a strong correlation between stressors such as workload, interpersonal conflicts, and insufficient support, all contributing to adverse stress perceptions. Thus, the null hypothesis (H2O), suggesting no elevated stress levels, is rejected.

The results underscore the need for targeted interventions to address occupational stress among phlebotomists at Mater Dei Hospital. Key strategies include optimizing workload management through adequate staffing and consistent scheduling (Aiken et al., 2002), enhancing support systems by developing peer support initiatives and mental health resources (Shanafelt et al., 2012), and improving conflict resolution with communication skills training and collaborative teamwork (Van Bogaert et al., 2014). Implementing these measures is crucial for improving phlebotomists well-being and fostering a supportive workplace environment.

5.6 Quality of Care

The chi-squared analysis demonstrates a noteworthy correlation between occupational stressors and the perceived quality of care among phlebotomists at Mater Dei Hospital, yielding a chi-square statistic of 31.187 and a p-value less than 0.00001. This finding underscores a strong link between stress factors and variations in

care quality perceptions, thereby corroborating the alternative hypothesis (H3A) while refuting the null hypothesis (H3O).

Q13, Care Statements: The findings indicate a favorable trend in care perceptions, with 67 respondents expressing a positive view of care quality, contrasted with 23 who reported negative sentiments. This implies that, notwithstanding the challenges posed by occupational stress, phlebotomists tend to maintain a positive outlook regarding their capacity to deliver high-quality care. This observation aligns with the research conducted by Maslach and Jackson (1981) and Schaufeli and Enzmann (1998), which posits that healthcare professionals frequently uphold rigorous care standards even in the face of stress. The routine and systematic nature of the technical tasks involved in phlebotomy may play a role in fostering this perception, enabling phlebotomists to effectively manage and compartmentalize their stress.

Suffering, Death, and Dying: The analysis reveals a relatively even distribution of responses concerning suffering, death, and dying, comprising 39 positive, 58 neutral, and 53 negative perceptions. This distribution underscores a notable level of emotional distress associated with these elements of care. The prevalence of neutral and negative responses emphasizes the emotional strain that phlebotomists endure, which is consistent with Figley's (1995) theory of compassion fatigue and the research by Schmidt and Diestel (2013) on emotional exhaustion stemming from patient suffering and mortality. The substantial number of neutral responses indicates that while certain phlebotomists may

effectively cope with the emotional demands, others might find it challenging, which could influence their perceived quality of care.

Feeling Inadequately Prepared: The analysis of the data indicates that 39 respondents express negative perceptions regarding their preparedness, in contrast to only 32 who report positive feelings. This disparity suggests that a considerable proportion of phlebotomists perceive themselves as insufficiently prepared, which in turn influences their views on the quality of care they provide. This observation aligns with the findings of Kirk and Brown (2003) and Cohen and Wills (1985), who highlight inadequate training and preparation as significant stressors that can undermine both confidence and job performance. It is crucial to ensure that phlebotomists feel sufficiently prepared to uphold high standards of care, especially in demanding circumstances.

Stress Due to Inadequate Preparation: The data presented in Tables 4.22 indicate that stress stemming from insufficient preparation is considerable, as evidenced by 42% of participants reporting that they occasionally feel unprepared to meet the emotional needs of patients, while 43% express a lack of readiness to support the needs of patients' families. This finding aligns with the research conducted by Shanafelt et al. (2012), which underscores the stress linked to a sense of unpreparedness for the emotional challenges encountered in healthcare settings. Enhancing training programs and resource availability may serve to mitigate these stress-related issues.

The findings from the chi-squared analysis provide robust evidence in favor of the alternative hypothesis (H3A), indicating that occupational stress has a significant effect on phlebotomists' perceptions of the quality of care. The extremely low p-value (<0.00001) suggests that stressors, including experiences of suffering, death, and feelings of inadequacy, have a profound impact on these perceptions. In contrast, the null hypothesis (H3O), which posits that stress does not influence care quality, is decisively rejected. The results unequivocally demonstrate that occupational stress plays a critical role in shaping phlebotomists' assessments of their performance and the quality of care they provide.

The findings from the chi-squared analysis highlight the necessity for focused interventions aimed at mitigating occupational stress and enhancing the quality of care. Essential recommendations include:

Improved Training and Readiness: Augmenting training programs and resources to ensure that phlebotomists possess the confidence and preparedness required for their responsibilities, especially in high-pressure scenarios.

Psychological Support for Coping with Suffering and Loss: Establishing debriefing sessions, counseling services, and support groups to assist phlebotomists in managing the emotional challenges linked to patient suffering and mortality.

Continuous Professional Growth: Offering ongoing professional development initiatives to refine skills, foster effective communication, and build resilience, thereby alleviating feelings of inadequacy and elevating the standard of care.

The chi-squared analysis indicates notable correlations between occupational stressors and phlebotomists' assessments of care quality. Although phlebotomists predominantly express a favorable view of the quality of care they deliver, concerning patterns associated with suffering, mortality, and insufficient preparation underscore the impact of stress on their professional efficacy. These results lend support to the alternative hypothesis (H3A) and underscore the necessity for focused interventions aimed at alleviating stress and enhancing the quality of care rendered by phlebotomists. Mitigating these stressors is essential for cultivating a nurturing work environment and improving patient care outcomes.

5.7 Participant's Perceptions

5.7.1 Perceived Occupational Stress

Occupational stress in healthcare significantly affects professionals' well-being, patient care quality, and system effectiveness. Table 4.30 highlights various stressors impacting phlebotomists, including poor management, ineffective communication, lack of resources, and challenging working conditions. This analysis will explore these factors in detail, supported by relevant literature, and suggest strategies for reducing stress.

Managerial Roles and Organizational Structure: The initial feedback highlights the increased managerial duties that senior phlebotomists assume, including the allocation of ward tasks to their peers. While the concepts of delegation and leadership are vital

within the healthcare sector, assigning managerial responsibilities to individuals lacking formal training or sufficient support can lead to a notable rise in stress levels (Peckham et al., 2016). This added pressure may detract from their primary responsibilities, resulting in elevated stress. Studies indicate that role overload—where employees are tasked with juggling multiple roles without adequate support—serves as a significant contributor to stress (Beehr & Glazer, 2005). Senior phlebotomists may experience feelings of being overwhelmed if their managerial duties are not backed by appropriate training and resources. Such an imbalance can lead to role conflict, where the expectations of managerial tasks conflict with their essential duties, further exacerbating stress. It is imperative for healthcare organizations to tackle this issue by ensuring that those in managerial roles receive the necessary training and support. Establishing clear role definitions, providing administrative assistance, and engaging senior phlebotomists in pertinent decision-making processes can help mitigate the stress associated with their managerial obligations.

Workload and Resource Management: Participants expressed apprehensions regarding their workload and the adequacy of available resources, particularly concerning the provision of essential items such as trolleys and phlebotomy carts. These apprehensions underscore more extensive challenges in resource management within healthcare environments, which can profoundly affect stress levels among professionals. A lack of adequate resources impedes healthcare workers' ability to execute their responsibilities effectively, resulting in frustration and a sense of powerlessness (Aiken et al., 2002). The relationship between workload and stress is well-established, with elevated workloads

associated with heightened burnout and diminished job satisfaction (Lee et al., 2016). When insufficient resources are factored in, the resultant pressure can intensify stress, creating a vicious cycle where stress diminishes efficiency, thereby increasing both workload and stress. To mitigate these challenges, healthcare organizations should prioritize effective resource management strategies. Conducting regular evaluations of equipment and supplies, streamlining restocking procedures, and involving staff in identifying resource requirements can alleviate these stressors and promote a more conducive work environment.

Shift Work and Rotational Schedules: The influence of shift work and rotating schedules on stress levels represents a significant concern highlighted by participants. Although rotational shifts are essential for ensuring adequate staff coverage, they tend to heighten stress, especially since many employees favor stable ward assignments. A substantial body of research has established a connection between irregular working hours and issues such as disrupted sleep, fatigue, and an elevated risk of burnout (Ferri et al., 2016). The nature of rotational shifts interferes with circadian rhythms, resulting in sleep disturbances and reduced cognitive functioning (Barton, 1994). Prolonged exposure to this disruption can lead to chronic stress and adverse health outcomes (Rajaratnam et al., 2013). Furthermore, inconsistent schedules can hinder work-life balance, thereby exacerbating stress and dissatisfaction with one's job. It is imperative for healthcare organizations to explore more adaptable scheduling options that align with staff preferences and allow for sufficient recovery periods. Additionally, providing resources aimed at alleviating the impacts of shift work, such as access to sleep clinics or wellness initiatives, may help to alleviate

some of the negative consequences associated with irregular schedules.

Communication Issues and Team Dynamics: Poor communication among healthcare teams, especially between phlebotomists and management, is a major source of stress, leading to misunderstandings and conflicts (Vermeir et al., 2018). Issues like gossip and exclusion from decision-making highlight the need for greater transparency. Effective communication is essential for keeping healthcare professionals informed and engaged, while poor communication can cause feelings of isolation and frustration (Reader et al., 2017). In high-pressure environments, clear communication is crucial for coordinating care and ensuring patient safety. To enhance communication, healthcare organizations should establish clear channels, hold regular team meetings, utilize communication tools, and provide training in communication skills. Fostering a culture of openness and inclusivity can also alleviate stress related to communication failures.

Workplace Environment and Toxicity: Participants identified difficulties related to the workplace atmosphere, highlighting issues such as interpersonal conflicts and a lack of support, which are indicative of a toxic work environment. Toxic workplaces are often marked by behaviours including bullying, gossip, and social exclusion, all of which can significantly contribute to occupational stress (Nielsen et al., 2010). Studies indicate that exposure to these detrimental behaviours is associated with heightened levels of burnout, depression, and anxiety (Hogh et al., 2011). In the healthcare sector, a toxic environment can result in diminished

performance, increased employee turnover, and a decline in the quality of patient care (Laschinger et al., 2004). To mitigate workplace toxicity, healthcare organizations must take proactive measures to foster a positive work environment. This can be achieved by implementing anti-bullying policies, offering conflict resolution training, and creating clear procedures for reporting and addressing negative behaviors. Encouraging respect and inclusivity is essential in alleviating the negative consequences associated with a toxic workplace.

Management Practices and Employee Engagement: Participants raised concerns regarding management practices, highlighting issues such as insufficient support, ineffective communication, and a lack of staff involvement. These challenges are indicative of broader systemic issues related to disengaged or ineffective management, which can profoundly impact employee stress levels and overall job satisfaction (Wright & Cropanzano, 1998). When management does not actively engage employees or involve them in the decision-making process, it can result in feelings of frustration, disempowerment, and heightened stress (Kelloway et al., 2005). The role of effective management is essential in fostering a supportive workplace atmosphere. Research has shown that supportive management correlates with increased job satisfaction, lower stress levels, and enhanced well-being (Skakon et al., 2010). In contrast, a lack of support from management can exacerbate stress, reduce motivation, and elevate the risk of burnout (Maslach et al., 2001). To enhance management practices and mitigate stress, healthcare organizations should prioritize the development of robust leadership. This entails equipping managers with skills in communication, employee engagement, and stress management. Additionally, creating avenues for staff to provide feedback and

participate in decision-making processes can further boost engagement and contribute to a more favorable work environment.

Interpersonal Relationships and Team Support: Numerous participants emphasized the significance of interpersonal relationships and team support in alleviating stress. A lack of effective teamwork and support from colleagues emerged as significant sources of stress. Constructive interpersonal relationships within healthcare teams foster a nurturing environment, whereas detrimental relationships can exacerbate stress levels and contribute to burnout (Halbesleben & Rathert, 2008). In the context of high-stress healthcare settings, the importance of team support cannot be overstated (McVicar, 2016). The perception of support from colleagues plays a crucial role in navigating role-related challenges and mitigating burnout (Salyers et al., 2017). In contrast, insufficient support can result in feelings of isolation and heightened stress (Greenglass & Burke, 2003). To improve team support, healthcare organizations should prioritize the development of cohesive teams through team-building activities, training focused on collaboration and communication, and the promotion of a culture characterized by mutual respect and trust.

Personal Factors and External Stressors: Participants identified various personal factors, including mental health issues and external pressures, as significant contributors to stress in the workplace. This highlights the intricate nature of occupational stress, which is shaped by both job-related and external influences (Lazarus & Folkman, 1984). Personal stressors, such as familial obligations and financial difficulties, can intensify work-related

stress, resulting in heightened anxiety and burnout (Geurts et al., 1999). The interplay between personal and occupational stress is extensively documented, indicating that stress in one domain can influence overall stress levels. For healthcare professionals, personal stressors can aggravate job-related stress, adversely affecting mental health and overall well-being (West et al., 2018). To effectively address these personal factors, healthcare organizations should implement support systems, which may include access to mental health resources and flexible working arrangements. By fostering overall well-being, organizations can alleviate the effects of personal stressors on work-related stress.

5.7.2 Suggested Measures to reduce Stress for Phlebotomists

Occupational stress is a significant issue in healthcare, impacting both employee health and patient care quality. Phlebotomists face unique stressors due to high demands, including patient interactions, strict protocols, and time constraints. Table 4.31 highlights these stressors and suggests strategies for alleviation. This analysis explores these strategies, supported by relevant literature, to provide evidence-based recommendations for improving phlebotomist well-being.

Enhancing Managerial Support and Understanding: To alleviate stress among phlebotomists, enhancing support from supervisors is essential. Research shows that managerial support leads to higher job satisfaction, lower stress, and reduced burnout (Skakon et al., 2010). When managers provide clear direction, empathy, and responsiveness, staff feel valued and experience less stress

(Laschinger et al., 2004). The Job Demand-Resources (JD-R) model indicates that job resources like managerial support can mitigate stress and burnout (Bakker & Demerouti, 2007). For phlebotomists, this support includes access to supplies, clear protocols, and timely supervisor interactions. Healthcare organizations should train managers in supportive leadership skills, such as emotional intelligence and conflict resolution, and establish regular feedback channels to address concerns and enhance job satisfaction.

Increasing Staff Meeting Frequency: The study's participants recommended increasing the frequency of staff meetings as a means to alleviate stress and enhance communication within the workplace. Such regular gatherings can serve as a forum for open dialogue, enabling phlebotomists to voice their concerns, share their experiences, and offer feedback regarding workplace practices (Vermeir et al., 2018). Existing research indicates that regular meetings contribute to improved team cohesion and lower stress levels by promoting a collaborative atmosphere in which challenges are collectively addressed (Blegen, 1993). Additionally, these meetings create opportunities for conflict resolution and recognition of accomplishments, further contributing to stress reduction. To fully leverage the advantages of staff meetings, it is essential to foster an environment that encourages candid and genuine communication. Managers should strive to cultivate a setting where all team members feel at ease expressing their views, and meetings should strike a balance between formal discussions and informal social interactions to enhance team relationships.

Improving Staffing Levels: Insufficient staffing is a significant stressor for phlebotomists, leading to increased workloads and potential burnout (Aiken et al., 2002). Maintaining adequate staffing is crucial for employee welfare and quality patient care (Aiken et al., 2002). Although much research focuses on nursing, similar challenges apply to phlebotomy. To address understaffing, healthcare organizations should regularly assess staffing needs and adjust accordingly, which may include hiring more staff, offering flexible schedules, and adapting staffing based on patient volume. Prioritizing employee well-being can create a more sustainable work environment.

Implementing Team-Building Activities: It has been suggested that team-building activities serve as an effective strategy for alleviating stress and fostering team cohesion among phlebotomists. Cohesive teams are better equipped to manage job-related stressors and deliver high-quality care to patients (West & Lyubovnikova, 2013). Initiatives aimed at team-building, which may encompass workshops and social events, have been shown to improve team performance, enhance job satisfaction, and boost workplace morale (Baker et al., 2016). It is essential for healthcare organizations to customize team-building activities to align with the unique needs and preferences of their personnel. Gathering feedback from phlebotomists can facilitate the selection of inclusive and engaging activities, and it is advisable that these initiatives be sustained over time rather than conducted as isolated events to maximize their effectiveness.

Assigning Phlebotomists to Consistent Wards: The proposal for consistent assignment of phlebotomists to specific wards has been put forward as a strategy to mitigate their stress levels. Developing familiarity with the ward personnel, operational protocols, and daily routines can lessen cognitive load and enhance overall efficiency (Tubre & Collins, 2000). By being assigned to a particular ward, phlebotomists can cultivate stronger relationships, gain a better understanding of patient requirements, and streamline their workflow (Santos & Cox, 2000). It is advisable for healthcare organizations to explore the implementation of a system that facilitates stable ward assignments while also allowing for necessary flexibility in cases of absences or other circumstances. Furthermore, incorporating phlebotomists' preferences regarding their ward assignments could significantly improve job satisfaction and alleviate stress.

Ensuring Consistent Staffing Levels Throughout the Week: Participants highlighted the critical role of sustaining stable staffing levels across the week to mitigate stress associated with varying workloads. Inconsistent staffing can result in stressful patterns characterized by alternating periods of high and low workloads (Jennings, 2008). A steady staffing approach fosters a reliable work environment and alleviates stress by ensuring a predictable workload (Greenglass & Burke, 2003). Organizations ought to refine their staffing schedules to avoid substantial fluctuations. This may necessitate modifications to shift arrangements, the recruitment of additional personnel during peak times, and the utilization of data to forecast patient demand. Maintaining consistent staffing can contribute to a more stable and supportive workplace.

Enhancing Communication and Listening: Improved communication between management and phlebotomists was underscored as a critical factor in alleviating stress. Effective communication cultivates a workplace atmosphere where employees perceive themselves as informed, appreciated, and supported (Vermeir et al., 2018). Conversely, insufficient communication can result in misunderstandings, heightened frustration, and increased stress levels (Reader et al., 2017). It is imperative for healthcare organizations to emphasize the importance of open and transparent communication by implementing regular meetings, individual check-ins, and various communication tools to ensure that phlebotomists feel acknowledged and supported. Additionally, equipping managers with effective communication techniques and establishing formal communication channels can significantly improve this dynamic.

Expanding Mental Health Services: The necessity for enhanced mental health services has been recognized, as current employee assistance programs frequently face high demand. The psychological well-being of healthcare professionals, such as phlebotomists, has gained significant attention, particularly in the aftermath of the COVID-19 pandemic (Pappa et al., 2020). It is essential to provide comprehensive mental health support, which encompasses counseling and stress management initiatives, to mitigate burnout and foster overall well-being (Salyers et al., 2017). Healthcare organizations ought to prioritize the expansion of mental health services, ensuring they are both accessible and specifically designed to meet the unique needs of healthcare workers. This expansion

should involve increasing the availability of counseling services, conducting stress management workshops, and incorporating mental health support into wider wellness initiatives.

Promoting a Safe and Supportive Work Environment: The establishment of a secure and nurturing work environment has become a prominent issue. Ensuring safety in the workplace, encompassing both physical and mental dimensions, is vital for alleviating stress and promoting the well-being of phlebotomists (Zhang et al., 2020). This necessitates the effective management of hazardous materials, the prevention of workplace violence, and the cultivation of a culture characterized by respect and inclusivity (Nembhard, 2006). Organizations are encouraged to perform regular safety evaluations, offer continuous safety training, and implement confidential mechanisms for reporting safety concerns. Additionally, fostering a supportive atmosphere where employees feel appreciated and respected is of paramount importance.

Reducing Repetitive Strain Injuries: The implementation of audits and controls to address repetitive strain injuries (RSIs) has been proposed as a strategy to alleviate physical stress experienced by phlebotomists. RSIs frequently occur in the healthcare sector, particularly due to the repetitive nature of tasks such as blood collection (David et al., 2015). Research indicates that ergonomic interventions and effective workload management can significantly diminish the likelihood of RSIs (Silverstein et al., 1998). It is essential for healthcare organizations to perform ergonomic assessments of their work environments, offer training focused on proper body mechanics, and establish protocols to monitor and

manage workload. Such measures may involve capping the number of blood draws conducted during a single shift to avert the risk of overexertion.

Promoting Fair Treatment and Equal Opportunities: Fair treatment and equal opportunities play a vital role in alleviating stress and improving job satisfaction. Research indicates that individuals' perceptions of fairness regarding outcomes and processes are associated with their overall job satisfaction and mental well-being (Colquitt et al., 2001). By ensuring an equitable distribution of workloads, offering opportunities for career progression, and maintaining a respectful workplace environment, organizations can effectively mitigate stress levels. It is essential for organizations to cultivate a culture of fairness by routinely evaluating workload allocations, facilitating professional development, and implementing policies that encourage diversity and inclusion. Additionally, transparent decision-making and effective feedback systems can further enhance this framework.

Enhancing Management Skills and Leadership Practices: Participants emphasized the necessity for enhanced management competencies and leadership methodologies. The role of effective leadership is vital in fostering a constructive workplace atmosphere and alleviating stress (Wong et al., 2013). Transformational leadership, characterized by its ability to motivate and assist employees, proves to be especially advantageous (Bass & Avolio, 1993). It is imperative for healthcare organizations to prioritize the development of managerial leadership capabilities through specialized training in areas such as emotional intelligence, conflict

resolution, and team dynamics. Additionally, the implementation of leadership development initiatives can facilitate the identification and cultivation of emerging leaders within the phlebotomy sector.

Table 4.31 outlines strategies to reduce stress and improve the well-being of phlebotomists, supported by research on healthcare occupational stress. These strategies include enhancing managerial support, increasing staff meetings, optimizing staffing levels, promoting team-building, ensuring consistent ward assignments, maintaining stable staffing, improving communication, expanding mental health services, prioritizing safety, reducing repetitive strain injuries, ensuring fair treatment, and refining management practices. Implementing these approaches can create a more supportive work environment for phlebotomists, benefiting both staff and patients.

5.8 Conclusion

To effectively address the insights provided by phlebotomists, it is essential to adopt a comprehensive strategy that emphasizes the improvement of managerial support, the enhancement of communication methods, the assurance of sufficient staffing levels, the acknowledgment of employee contributions, and the efficient management of equipment and resources. By focusing on these critical areas, healthcare organizations can cultivate a more supportive and efficient work environment. This strategy is expected to result in increased job satisfaction, lower stress levels, and an enhancement in the quality of care provided. Implementing initiatives such as regular staff meetings, fair resource distribution,

recognition programs, and streamlined communication channels will be vital in fostering a positive and productive environment for phlebotomists and other healthcare professionals.

CHAPTER 6

CONCLUSIONS AND RECCOMANDATIONS

6.1 Introduction

This chapter offers a concise overview of the research conducted with phlebotomists at Mater Dei Hospital, specifically within the pathology department. It outlines the strengths and limitations of the study, along with suggestions for future research and clinical applications. The concluding section reflects on the researchers' experiences and insights gained throughout the research process.

6.2 Summary of the Research Study

This research study has examined the occupational stressors experienced by phlebotomists in the pathology department of Mater Dei Hospital. Additionally, the study explored the phlebotomists' perceptions regarding the impact of stress on the quality of care they provide to patients.

Chapter 2 presented a comprehensive review of the current literature pertaining to the topic. This encompassed a thorough investigation into the phlebotomy profession, its specific context in Malta, as well as the broader concepts of stress and work-related stress. Factors associated with the workplace that influence stress levels were discussed, including experiences of suffering, encounters with death and dying, conflicts with other healthcare professionals such as nurses and physicians, insufficient support, and the demands of workload.

The researcher carried out this research utilizing quantitative analysis through the distribution of questionnaires across various acute mental health ward environments. A total of thirty

participants completed the questionnaire, resulting in a response rate of 71%. To enhance reliability, it was necessary to delete certain inter-factor reliability items.

Data analysis was conducted using the Statistical Package for Social Science Version 29. To assess significant differences both within and between groups, Spearman Correlation testing, Descriptive Analysis, and crosstabulation testing were employed. Prior to the commencement of the study, all necessary ethical approvals and considerations were secured.

The findings indicated that there was a notable statistical difference in the levels of stress experienced, the emotional impact of the job, and the contributing stress factors when analysed in relation to demographics, qualifications, experience, and job satisfaction.

Phlebotomists experience stress in their professional roles; however, they generally maintain a positive outlook regarding this stress and appear to employ effective coping strategies. Additionally, while there are various stressors that contribute to occupational stress, they believe that these factors do not significantly impact the quality of care they deliver.

Effective communication emerged as a crucial element, particularly highlighted in the open-ended questions where participants were asked to identify and suggest alternative approaches to implementing change. Additionally, the organization of more meetings was deemed significant, further underscoring the necessity for enhanced communication.

Additional factors identified encompassed increased motivation and the availability of adequate human resources. These elements align closely with those identified in existing literature.

The subsequent section delineates the strengths and limitations of the research.

6.3 Strengths and Limitations of the Research Study

The subsequent sub-sections will address the strengths and weaknesses of this study.

6.3.1 Strengths

The study strengths will be discussed in this section.

All phlebotomists within the pathology department had the opportunity to take part in the study.

Conducting a research study among phlebotomists, as opposed to nurses, offers several key strengths that enhance the validity and applicability of the findings. Firstly, the inclusion of all phlebotomists within the pathology department ensures a comprehensive representation of the entire staff, which is often not achieved in studies focused on nursing staff within ward settings. This inclusivity allows for a more holistic understanding of the issues being studied, as it captures a wide range of experiences and perspectives.

The study's inclusion of phlebotomists from various shifts and experience levels ensures a well-rounded perspective on the impact

of stress and quality of care. This diversity in participants captures the range of challenges and insights across different working conditions, leading to more comprehensive findings.

By focusing specifically on phlebotomists, who may have a vested interest in the study's outcomes, the research may achieve a higher response rate compared to studies involving broader healthcare staff categories. This enhances the reliability of the data collected.

Phlebotomists' daily roles are directly related to the quality of patient care, particularly in areas like blood collection and handling. Research focused on this group directly links findings to practical outcomes, making the study's results immediately applicable to improving care standards and reducing stress.

Incorporating both close ended and open ended questions allows for a richer, more detailed understanding of the factors influencing phlebotomists' stress and its impact on quality of care. This mixed-methods approach ensures that the research captures not only measurable outcomes but also the nuanced, personal experiences of the participants.

These strengths help ensure that the research is robust, relevant, and capable of informing both immediate practice and broader healthcare policies.

6.3.2 Limitations

While the research presented several strengths, it was not without its limitations.

Study limitations encompass the design and methodology characteristics that impact the application or understanding of the study (Theofanidis & Fountouki, 2018).

One limitation of the study pertains to the small sample size, which consisted of professionals from only one department. This decision was made due to variations in work conditions and management across departments, potentially influencing responses based on the phlebotomists' workplace. Additionally, the study involved a single group of forty-two phlebotomists', raising concerns about particular anonymity and potential bias in questionnaire responses. To address this, the researcher took precautions to avoid identifying participants, refraining from inquiring about specific work wards to reduce the risk of participant identification.

An additional constraint identified was the lack of follow-up reminders sent to participants after the initial email at the beginning of the questionnaire period. The researcher posits a higher response rate could have been achieved if multiple reminders were issued to encourage greater participation in the survey.

A notable constraint faced in the exploration of the relationship between stress, phlebotomy, and quality of care is the limited number of studies available in this particular field. This deficiency in previous research may impede the development of a solid theoretical framework and the recognition of pertinent variables for investigation, while also providing minimal direction for the researcher.

6.4 Recommendations

The subsequent section will outline the proposed recommendations for future research and clinical practice.

6.4.1 Recommendations for Future Research

Phlebotomists are a specialized group within healthcare and studying them specifically allows for a deeper exploration of the unique challenges and stressors they face, which might be overlooked in studies with a broader focus. This specificity enables the development of tailored interventions that address their particular needs.

Conducting additional research involving phlebotomists from various sectors, along with their management, would provide valuable insights. Such studies could facilitate the examination of diverse perspectives, enabling researchers to identify common stressors and the strategies employed to address them across different fields. Consequently, departments that employ phlebotomists could benefit from shared knowledge, ultimately fostering improved working conditions for their staff.

6.4.2 Recommendations for Clinical Practice

Considering the considerable influence of stress on phlebotomists, it is essential for organizations to adopt thorough strategies aimed at alleviating these stressors and fostering a conducive work environment.

In addition to the discussions presented in the preceding chapter, the following recommendations are based on the findings of this research.

Enhancing Positive Feedback Systems: It is essential for healthcare organizations to emphasize the establishment of feedback systems that are both constructive and encouraging. Providing ongoing training for supervisors and healthcare practitioners in effective communication strategies can facilitate the delivery of feedback that fosters professional development while minimizing stress levels.

Establishing Conflict Management Training: To effectively manage disputes among healthcare staff, organizations ought to implement training initiatives centered on communication skills and conflict management. Cultivating an environment of collaboration and respect can significantly decrease the occurrence and intensity of conflicts, thereby improving job satisfaction and team cohesion.

Facilitating Continuous Technical Education and Assistance: To mitigate concerns associated with technical processes, healthcare institutions ought to prioritize continuous training and simulation exercises. Establishing a nurturing atmosphere where personnel can request help and receive constructive feedback can significantly bolster their confidence and alleviate stress.

Guaranteeing Technological Dependability: Consistent maintenance and prompt repairs of technological devices are crucial for reducing operational interruptions. Equipping staff with the skills to resolve common technical issues can enable them to handle minor challenges autonomously, thereby decreasing stress levels and minimizing downtime.

Ensuring Sufficient Staffing Levels: To alleviate the pressures stemming from staffing deficiencies and erratic scheduling, healthcare institutions must prioritize the maintenance of sufficient staffing levels alongside the establishment of stable scheduling practices. Additionally, offering resources for effective time management and task prioritization can further reduce stress levels.

Encouraging Transparent Communication and Emotional Assistance: Healthcare institutions should develop programs that promote transparent communication and create avenues for emotional support. Regularly scheduled team meetings, support groups, and peer counselling opportunities can cultivate a nurturing environment where staff members feel empowered to express their concerns and seek help.

Facilitating Channels for Emotional Expression: In order to combat the repression of negative emotions, healthcare organizations ought to provide organized support mechanisms, such as counselling services or debriefing sessions. These programs can assist employees in processing their feelings and diminish the likelihood of experiencing burnout.

6.5 The Researcher's Reflections

The researcher will articulate his insights throughout this research endeavour.

This study represents the second instance of employing quantitative research methods; however, it proved to be a more challenging project due to the scarcity of existing literature and the limited scope of the population involved.

The experience significantly broadened the investigator's understanding of the profession within the hospital environment, as well as the various stressors that may arise and the corresponding management strategies. This research could provide valuable insights for organizational management regarding their employees' perceptions.

Additionally, the investigator deepened her expertise in conducting statistical analyses, particularly in relation to the presentation of deductive empirical research.

The researcher was able to recognize and comprehend the essential ethical considerations necessary for conducting this study.

Working within the same profession, although in a different setting, allowed her to appreciate the perspectives of the participants. Moreover, the researcher gained further insights into the subject matter, resulting in an enhancement of her knowledge.

If given the opportunity, the findings will be shared with the relevant management to illustrate the potential for implementing effective strategies to address the identified concerns.

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Appendices

Appendix 1

Questionnaire

Demographics

271

Q1 Gender

- Male
- Female
- Other

27

Q2 Age

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65+

Q3 Marital Status

- Single
- Married
- Separated / Divorced
- Widowed

Q4 Nationality

- Maltese
- Other

Education Background and Work Experience

Q5 Qualification Level

- MQF Level 3 (Diploma)
- MQF Level 4 (Extended Diploma)
- MQF Level 5 (Higher National Diploma)
- MQF Level 6 (Degree)

Q6 How long have you been working as a phlebotomist?

- < 1 Year
- 1-5 Years
- 6-10 Years
- 11-15 Years
- > 16 Years

Q 7 Position held at Mater Dei Hospital

- Phlebotomist
- Senior Phlebotomist

Q8 Apart of the 40hour roster, do you work extra hours as part time or over time?

- Yes
- No

Q9 Have you worked in another phlebotomy setting before Mater Dei Hospital?

- Yes
- No

Q10 I work at Mater Dei Hospital;

- **Because it is my choice**
- **Because it is difficult to transfer to any other phlebotomy section**

Q11 Select the option below that represents your level of satisfaction working at Mater Dei Hospital

78

- **Very Satisfied**
- **Satisfied**
- **Neutral**
- **Unsatisfied**
- **Very Unsatisfied**

Q12 Let's Measure Your Stress levels!!

1

12A I finish the working day feeling satisfied with what I have done

3

- **Never**
- **Almost Never**
- **Occasionally**
- **Frequently**
- **Very Frequently**

3

12B I experience control of my life

- **Never**
- **Almost Never**
- **Occasionally**
- **Frequently**
- **Very Frequently**

12C I experience dizzy spells or palpitations

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12D I feel fatigue or lack of energy

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12E I have Difficulty getting to sleep

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12F I am confident about the future

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12G I have poor apatite

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12H I lose my temper over minor things

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12I I can rely on my family or friends to support me if I need it

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12J I find the amount of work I have exceeds the amount of time I have available for it

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12K I feel I am good as anyone else at my job

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12L I find work management supportive

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12M I look forward to going to work

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12N I do not Know what I am working for

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12O I am unable to relax in the evening

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12P I have more responsibility than I can handle

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12Q I drink too much alcohol

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12R I can switch off thinking about problems

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12S I think I manage my time well

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

12T I know how to refuse to take additional work if I need to

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

Q13 How does your job make you feel?

13A It is hard to work when seeing patients in a lot of pain every day

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Agree

13B When the workload is big, it interferes with the quality of care I give to the patients I see

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

13C Sometimes being under pressure makes it harder to concentrate on what I am doing

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

13D When patients come in because they are in pain or injured, it is harder to co-operate with them

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

13E The workload is bigger in the morning rather than during the rest of the day

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

13F My job got easier when I got used to the daily routine

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

13G It is easier to attend to the same patients frequently

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

Stress Factors

Q14 Stress caused by; Death and Dying

14A Performing procedure that patients experience as painful

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

14B Feeling helpless in the case of a patient who fails to improve

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

14C Listening / talking to a patient about his / her approaching death

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

8

14D The death of a patient

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

14E Watching a patient suffer physically or emotionally

3

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

Q15 Stress caused by: Criticism by a doctor

15A Criticism by a doctor

3

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

15B Conflict with a doctor

3

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

15C Fear of not managing to draw bloods of a patient

3

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

15D Disagreement concerning samples of a patient

3

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

Q16 Stressed caused by; Inadequate Preparation

8

Q16A Feeling inadequately prepared to help with the emotional needs of a patient Never

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

14

Q16B Being asked a question by a patient for which I do not have a satisfactory answer

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

8

Q16C Feeling inadequately prepared to help with the emotional needs of a patient's family

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

Q17 Stressed caused by; Lack of Support

14

Q17A Lack of opportunity to talk openly with other colleagues about problems related to work

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

8

Q17BLack of opportunity to share experiences and feelings with other personnel in the same work environment

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

Q17C Lack of opportunity to express to other employees at the same care setting my negative feelings towards patients

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

Q18 Stressed caused by; Conflict with Nurses

Q18A Criticism by a nurse

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

Q18B Conflict with nursing officers

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

Q18C Difficulty working with nurse/s

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

Q19 Stressed caused by; Workload

Q19A Breakdown of computer / printer

3

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

Q19B Unpredictable staffing and scheduling

3

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

Q19C Not enough time to complete all my tasks

14

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

266

Q19D Not enough staff to cover all wards

3

- Never
- Almost Never
- Occasionally
- Frequently
- Very Frequently

Q20 Do you feel that there are other factors that contribute to work-related or occupational related stress? If so, State below

Q21 In your opinion, what measures could be implemented to reduce stress and improve the overall well-being of phlebotomists in the workplace.

Appendix 2

Data Protection Clearance Declaration Form

REF: 73/2024

I hereby declare that I will respect the confidentiality and privacy of any personal data or information that I will come across at Mater Dei and will in no circumstance disclose any such information to third parties.

I confirm that information submitted for Data Protection Clearance is correct and that I will abide with conditions issued in same clearance notice.

- **This clearance does not cover ethical approval.**
- **This clearance applies only for your online questionnaire to be conducted at MDH and not at any other institution / department / unit.**
- **This clearance is valid for your report to be included with your dissertation only and not in medical journals or elsewhere given that you are not obtaining approval from MDH legal office.**
- **This clearance is only valid for your questionnaire to be distributed online and not paper-based.**
- **This clearance doesn't cover any form of interviews.**
- **This clearance doesn't cover access to medical records or Health Information Systems.**
- **This clearance doesn't allow patient contact / communication / observations / examinations.**
- **What was declared during this clearance process is what you will abide to.**
- **Your submitted documentation and declarations must remain unchanged.**
- **You must abide with all the articles of the GDPR (EU) 2016 / 679 throughout the data collection process and thereafter.**
- **You are requested to submit a copy of your findings to this office at the end of your study.**
- **This clearance covers your research to be carried out only at MDH and not in any other department / institution such as Primary Healthcare, GGH, MHS, SVPR, DHIR or any other institution / department that doesn't form part of MDH Data Controller.**
- **SAMOC – MDH is not included with this clearance letter.**
- **Please present this email to Mr Charles Borg.**

I also declare that I am aware of the provisions of the:

- General Data Protection Regulation (2016)

  (ref: https://idpc.org.mt/en/Pages/gdpr.aspx),

- Computer misuse provisions of the Criminal Code

  (ref: http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=8574),

and, the

- Professional Secrecy Act

  (ref: http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=8844&l=1)

and that I will abide by all Government and Hospital regulations related to data, information and use of IT Systems and services (ref: http://ictpolicies.gov.mt , http://www.kura.gov.mt).

Data Protection Clearance Declaration Form

REF: 73/2024

Full Name: Sarah Dimech

ID Number: 0185891M

Approval Date from DPO: 10th April 2024

Approval Date from CEO: 28th March 2024

Data Collection Period (From – To): April 2024 – August 2024

MDH Official Approval Names: Dr C Barbara

Name of Study / Audit: Stress levels amongst phlebotomists in Malta, the role of the work environment. A study amongst the phlebotomist working within Mater Dei Hospital

Applicant's Signature: Sarah Dimech
Sarah Dimech (Apr 26, 2024 12:14 GMT+2)

Permission Letter

Ms. Celia Falzon

Mater Dei Hospital Imsida

27th March 2024 Dear Ms. Falzon

I am writing to request permission to conduct research within the Ministry for Health and Active Ageing.

My name is Sarah Dimech and I am a student of IDEA Academy, where I am conducting research on work related stress amongst phlebotomists for my dissertation as part of a Master's Degree in the field of Healthcare Management and Leadership, I am particularly interested in understanding wheatear local health care professionals, specifically phlebotomists' lives are being impacted by work related stress and if they think it impacts the quality of care they provide to their patients, and would like the phlebotomists working at Mater Dei Hospital to be part of my research.

The research will involve an anonymous online survey. I can provide further information about the research if needed. I understand that you may have specific requirements or protocols that need to be met, and I am happy to comply with them. I understand the importance of confidentiality and data protection and can guarantee that all information collected as part of this research will be treated with the utmost description. Data collected will be stored on a password protected laptop. All data collected will be anonymous hence no personal information from participants would be required. Only my supervisor and I will have access to this data.

I am available to discuss this further and am happy to hear from you soon so that I can begin my research.

Thank you for your time and consideration.

Sincerely,
Sarah Dimech
[redacted]

Flavia Cristina Morone Pinto
[redacted]

Permission Letter

Ms. Celia Falzon

On behalf of CEO
28/3/24.
Ms. Carmen D'amato
Director Nursing & Midwifery Services
Mater Dei Hospital
Tel. 25454202

Mater Dei Hospital
Imsida

27th March 2024

Dear Ms. Falzon

I am writing to request permission to conduct research within the Ministry for Health and Active Ageing.

My name is Sarah Dimech and I am a student of IDEA Academy, where I am conducting research on work related stress amongst phlebotomists for my dissertation as part of a Master's Degree in the field of Healthcare Management and Leadership, I am particularly interested in understanding wheatear local health care professionals, specifically phlebotomists' lives are being impacted by work related stress and if they think it impacts the quality of care they provide to their patients, and would like the phlebotomists working at Mater Dei Hospital to be part of my research.

The research will involve an anonymous online survey. I can provide further information about the research if needed. I understand that you may have specific requirements or protocols that need to be met, and I am happy to comply with them. I understand the importance of confidentiality and data protection and can guarantee that all information collected as part of this research will be treated with the utmost description. Data collected will be stored on a password protected laptop. All data collected will be anonymous hence no personal information from participants would be required. Only my supervisor and I will have access to this data.

I am available to discuss this further and am happy to hear from you soon so that I can begin my research.

Thank you for your time and consideration.

Sincerely,
Sarah Dimech
Sarahdimech@hotmail.com

Flavia Cristina Morone Pinto
fcmorone@gmail.com

Permission Letter

Mr. Christofer Barbara

Pathology Department At Mater Dei Hospital

27th March 2024 Dear Mr. Barbara,

I am writing to request permission to conduct research within the Ministry for Health and Active Ageing.

My name is Sarah Dimech and I am a student of IDEA Academy, where I am conducting research on work related stress amongst phlebotomists for my dissertation as part of a Master's Degree in the field of Healthcare Management and Leadership, I am particularly interested in understanding wheatear local health care professionals, specifically phlebotomists' lives are being impacted by work related stress and if they think it impacts the quality of care they provide to their patients, and would like the phlebotomists within the department to be part of my research.

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I am available to discuss this further and am happy to hear from you soon so that I can begin my research.

Thank you for your time and consideration.

Sincerely,
Sarah Dimech
[redacted]

Flavia Cristina Morone Pinto
[redacted]

Re: dissertation permission

Barbara Christopher at MHA - MDH <christopher.barbara@gov.mt>
Thu 3/28/2024 10:04 AM

To:Sarah Dimech <sarahdimech@hotmail.com>
Cc:Borg Charles M at MHA - MDH <charles.m.borg@gov.mt>

Dear Sarah,

I endorse subject to approval by DPO and ethics.

Dr. Christopher Barbara M.D. MSc (London), D.L.S.H.T.M., FMCPath., U.O.M.

Clinical Chairperson
Department of Pathology
Mater Dei Hospital
MSIDA
MALTA

Tel: 00356 2545 6516/7

On 27 Mar 2024, at 14:15, Sarah Dimech <sarahdimech@hotmail.com> wrote:

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Dear Mr. Barbara

Good morning, I trust this e-mail finds you well.

I am a student with Idea Academy, following the course, MSc in Healthcare Managment and Leadership. Currently I have started working on my dissertation.

I would like to ask for your permission to conduct questionnaires with the phlebotomists working within Mater Dei Hospital wards.

Attached are my research proposal, questionnaire, the ethical approval document received by Idea Academy and consent form addressed to the participants and ethics documents. Should you require anything else, please let me know and I would be more than happy to provide you with them.

I would highly appreciate your guidance through this process.

Kind Regards,
Sarah Dimech
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<1. RESEARCH PROPOSAL 22:03.pdf>
<6. CONSENT FORM AND PERMISSION LETTERS.pdf>
<IREB Sarah Dimech_Healthcare.pdf>
<Permission Letter Mr. Barbara.pdf>
<Sarah Dimech. Phlebotomists Questionnaire.pdf>

Re: dissertation permission

Barbara Christopher at MHA - MDH <christopher.barbara@gov.mt>
Thu 3/28/2024 10:04 AM

To:Sarah Dimech [redacted]
Cc:Borg Charles M at MHA - MDH <charles.m.borg@gov.mt>

Dear Sarah,

I endorse subject to approval by DPO and ethics.

Dr. Christopher Barbara M.D. MSc (London), D.L.S.H.T.M., FMCPath., U.O.M.

Clinical Chairperson
Department of Pathology
Mater Dei Hospital
MSIDA
MALTA

Tel: 00356 2545 6516/7

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I would highly appreciate your guidance through this process.

Kind Regards,
Sarah Dimech
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Consent Form

Dear Participant,

My name is Sarah Dimech, and I am currently studying for a Master's Degree in Healthcare Management and Leadership at IDEA Academy.

I a conducting research which aims to discover whether local health care professionals specifically phlebotomists' lives are being impacted by work related stress and if they think that it impacts the quality of care they provide to their patients.

The survey that you have been invited to complete forms part of this study. This survey should take approximately 10 minutes to complete. All data collected from this survey will only be used for the purpose of this study. There are no direct benefits or risks associated with participating. Participation is voluntary and you are free to accept or refuse to participate.

At no point will you be asked to provide your name or another personal data that may lead to you being identified. Additionally you may skip any questions you do not wish to answer.

If you are willing to take part in this study, please click the button that says 'I agree to participate'. If not, please close the browser window (or click 'I do not wish to participate').

If you have any questions or concerns, please contact me or my supervisor using the contact details provided below.

Sincerely,
Sarah Dimech Flavia
[redacted]

Cristina Morone Pinto
[redacted]

DECLARATION BY RESPONDENT: I hereby confirm that I am eighteen years of age or older. I am aware that completing and submitting this anonymous questionnaire implies that I am participating voluntary and with full informed consent on the conditions listed above.

RE: Dissertation Survey

Borg Charles M at MHA - MDH <charles.m.borg@gov.mt>
Mon 4/1/2024 5:50 AM
To:'Sarah Dimech' [redacted]
Cc:Decelis Stephen at MHA - MDH <stephen.decelis@gov.mt>

Dear Sarah
I would be happy to act as your intermediary, Stephen is on VI today he will be answering you soon.

For all official correspondence always use the gov.mt email

I would prefer if you would resend this email using the gov.mt address.

Thanks

Charles M Borg
Lead Allied Health Practitioner (MLS)
Pathology Department
MHA-Mater Dei Hospital

t: 25456383 **e:** charles.m.borg@gov.mt
https://health.gov.mt

MINISTRY FOR HEALTH AND ACTIVE AGEING
Mater Dei Hospital, Triq Id-Donaturi Tad-Demm,
Msida, Malta

Kindly consider your environmental responsibility before printing this e-mail

---

From: Sarah Dimech <sarahdimech@hotmail.com>
Sent: Monday, 01 April 2024 07:26
To: Borg Charles M at MHA - MDH <charles.m.borg@gov.mt>
Cc: Decelis Stephen at MHA - MDH <stephen.decelis@gov.mt>
Subject: Dissertation Survey

CAUTION: This email originated from OUTSIDE the Government Email Infrastructure. DO NOT CLICK LINKS or OPEN attachments unless you recognise the sender and know the content is safe.

Dear Mr.Borg,

Good Morning. I trust this e-mail finds you well.

As you are aware , I will be conducting my surveys for the dissertation with the phlebotomists working within the pathology department.

I would like to know if it will be possible that either yourself of Mr. Decelis can act as intermediary as to pass on the link with the survey to the phlebotomists as I cannot do this myself due to GDPR.

A confirmation of this and that you have e-mails of the phlebotomists is required for me to present to the GDPR office.

Your assistance is highly appreciated.

Kind Regards,
Sarah

Appendix 3

TABULATED QUESTIONS FOR SPSS

Q1	**Gender**
Q2	**Age**
Q3	**Marital Status**
Q4	**Nationality**
Q5	**Qualification Level**
Q6	**How long have you been working as a phlebotomist?**
Q7	**Position held at Mater Dei Hospital**
Q8	**Apart of the 40hour roster, do you work extra hours as part time or over time?**
Q9	**Have you worked in another phlebotomy setting before Mater Dei Hospital?**
Q10	**I work at Mater Dei Hospital because …**
Q11	**Select the option below that represents your level of satisfaction working at Mater Dei Hospital**
Q12	**Let's Measure Your Stress levels!!**
12A	**I finish the working day feeling satisfied with what I have done**
12B	**I experience control of my life**
12C	**I experience dizzy spells or palpitations**
12D	**I feel fatigue or lack of energy**
12E	**I have Difficulty getting to sleep**
12F	**I am confident about the future**
12G	**I have poor apatite**
12H	**I lose my temper over minor things**
12I	**I can rely on my family or friends to support me if I need it**
12J	**I find the amount of work I have exceeds the amount of time I have available for it**
12K	**I feel I am good as anyone else at my job**
12L	**I find work management supportive**
12M	**I look forward to going to work**
12N	**I do not Know what I am working for**
12O	**I am unable to relax in the evening**

12P	I have more responsibility than I can handle
12Q	I drink too much alcohol
12R	I can switch off thinking about problems
12S	I think I manage my time well
12T	I know how to refuse to take additional work if I need to
Q13	How does your job make you feel?
13A	It is hard to work when seeing patients in a lot of pain every day
13B	When the workload is big, it interferes with the quality of care I give to the patients I see
13C	Sometimes being under pressure makes it harder to concentrate on what I am doing
13D	When patients come in because they are in pain or injured, it is harder to co-operate with them
13E	The workload is bigger in the morning rather than during the rest of the day
13F	My job got easier when I got used to the daily routine
13G	It is easier to attend to the same patients frequently
	Stress Factors
Q14	Stress caused by; Death and Dying
14A	Performing procedure that patients experience as painful
14B	Feeling helpless in the case of a patient who fails to improve
14C	Listening / talking to a patient about his / her approaching death
14D	The death of a patient
14E	Watching a patient suffer physically or emotionally
Q15	Stress caused by: Criticism by a doctor
15A	Criticism by a doctor
15B	Conflict with a doctor
15C	Fear of not managing to draw bloods of a patient
15D	Disagreement concerning samples of a patient
Q16	Stressed caused by; Inadequate Preparation
Q16A	Feeling inadequately prepared to help with the emotional needs of a patient Never

Q16B	**Being asked a question by a patient for which I do not have a satisfactory answer**
Q16C	**Feeling inadequately prepared to help with the emotional needs of a patient's family**
Q17	**Stressed caused by; Lack of Support**
Q17A	**Lack of opportunity to talk openly with other colleagues about problems related to work**
Q17B	**Lack of opportunity to share experiences and feelings with other personnel in the same work environment**
Q17C	**Lack of opportunity to express to other employees at the same care setting my negative feelings towards patients**
Q18	**Stressed caused by; Conflict with Nurses**
Q18A	**Criticism by a nurse**
Q18B	**Conflict with nursing officers**
Q18C	**Difficulty working with nurse/s**
Q19	**Stressed caused by; Workload**
Q19A	**Breakdown of computer / printer**
Q19B	**Unpredictable staffing and scheduling**
Q19C	**Not enough time to complete all my tasks**
Q19D	**Not enough staff to cover all wards**
Q20	**Not on SPSS**
Q21	**Not on SPSS**

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