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**ASSESSMENT OF MENTAL WELLNESS PROGRAM IMPLEMENTATION AND
HEALTHCARE PROVIDER WELL-BEING AT AGA KHAN UNIVERSITY HOSPITAL,
KENYA**

**BY
BELINDA KERU
Reg. No. 194025**

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS
ADMINISTRATION IN HEALTHCARE MANAGEMENT OF STRATHMORE
UNIVERSITY BUSINESS SCHOOL**

JUNE 2026

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

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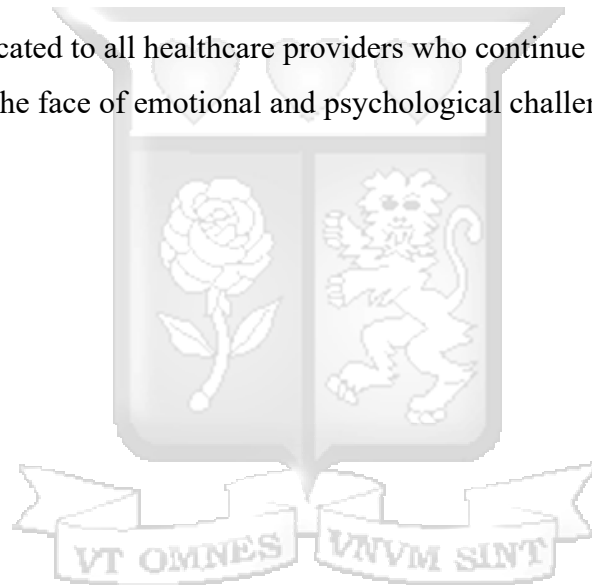
Director, Office of Graduate Studies

DEDICATION

This dissertation is dedicated to my father, whose unwavering support, encouragement, and belief in my abilities gave me the strength to persevere throughout this journey.

I also dedicate this work to my children, who continue to inspire me every day and whose love and patience motivated me to keep pushing forward despite the demands of academic and professional life.

Finally, this work is dedicated to all healthcare providers who continue to serve with resilience and compassion even in the face of emotional and psychological challenges.



ACKNOWLEDGEMENT

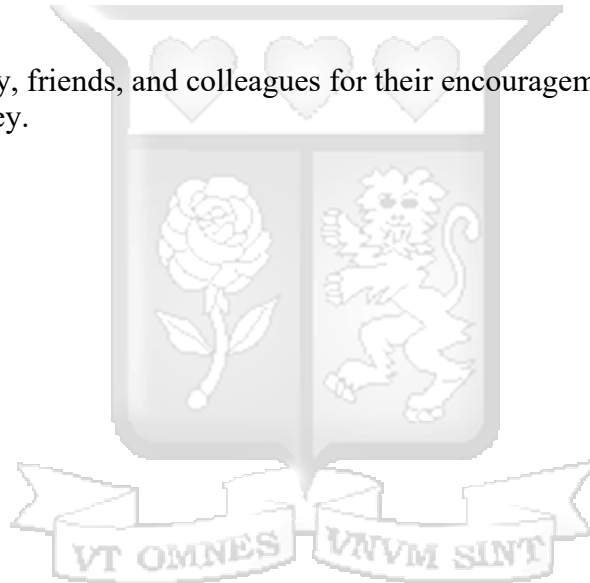
I sincerely thank Almighty God for granting me wisdom, strength, and resilience throughout this academic journey.

My deepest appreciation goes to my supervisor, Prof. Joseph Onyango, for his guidance, patience, constructive feedback, and continuous support during the development of this dissertation.

I am especially grateful to my father for his unwavering encouragement, support, and belief in my potential throughout my studies.

I also extend my appreciation to Aga Khan University Hospital for providing a supportive environment that made this research possible, and to all healthcare providers who willingly participated in this study.

Finally, I thank my family, friends, and colleagues for their encouragement, understanding, and support during this journey.



ABSTRACT

Healthcare providers in private hospitals across sub-Saharan Africa face high occupational demands, yet the implementation and effectiveness of institutional mental wellness programmes in this context remain poorly documented. This study assessed the implementation of mental wellness programmes (MWP) and their relationship with healthcare provider (HCP) well-being at Aga Khan University Hospital (AKUH), Nairobi, Kenya. Grounded in the Job Demands–Resources (JD-R) model and Organisational Support Theory (OST), the study employed a quantitative, cross-sectional survey design with a final valid sample of 328 healthcare providers. Data were analysed using descriptive statistics, Pearson correlation, chi-square tests, one-way ANOVA, and structural equation modelling. Awareness of MWPs was high (87.2%) and overall participation was substantial (69.3%), though significant cadre-based disparities were identified, with nursing staff and administrative personnel reporting the lowest participation rates. Organisational support for MWPs was strongly associated with provider well-being, and MWP implementation was a significant predictor of HCP well-being. A notable paradox was observed: high emotional exhaustion coexisted with high job satisfaction and positive overall well-being, reflecting an engaged but increasingly depleted workforce. Workload and shift patterns were significant independent predictors of well-being but did not significantly moderate the MWP–well-being relationship, suggesting that programme benefits were consistent across levels of occupational demand. The findings support the applicability of the JD-R model and OST in a sub-Saharan African private hospital context. The study recommends that private hospitals institutionalise mental wellness frameworks as a core human-resource strategy, develop cadre-specific outreach programmes, establish formal emotional exhaustion monitoring protocols, and conduct workload and shift reviews to address high occupational demand burdens alongside wellness programme investments.

Keywords: mental wellness programmes, healthcare providers, perceived organisational support, job demands–resources model, PLS-SEM, emotional exhaustion, job satisfaction, private hospitals, Kenya

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LIST OF ABBREVIATIONS

Abbreviation	Full Meaning
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AKUH	Aga Khan University Hospital
EAPs	Employee Assistance Programs
HCPs	Healthcare Providers
IQR	Interquartile Range
JD-R	Job Demands-Resources Model
KAPH	Kenya Association of Private Hospitals
OST	Organizational Support Theory
PIPE	Penetration, Implementation, Participation, and Effectiveness Framework
RE-AIM	Reach, Effectiveness, Adoption, Implementation, and Maintenance Framework
WEMWBS	Warwick-Edinburgh Mental Well-Being Scale



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DEFINITION OF TERMS

Mental Wellness Program (MWP): A structured set of institutional initiatives, policies, and interventions (such as counseling, stress management workshops, and peer support groups) designed to promote psychological health and prevent burnout among employees.

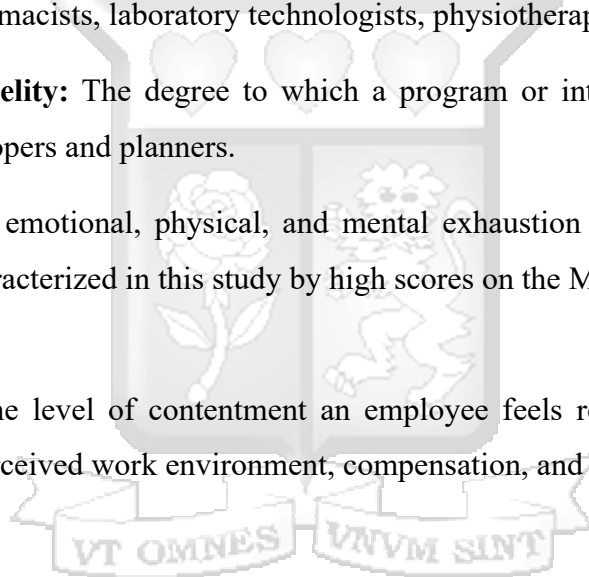
Healthcare Provider (HCP): For the purpose of this study, this refers to all clinical and support staff directly involved in patient care or clinical operations, including medical doctors, registered nurses, and allied health professionals.

Allied Health Professionals: Healthcare practitioners distinct from medicine and nursing who provide a range of diagnostic, technical, therapeutic, and support services. This includes, but is not limited to, pharmacists, laboratory technologists, physiotherapists, and nutritionists.

Implementation Fidelity: The degree to which a program or intervention is delivered as intended by its developers and planners.

Burnout: A state of emotional, physical, and mental exhaustion caused by excessive and prolonged stress, characterized in this study by high scores on the Maslach Burnout Inventory (MBI).

Job Satisfaction: The level of contentment an employee feels regarding their work role, measured by their perceived work environment, compensation, and organizational support.



CHAPTER ONE

INTRODUCTION

This chapter introduces the study by contextualizing the problem of mental wellness among healthcare providers within a global, regional, and local context. It highlights the increasing prevalence of stress, burnout, and psychological strain among healthcare workers, particularly in private hospitals where workload, shift patterns, and competitive service delivery pressures are pronounced. The chapter further defines key variables while situating the study in the context of Aga Khan University Hospital (AKUH), Kenya. It articulates the problem statement, research objectives, research questions, and significance of the study, thereby laying the foundation for a critical assessment of how mental wellness programs are implemented in private healthcare settings.

1.1 Background of the Study

Healthcare workers' psychological wellbeing has become a significant global concern, especially in the aftermath of the COVID-19 pandemic (Bamforth et al., 2023). For years, scholarly and professional communities have documented a rise in stress, burnout, and emotional exhaustion among healthcare providers (HCPs) worldwide, with the phenomenon reaching a crisis level in recent years (Malik et al., 2024). This critical issue is not confined to a single country or specialty but represents a pervasive systemic challenge with profound implications for both healthcare providers (HCPs) and the patients they serve (Sexton & Adair, 2019). HCPs operate in environments defined by high-stakes decisions, prolonged physical and mental effort, and the constant exposure to human suffering and trauma (Burrowes et al., 2023). Such sustained pressure, often compounded by long working hours and limited resources, depletes individuals' psychological and emotional reserves, leading to adverse outcomes such as anxiety, depression, and moral distress (Inchingolo et al., 2025).

A particularly significant dimension of this distress is the “second victim” experience, a phenomenon in which HCPs are emotionally traumatized by adverse patient events (Mira, 2024). This experience extends beyond the direct event itself, as professionals are also affected by the responses of their colleagues, superiors, and the institution. The presence of systemic factors, including organizational, cultural, and environmental issues, contributes to these events, creating a sense of shared responsibility and guilt among the healthcare team (Almutairi et al., 2022). This

recognition marks a conceptual shift in the discourse on HCP well-being, moving from a focus on an individual's resilience to a recognition of a collective, systemic problem that requires organizational-level solutions (Burrowes et al., 2023). The consequences of this crisis are far-reaching, directly impacting job satisfaction, increasing staff turnover and absenteeism, and critically, compromising the quality of patient care (Schwatka et al., 2022). According to the World Health Organization (2024), at least a quarter of health and care workers worldwide reported suffering from anxiety, depression, and burnout symptoms during and after the COVID-19 pandemic, with lasting negative effects on job satisfaction, staff retention, and quality of patient care highlighting the urgency of addressing this issue with comprehensive, evidence-based interventions. A recent scoping review of mental health awareness programmes for workplace well-being in LMICs documented that structured institutional programmes are associated with improvements in psychological safety and workforce retention, though their impact is moderated by organisational culture, leadership support, and implementation fidelity (Luberenga et al., 2026).

The challenges of HCP mental wellness are particularly pronounced within the regional context of Sub-Saharan Africa (SSA). Health systems in this region frequently face high burdens of disease, chronic under-resourcing, and severe shortages of trained mental health professionals, intensifying the emotional and physical demands on the workforce (Azevedo, 2017). Empirical research from this region confirms that HCPs experience significant stress and burnout. For example, a study encompassing HCPs in Ghana and Kenya found high levels of job dissatisfaction, stress, and burnout among providers, citing inadequate staffing and poor managerial communication as key frustrations (Afulani et al., 2021).

More recent localized studies reinforce this trend in private Kenyan settings. Muriithi et al. (2020) found that among private hospital nurses in Nairobi, organizational factors like management support and shift scheduling significantly predicted emotional exhaustion. Similarly, Marangu et al. (2021) examining physician burnout in a consortium of private hospitals in Kenya, highlighted that while awareness of wellness initiatives was often high, actual participation was low due to perceived stigma and time constraints, directly pointing to critical implementation barriers. These findings establish that HCPs in Kenya face a well-being crisis intensified by regional constraints. The profound lack of scholarly focus on the implementation fidelity and effectiveness of mental

wellness programs in this specific context means that while the problem is clear, the success factors of institutional solutions remain largely unexamined in the academic literature.

The Mental Awareness Program (MAP) at Aga Khan University Hospital (AKUH) is an institutional initiative designed to mitigate occupational stress and promote psychological resilience among healthcare workers (Aga Khan University Hospital, 2025). Nationally and globally, such programs have become a cornerstone of health human resource management (Luberenga et al., 2026). For instance, in high-income settings such as the United States and the United Kingdom, Wellness Recovery Action Plans (WRAP), pioneered by Mary Ellen Copeland, have demonstrated a 25% reduction in self-reported burnout symptoms among clinical staff (Cook et al., 2012). Similarly, studies in South African private healthcare facilities indicate that structured employee assistance programs (EAPs) contribute to reducing absenteeism and improving employee retention [Note: this citation is sourced from grey literature and has been retained pending verification of a peer-reviewed equivalent] (Valadez, 2026).

At Aga Khan University Hospital, the Mental Awareness Program was formally institutionalized in 2018 following a pilot phase initiated by the Human Resources Department in collaboration with the Department of Psychiatry (Munyi & Mabonga, 2024). The Mental Awareness Program at Aga Khan University Hospital was developed by the AKU Wellness Committee and is implemented through a multi-tiered approach that includes mandatory wellness hours, a 24-hour confidential counseling hotline, and the integration of mental health screening during annual staff medical check-ups (Munyi & Mabonga, 2024). Despite these structured efforts, empirical data on the fidelity of implementation and the program's impact across diverse staff cadres at AKUH Nairobi remains undocumented, thereby necessitating this assessment.

1.1.1 Mental Wellness Programs at the Institutional Level

Implementation, in this context, refers to the systematic and strategic process of introducing, integrating, and sustaining structured interventions aimed at promoting and restoring the mental and psychological health of employees within the workplace (Paterson et al., 2024). These programs are not merely a collection of ad hoc activities but are strategic initiatives designed to address specific needs, facilitate system-level improvements, and address the social determinants of health that impact an individual's well-being (Khatri et al., 2024).

Core components of mental wellness programs typically adopt a multi-level approach, starting with primary prevention, which aims to reduce stressors through organizational initiatives such as better workload management, improved communication structures, and the promotion of a psychologically safe workplace culture (Wu et al., 2021). Secondary prevention focuses on proactive individual support, offering resources like Employee Assistance Programs (EAPs), mental health screenings, psychoeducational workshops on stress management and mindfulness, and peer support networks (Bouzikos et al., 2022). Tertiary prevention addresses those already experiencing distress by providing access to confidential counseling, subsidized psychotherapy, and structured referral systems for specialized care (Muibu et al., 2025).

The process involves a multi-stakeholder approach, from leadership buy-in to participatory engagement of the workforce, to ensure that the programs are not just adopted but are effectively embedded into the organizational culture (Leso et al., 2024).

1.1.2 Healthcare Provider Well-being

Healthcare provider well-being is a holistic concept that encompasses an individual's subjective physical, mental, and social health within the work environment (Lin et al., 2025), while performance relates to the quality, productivity, and professional conduct of an individual's work (Triyani et al., 2023). The two are inextricably linked, as a decline in well-being has been shown to have a direct and detrimental effect on professional performance, leading to increased medical errors, reduced productivity, and lower patient satisfaction (Garcia et al., 2019). Therefore, the well-being of HCPs has significant implications for both organizational and patient outcomes.

The measurement of HCP well-being and performance relies on a combination of self-reported and objective indicators, utilizing validated instruments to ensure reliability and rigor (Adamou et al., 2025). Key measures of well-being include the assessment of burnout, often quantified using subscales of instruments like the Maslach Burnout Inventory, which focus on emotional exhaustion and depersonalization (Sexton & Adair, 2019). Mental well-being is commonly measured using positive psychology scales, such as the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS), which assesses a broad range of feelings related to purpose, confidence, and connection with others (Perera et al., 2025). However, this study does not employ such psychometric instruments; instead, it examines institutional-level practices and policies that support mental wellness. Indicators of psychological distress and job satisfaction are also vital, as

they capture self-reported stress levels, anxiety, depression, and overall contentment with the job and work environment (Lin et al., 2025). In terms of performance, key indicators include work-life balance, a measure of an individual's ability to integrate their professional and personal lives (Sexton & Adair, 2019), and turnover intention, which indicates the likelihood of an employee leaving the organization or the profession (Burrowes et al., 2023). The bidirectional relationship between stress, burnout, and job satisfaction makes these indicators highly relevant for assessing the impact of any intervention (Afulani et al., 2021).

1.1.3 Workload and Shifts

Workload in a healthcare setting is a complex, multi-causal construct that can be distinguished into quantitative and qualitative dimensions. Quantitative workload refers to the volume, speed, and physical effort required to perform tasks (Wortmann & Panahian, 2024), a dimension often exacerbated by staff shortages and heavy patient loads. Qualitative workload pertains to the cognitive and emotional demands of the job, such as high-stakes decision-making, the need for continuous vigilance, and the emotional labor involved in patient care (Cucolo & Perroca, 2019). Inappropriate workload, particularly when not balanced by adequate resources, has been identified as a primary driver of stress and burnout among HCPs (Langton & Morley, 2025).

In addition to workload, shift work is a significant contributing factor to HCP well-being issues. The necessity of providing continuous patient care often results in non-traditional work schedules, including night shifts, which disrupt the body's natural circadian rhythm (Boivin et al., 2022). The physiological consequences of this disruption are well-documented, leading to chronic fatigue, sleep deprivation, and an increased risk of metabolic and cardiovascular diseases. From a psychological perspective, shift work negatively impacts social and family life, contributing to burnout and job dissatisfaction (Inchingolo et al., 2025). The dimensions of workload and shifts are therefore critical in this study as they represent powerful job demands that can moderate the effect of any mental wellness intervention (Langton & Morley, 2025). Measures for these dimensions include scales like the Quantitative Workload Inventory (QWI) and the NASA Task Load Index (NASA-TLX), which assess both the frequency of workload-related difficulties and the subjective experience of mental and emotional load (Baka & Bazińska, 2016; Tubbs-Cooley et al., 2018).

1.1.4 Awareness and Participation in Workplace Health Programs (WHP)

Awareness of WHP refers to an employee's knowledge and understanding of the mental wellness programs available to them, including their purpose, scope, and potential benefits (van der Put et al., 2023). Participation, on the other hand, is the actual act of engaging with these programs. The two concepts are fundamentally intertwined, as a lack of awareness can act as a direct barrier to participation, rendering even the most robust program ineffective if it is not known or understood by the target audience (Jones et al., 2019). The literature consistently identifies low participation as a major challenge in the success of WHP globally (Campmans et al., 2023; Mahmoodi et al., 2023).

A multidimensional approach is required to measure awareness and participation, moving beyond simple engagement rates. Awareness can be gauged by surveying employees on how well-informed they feel about available programs, the clarity of communication, and their perception of the program's relevance to their needs (Barrington, 2021). Participation is quantified by tracking key metrics, such as initial program registration, active engagement, and program completion rates (Solé-Beteta et al., 2022). The literature identifies a range of barriers that hinder participation, including time constraints due to excessive work and family commitments, a lack of trust in program confidentiality, and a perception that the program is an employer demand rather than an employee resource (Campmans et al., 2023; Mahmoodi et al., 2023). Conversely, key facilitators include the availability of programs, strong managerial support, and a positive organizational health climate (Leso et al., 2024).

1.1.5 Private Hospitals in Kenya

Globally, private hospitals are a crucial component of the healthcare ecosystem, often complementing public services and playing a central role in medical education and research (Sriram et al., 2024). They are a significant part of the economic value chain, providing specialized services and often serving as a destination for medical tourism. Private hospitals are typically known for their advanced technology, patient-centric services, and an ability to respond to consumer demands with greater agility than public systems (Siddiqi et al., 2023; Tsevelvaanchig et al., 2016). This has positioned them as key stakeholders in discussions on national health policy and delivery.

In the African and Kenyan context, the private sector is particularly vital for expanding healthcare access (Boone et al., 2023), especially for those who can afford private insurance. The Kenya

Association of Private Hospitals (KAPH) exemplifies this role, advocating for improved working conditions, championing ethical and quality care, and acting as a voice for the sustainability of private enterprises (KAPH, 2025). AKUH, a premier private, not-for-profit teaching hospital in East Africa, embodies this role by providing advanced care and contributing significantly to the training of new generations of medical professionals (Aga Khan University Hospital, 2015). The institution's commitment to quality and accessibility is central to its mission. Other peer-level private hospitals such as MP Shah Hospital, Avenue Hospital, The Nairobi Hospital, and Mater Hospital also exemplify the role of private healthcare providers in Kenya. These institutions share common characteristics with AKUH, including advanced technology, specialized service delivery, and significant contributions to training and patient care. While each has unique governance structures and market positioning, together they highlight the essential role of private hospitals in shaping Kenya's healthcare landscape. This strategic position places private hospitals at the forefront of healthcare innovation, making them an ideal case for this study.

1.1.6 Aga Khan University Hospital (AKUH)

Aga Khan University Hospital, Nairobi (AKUH), is a leading private, not-for-profit teaching and referral health facility, serving as the study setting for this research (see also Section 3.1), that has been a cornerstone of the East African healthcare system for over sixty years. The institution's mission is to provide accessible, cost-effective, and evidence-based care while fostering a "collaborative work environment that motivates, energises and recognises the contributions of individuals and teams" (Aga Khan University Hospital, 2015). This ethos, combined with its role in training new medical professionals, positions AKUH as a model for healthcare excellence in the region. The hospital's public commitment to staff well-being and a supportive work environment sets a clear and high standard against which its internal practices can be evaluated (Aga Khan University Hospital, 2015).

Despite its prestigious status and espoused values, there is a specific and significant scholarly problem that warrants this research. The literature on healthcare provider burnout in Kenya is limited and largely generalized, often combining samples from public and private institutions without providing institution-specific details (Afulani et al., 2021; Shah et al., 2021). For instance, a study that included a sample of Kenyan HCPs noted high levels of stress and burnout but provided no insight into what, if any, specific mental wellness programs were available or how

they were implemented (Afulani et al., 2021). While a previous cross-sectional study conducted at AKUH examined nurses' attitudes toward computerization, it did not assess their well-being or the presence of support systems (Kipturgo et al., 2014). Therefore, a profound gap exists in the broader Kenyan, African, and LMIC literature: there is limited publicly available, peer-reviewed empirical research that assesses implementation, effectiveness, and employee participation in institutional mental wellness programmes within private hospital settings. Most studies combine public and private sector samples, focus on burnout prevalence, and fail to capture institution-specific programmatic detail. The following observation regarding AKUH illustrates this gap at the institutional level: there is no published evidence in mental wellness programs specifically at AKUH. This research is therefore not an assessment of a known problem but a vital investigation into an unknown. By focusing on a leading, mission-driven private hospital, the study is uniquely positioned to reveal whether its aspirational values translate into tangible support and whether a gap exists between its public stance and its internal policies and practices.

1.2 Problem Statement

Universal Health Coverage (UHC) aims to ensure equitable access to quality healthcare without financial hardship, a goal that depends on a sustainable and healthy healthcare workforce. While this problem touches on burnout prevalence, programme implementation gaps, and programme effectiveness, the primary analytical focus of this study is implementation: specifically, whether and how a mental wellness programme operates at AKUH, and how its operation relates to provider well-being. Burnout prevalence and programme effectiveness are treated as contextual motivation and outcome variables respectively, rather than as co-equal research problems. Globally, healthcare professionals (HCPs) face rising levels of stress and burnout, driven by long hours, high-stakes decision-making, and emotional labor, which often lead to emotional exhaustion, depersonalization, and reduced personal accomplishment (Burrowes et al., 2023; Inchingolo et al., 2025; Malik et al., 2024). These outcomes contribute to increased absenteeism, staff turnover, and declines in patient safety and care quality (Schultz, 2023). Evidence from high-income countries shows that organizational support can mitigate these effects, but burnout remains widespread, highlighting the complex interplay between job demands and resources (Malik et al., 2024; Schwatka et al., 2022). In low- and middle-income countries (LMICs), limited staffing and resource constraints intensify these challenges (Wright et al., 2022).

In Kenya, research confirms high stress and burnout among HCPs (Afulani et al., 2021), yet there is limited data on the availability, implementation, or effectiveness of institutional wellness programs. The Job Demands-Resources (JD-R) model underscores that high demands coupled with insufficient resources increase risk for poor health outcomes, but its applicability in Kenyan healthcare settings remains underexplored (Schwatka et al., 2022; Widayana et al., 2025). This gap is especially relevant in private hospitals, where institutional interventions may differ from public facilities.

Healthcare providers at tertiary institutions are subject to high cognitive and emotional loads, which, if unmanaged, lead to clinical burnout and diminished quality of care. While Aga Khan University Hospital (AKUH) has established a Mental Awareness Program (MAP) to address these risks, there is a lack of empirical data regarding the program's reach and effectiveness across different staff cadres. Preliminary observations suggest a disconnect between the availability of wellness resources and their actual utilization by frontline clinicians.

The core problem is that despite the existence of institutional mental health policies, the factors influencing implementation fidelity (such as workload-related barriers, perceived stigma, and the alignment of resources with provider needs) remain unexamined within the context of private hospitals in Kenya (Afulani et al., 2021; Muriithi et al., 2020; Shah et al., 2021). Without a systematic assessment of how the MAP is being implemented and perceived, the hospital risks maintaining a program that may not adequately address the evolving psychological needs of its workforce. This study, therefore, seeks to evaluate the implementation status and the barriers to utilization of mental wellness programs at AKUH to provide an evidence-based framework for improvement. Specifically, what remains unknown is the extent to which mental wellness programmes at AKUH are reaching and being utilised by all cadres of healthcare providers, and what organisational factors support or hinder successful implementation. Current evidence is insufficient because studies in Kenya and other LMICs largely document the prevalence of burnout and stress without examining the fidelity, reach, or effectiveness of institutional responses within named private hospitals. This study fills that gap by providing the first institution-specific, empirical assessment of MWP implementation and its association with HCP well-being at AKUH, with implications for private hospital policy across the region. The problem is further illuminated by comparison with non-healthcare wellness programme evaluations: corporate and NGO wellness

initiatives in Kenya and the wider region have been evaluated for their effects on employee retention and engagement (Wanjiru & Kamau, 2022; Mwangi, 2023), generally finding that programme effectiveness depends heavily on management endorsement, confidentiality safeguards, and ease of access — factors that mirror the implementation dimensions examined in this study. However, these corporate and NGO evaluations are not directly transferable to a clinical hospital setting, where occupational demands (e.g., shift work, patient mortality exposure, and the “second victim” phenomenon) are qualitatively different from corporate workplace stressors. This distinction reinforces the need for a healthcare-specific empirical assessment such as the one undertaken here.

1.3 Research Objectives

The general objective of this study is to assess the implementation of mental wellness programs and their correlation with the well-being of healthcare providers at Aga Khan University Hospital (AKUH).

The study is guided by the following specific objectives:

- i. To assess the level of awareness (knowledge of programme availability) and participation rates (actual utilisation) in mental wellness programmes among healthcare providers at AKUH, and to determine whether these vary significantly across professional cadres, gender, and years of experience.
- ii. To determine the organisational factors (including management support, perceived confidentiality, programme satisfaction, and perceived organisational support) that influence the availability and utilisation of mental wellness programmes, and to examine their correlation with healthcare provider well-being at AKUH.
- iii. To determine whether workload and shift patterns moderate the relationship between implementation of mental wellness programs and healthcare provider well-being at AKUH.

1.4 Research Questions

The study was guided by the following research questions:

- i. What is the level of awareness and participation in mental wellness programs among healthcare providers at AKUH?

- ii. What factors influence the successful implementation of mental wellness programs, and how are they correlated with healthcare provider well-being at AKUH?
- iii. Do workload and shift patterns moderate the relationship between the implementation of mental wellness programs and healthcare provider well-being at AKUH?

1.5 Scope of the Study

This study is a focused, single-institution case study designed to assess the implementation of mental wellness programs at Aga Khan University Hospital, Kenya. The population of interest includes all full-time healthcare providers employed at the hospital, encompassing physicians, nurses, and allied health professionals. The research specifically examined the relationship between the implementation of mental wellness programs and the healthcare provider well-being and performance, while also considering the influence of moderating variables such as workload and shift patterns. The study is delimited to the context of a private, not-for-profit hospital in Kenya, and its findings, while specific to AKUH, may not be generalizable to other institutions without further research. The data collection was limited to January–May 2026 to ensure the timeliness and relevance of the findings.

In addition to its strategic role as a teaching hospital, AKUH has implemented a range of institutional investments and programs to support staff well-being. These include the establishment of wellness and counseling units, the integration of Employee Assistance Programs (EAPs), regular mental health awareness campaigns, and professional development initiatives aimed at stress reduction and resilience building. Such programs illustrate a deliberate organizational commitment to employee wellness, positioning AKUH as an ideal case study for investigating the implementation of mental wellness programs in private healthcare settings (Aga Khan University Hospital, 2015).

1.6 Justification and Significance of the Study

1.6.1 Justification of the Study

The justification for this study is rooted in the critical need to preserve the psychological health of the healthcare workforce to ensure the sustainability of quality clinical services. Despite the documented rise in burnout and occupational stress within the Kenyan healthcare sector, there is a profound lack of empirical evidence regarding the implementation fidelity and effectiveness of existing institutional interventions. While Aga Khan University Hospital has pioneered the Mental

Awareness Program (MAP), the absence of a formal evaluative framework means that the degree to which these resources meet the actual needs of frontline staff remains undocumented. Without this investigation, the hospital cannot determine if its wellness initiatives are performing as intended or if organizational barriers are rendering them inaccessible. This research is, therefore, a vital investigation into an empirical unknown, providing the necessary evidence to ensure that institutional investments translate into tangible support for a workforce operating under high-pressure clinical demands.

Beyond this practical justification, the study makes three specific contributions that distinguish it from prior work on healthcare worker burnout in Kenya. Methodologically, it is among the first studies in the Kenyan private healthcare sector to operationalise MWP implementation as a multi-dimensional construct (awareness, participation, management support, confidentiality, and satisfaction) rather than treating "wellness programme exposure" as a binary variable, allowing a more granular understanding of which implementation dimensions matter most. Contextually, it provides institution-specific evidence from a single, well-resourced private hospital, which sharpens causal interpretability relative to studies that pool heterogeneous public and private facilities into a single sample. Theoretically, it tests the joint application of the JD-R model and Organisational Support Theory in a sub-Saharan African private hospital setting, a combination that has been applied more extensively in high-income health systems but remains under-tested in LMIC clinical contexts. These three contributions are incremental rather than paradigm-shifting, and the study does not claim to resolve the broader debate on wellness programme effectiveness; rather, it adds a methodologically explicit, context-specific data point to a literature that has previously relied on broader, less granular assessments.

This research is expected to contribute value on multiple fronts, including practical, policy, scholarly, and stakeholder-related implications.

1.6.2 Practical Significance

The study provided Aga Khan University Hospital (AKUH) management with evidence-based insights to improve the design, implementation, and promotion of mental wellness programs. By identifying barriers to participation and factors that contribute to successful implementation, the research supports the optimization of resource allocation, enhance program effectiveness, and foster a more supportive work environment for healthcare providers. The findings can serve as a

model for other private and public hospitals in Kenya and the region, offering guidance on developing effective, contextually relevant wellness initiatives. Ultimately, a healthier and more resilient workforce is likely to improve staff satisfaction, reduce burnout, and enhance patient care quality.

1.6.3 Policy Significance

The findings have implications for broader healthcare policy in Kenya. By providing empirical evidence on the effectiveness and challenges of mental wellness programs, the study can inform county- and national-level initiatives aimed at supporting healthcare provider well-being. Policymakers, including the Ministry of Health and professional associations such as the Kenya Association of Private Hospitals (KAPH), can use the insights to develop or refine regulations, guidelines, and funding priorities that promote sustainable workforce health and mitigate systemic issues contributing to burnout. The research thus contributes to a national dialogue on building a resilient healthcare system.

1.6.4 Scholarly Significance

This study addresses a critical gap in the literature on healthcare provider well-being in Sub-Saharan Africa. While international research on mental wellness programs is extensive, there is limited empirical evidence from Kenya, particularly from private hospitals. By testing the applicability of frameworks such as the Job Demands-Resources (JD-R) model and Organizational Support Theory (OST) in a non-Western context, the study enhanced understanding of how cultural and institutional factors influence wellness program implementation. The use of validated evaluation frameworks will also strengthen methodological rigor and provide a foundation for future research in this under-researched area.

1.6.5 Stakeholder Significance

For healthcare providers, the study documents and analyzes their experiences, potentially leading to tangible improvements in working conditions and institutional support. For hospital management, it offers a data-driven assessment of existing initiatives, enabling informed decision-making and demonstrating commitment to staff well-being. For patients and the public, a healthier, less-stressed healthcare workforce directly translates into improved care quality and patient safety.

CHAPTER TWO

LITERATURE REVIEW

This chapter presents a review of relevant literature underpinning the study. It begins by outlining the theoretical framework that anchors the research, followed by an empirical review organized around the study objectives. The chapter critically evaluates international, regional, and local evidence on awareness and participation in workplace health programs, factors influencing program implementation, and the relationship between workload, shifts, and wellness initiatives. It further identifies existing research gaps, develops a conceptual framework, and establishes the foundation upon which the study is built.

2.1 Theoretical Framework

The current study is conceptually anchored in the Job Demands-Resources (JD-R) model, which serves as the primary theoretical framework due to its comprehensive explanation of how job demands and resources jointly determine employee well-being. This model is particularly suited to the study of healthcare providers, whose exposure to high demands and variable access to institutional resources makes them vulnerable to strain and burnout. To enrich this perspective, Organizational Support Theory (OST) is adopted as a complementary framework. OST specifically highlights the importance of employees' perceptions of organizational care and support, which can be understood as a critical job resource within the JD-R framework. In this way, OST strengthens the JD-R model by clarifying how institutional-level practices such as wellness programs influence healthcare providers' experiences of support, resilience, and well-being.

The integration of JD-R and OST in this study is more than additive: OST is used specifically to theorise the mechanism by which one category of job resource — institutional wellness programming — comes to be perceived as supportive in the first place. JD-R alone treats resources as objectively present or absent (e.g., a programme exists or does not), but does not explain why providers with equal access to the same programme might derive different well-being benefits from it. OST fills this gap by positing that the well-being effect of a resource operates through employees' subjective appraisal of organisational care, not merely through the resource's objective availability. This logic directly justifies why the study measures perceived management support and perceived confidentiality (OST-derived constructs) alongside awareness and participation (JD-

R-derived utilisation constructs) rather than treating programme existence as a sufficient predictor on its own. This integration is not without limits: the two theories were not tested against each other as competing explanations in this study, and the cross-sectional design cannot establish the temporal sequence implied by the JD-R process model (resources → appraisal → well-being). The conceptual framework should therefore be read as a theoretically motivated set of associations rather than a fully tested causal chain, and the moderating role assigned to workload reflects an a priori theoretical expectation drawn from JD-R's strain process, rather than an empirically pre-tested assumption; the non-significant moderation result reported in Chapter Four should be interpreted in this light.

2.1.1 The Job Demands-Resources (JD-R) Model

The Job Demands-Resources (JD-R) model, developed by Demerouti, Bakker, Nachreiner, and Schaufeli in the early 2000s, is a widely validated and popular framework for investigating the associations between job characteristics and employee well-being (Schwatka et al., 2022). The model's core postulation is that any working environment can be characterized by two fundamental categories of work characteristics: job demands and job resources (Batubara et al., 2020).

Job demands are defined as the "physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills" (Schwatka et al., 2022). These demands are not inherently stressful but become so when they require excessive effort and are not met with adequate resources. In a healthcare context, these demands include long working hours, strenuous shift work, and the emotional labor of dealing with high-stakes, stressful situations (Inchingolo et al., 2025; Langton & Morley, 2025). The JD-R model proposes that high job demands can lead to a health impairment process, which depletes an individual's physical and psychological energy and results in negative outcomes such as emotional exhaustion and burnout (Batubara et al., 2020).

Conversely, job resources are defined as those aspects of the job that are "(1) functional in achieving work goals, (2) reduce job demands and the associated physiological and psychological costs, and/or (3) stimulate personal growth, learning, and development" (Schwatka et al., 2022). These resources are typically perceived as positive and are linked to a motivational process that fosters work engagement and positive outcomes. Examples of job resources in a hospital setting include supportive leadership, social support from peers, career development opportunities, and

access to wellness programs (Atingabili et al., 2021). The model posits that when employees have access to these resources, they are more motivated to engage in health-promoting activities and are better equipped to cope with job demands, thereby mitigating the negative health impairment process (Schwatka et al., 2022).

The JD-R model is the ideal anchoring theory for this study as it provides a direct conceptual framework for analyzing the relationship between the key variables (Schwatka et al., 2022). The study's independent variable, the implementation of mental wellness programs, can be conceptualized as a critical job resource (Fleury et al., 2018). The contextual variable, workload and shifts, represents a significant job demand. The JD-R model allows for a sophisticated analysis of how these two forces interact to influence the dependent variable: HCP well-being and performance (Abdelsadig et al., 2022). For example, the model would predict that a well-implemented wellness program (a resource) could buffer the negative effects of a demanding work schedule, thereby enhancing employee well-being.

Despite its widespread application and validation through longitudinal meta-analyses, the JD-R model has faced some criticisms. Scholars have criticized the JD-R model for lacking universal applicability across diverse occupations and organizational contexts, as one study on Latin American agricultural workers found that the mediation hypothesis linking proactive health behaviors to overall health was not supported (Schwatka et al., 2022). The model has also been criticized for its general treatment of job demands, as it does not always distinguish between "hindering" demands (which are always negative) and "challenging" demands (which, like increased responsibility, can be motivating) (van Zyl et al., 2025). The JD-R model's original formulation has also been seen as too simplistic, potentially failing to capture the full complexity of the non-linear interactions between demands and resources (Li et al., 2025). However, these very critiques highlight the model's value for this research; they provide a roadmap for a more sophisticated application of the framework. This study directly addresses the criticism of context-specificity by applying the model to a new, under-researched setting in Kenya. It also offers the opportunity to explore the nuance of demands by examining how different dimensions of workload affect HCPs, thereby contributing to the broader academic discourse.

2.1.2 Organizational Support Theory (OST)

Organizational Support Theory (OST), developed by Eisenberger and his colleagues, complements the JD-R model by focusing on a specific, powerful job resource: Perceived Organizational Support (POS) (Atingabili et al., 2021). OST is based on the principle of social exchange, positing that employees develop a global belief about the extent to which their organization values their contributions and cares about their well-being (Rasool et al., 2021). When employees perceive high POS, they feel a sense of obligation to reciprocate with positive attitudes and behaviors, such as increased job satisfaction, greater commitment, and reduced burnout (Caesens & Stinglhamber, 2020). The theory suggests that employees view the organization's actions as an indication of its intentions toward them, and as a result, a supportive environment can act as a crucial resource for buffering stress (Atingabili et al., 2021).

OST is an essential theory for this study as it provides a framework for understanding an employee's willingness to engage with mental wellness programs (Eisenberger et al., 2020). The success of these programs is not merely a matter of their existence but is deeply tied to how employees perceive them. The theory suggests that a program's effectiveness is profoundly influenced by whether it is viewed as a genuine resource from a caring organization or as a superficial gesture (Li et al., 2022). In this way, OST explains how the perception of support (POS) from the institution can moderate the relationship between the program (as a tangible resource) and the employee's well-being (Caesens et al., 2017). This is particularly relevant for an institution like AKUH, which publicly commits to a supportive and collaborative work environment.

While foundational, OST has been subject to important criticisms that compel a more nuanced view. A central critique is the "too much of a good thing" (TMGT) effect, which challenges the linear assumption that more POS is always better (Caesens & Stinglhamber, 2020). Some preliminary evidence suggests that excessively high levels of support can, in certain circumstances, be perceived negatively by employees (Gray et al., 2020). This can be due to two potential mechanisms: first, employees with low socio-emotional needs may view high POS as a "bank of good will" that allows them to reduce their effort, thereby negatively impacting performance ; second, high POS can be perceived as a sign of organizational incompetence or a lack of confidence in the employee's abilities, which can limit their sense of freedom and autonomy and lead to increased stress or reduced job satisfaction (Caesens & Stinglhamber, 2020).

Another related criticism is the "plateauing effect," which proposes that at some point, employees may feel they have sufficiently reciprocated for the support they have received, leading to a flattening or decline in the positive relationship between POS and outcomes (Houle, 2024). Furthermore, some empirical studies have found no moderating effect of POS on the relationship between job satisfaction and turnover intentions, which challenges a core tenet of the theory (Ramlall, 2024). Engaging with these criticisms is crucial for this study. The investigation will not only assess the presence of organizational support but will also explore how it is perceived by HCPs and whether these perceptions, positive or negative, influence their engagement with wellness programs. This approach will provide a more comprehensive understanding of the support-well-being relationship in the Kenyan context.

2.2 Empirical Review

The empirical review synthesizes global and local research focusing on the relationship between organizational wellness initiatives and healthcare provider well-being, organized by the study's key constructs: awareness and participation, implementation factors, and the role of job demands. Rather than cataloguing individual studies sequentially, this review identifies convergent evidence, highlights contradictions and methodological limitations, and integrates regional perspectives to establish the theoretical and empirical context for the current study.

It is acknowledged that the empirical base for workplace mental wellness programming remains disproportionately drawn from high-income settings (the United States, United Kingdom, and Western Europe), where institutional wellness infrastructure, labour regulation, and disclosure norms differ substantially from the Kenyan private healthcare context. Where Kenyan and African studies exist — including doctoral and master's dissertations from local universities such as Kenyatta University and the University of Nairobi, alongside the Afulani et al. (2021) and Shah et al. (2021) studies on Kenyan health-worker burnout — these are deliberately foregrounded in this review's discussion of awareness, participation, and organisational support, rather than treated as secondary confirmatory citations to international findings. Nonetheless, a genuine limitation remains: there is markedly less African empirical literature evaluating the implementation fidelity of named, institution-specific wellness programmes (as opposed to documenting burnout prevalence alone), which is precisely the gap this study addresses. The relative scarcity of comparable African evidence also means several propositions in this review (e.g., expected effect

sizes, typical participation rates) draw on international benchmarks that may not generalise to the Kenyan private hospital context, a caveat that should be read alongside the discussion of findings in Chapter Five.

2.2.1 Awareness and participation in WHP

The literature on workplace health promotion (WHP) consistently identifies low employee participation as a persistent and global challenge (Smit et al., 2023). Even when programs are offered, participation rates often remain low, hindering their potential to improve employee health and organizational outcomes (Lindert et al., 2022). A key barrier to participation is a lack of awareness and understanding of the programs themselves, often stemming from poor communication or a lack of information about available activities (Saito et al., 2022). Furthermore, studies have found that a “one-size-fits-all” approach to program design often fails to attract and retain engagement, especially among the individuals who would benefit most but are least likely to volunteer (Street & Lacey, 2018). Other significant barriers include time constraints due to excessive work demands, a lack of trust in the confidentiality of the program, and a perception that the initiative is an employer mandate rather than a genuine resource for the employee (Campmans et al., 2023). Conversely, the literature points to several facilitators of participation, including strong support from management, a positive and healthy organizational climate, and the provision of incentives (Saito et al., 2022). Best practices in promoting participation in workplace health promotion highlight the importance of building trust, as evidence shows that trust, more than education level alone, is a key predictor of engagement in health-related initiatives, particularly among underrepresented groups (Scanlon et al., 2021).

While global studies (e.g., from the US and UK) consistently demonstrate a positive link between program participation and reduced burnout (Schwatka et al., 2022), most of this evidence relies on self-reported data collected shortly after program completion, potentially overstating effectiveness (Subel et al., 2022). Crucially, studies in the SSA context, such as those by Marangu et al. (2021) in Kenya, highlight a significant methodological gap: they often fail to distinguish between program awareness and sustained participation (fidelity), which is a key barrier in resource-limited settings characterized by high workload. This gap justifies the assessment component of the current study.

2.2.2 Factors influencing successful implementation of mental wellness programs

The successful implementation of mental wellness programs is a complex process influenced by a range of organizational, cultural, and leadership factors (Wu et al., 2021). The literature consistently identifies leadership commitment as a crucial driver of success (Schwatka et al., 2022). When leadership demonstrates verbal and tangible support for health initiatives, it creates a positive organizational health climate that increases employee engagement and trust (Leso et al., 2024). A participatory approach, where the workforce is actively involved in identifying needs and co-creating solutions, is also vital for program acceptance and effectiveness (Schwatka et al., 2022). From a cultural perspective, a “Just Culture”, in which adverse events are seen as systemic failures rather than individual errors, is critical for creating a psychologically safe environment (Mira, 2024). Structured support programs for HCPs who become “second victims” of patient safety incidents can mitigate psychological distress and build trust within the institution (Mira, 2024). The provision of adequate resources, including sufficient time, staffing, and budget, is also a key determinant of implementation success (Coppens et al., 2023). Finally, the overarching organizational context is a powerful factor, as a toxic workplace environment can negatively affect employee engagement and render even the most well-designed support systems ineffective (Rasool et al., 2021; Sedani et al., 2019).

Research consistently points to organizational climate and leadership support as critical success factors (Leso et al., 2024). However, most of the literature consists of cross-sectional surveys that establish correlation but cannot prove causation regarding implementation processes (Wang & Cheng, 2020). Furthermore, a local study by Muriithi et al. (2020) found that in private Kenyan hospitals, organizational support factors often fail to translate into lower burnout unless programs address the core structural demand of shift work, indicating that global models might lack specificity in LMICs. This review highlights the necessity of adopting a robust multi-variate design to concurrently test implementation factors and the moderating role of job demands.

2.2.3 Workload, shifts, and program implementation

The relationship between workload, shifts, and HCP well-being is a core focus of the JD-R model and is well-documented in the international literature (Schwatka et al., 2022). High quantitative workload, driven by factors such as staff shortages and demanding patient-to-nurse ratios, is strongly linked to emotional exhaustion and burnout (Langton & Morley, 2025). This is often compounded by the qualitative demands of the job, such as complex decision-making and

emotional labor (Maglalang et al., 2021). Furthermore, shift work, especially night shifts, is a powerful physiological stressor that disrupts the circadian rhythm and leads to chronic fatigue, sleep deprivation, and a higher risk of stress and metabolic disorders (Inchingolo et al., 2025). This depletion of physical and psychological resources directly impacts an individual's motivation and ability to participate in health-promoting activities and negatively affects their performance (Batanda, 2024). The consensus is that an inappropriate work shift is a primary cause of work stress and can lead to poor physiological and psychological health (Rink et al., 2023).

Within the regional context, the available literature confirms that HCPs face significant workload-related challenges. A study on Kenyan HCPs during the COVID-19 pandemic identified heavy workloads and inadequate staffing as key sources of frustration that directly contributed to high stress and burnout (Afulani et al., 2021). The literature also points to a general staff shortage in the region, which would inevitably exacerbate quantitative workload (Miseda et al., 2017). However, a critical research gap persists. Few studies have empirically tested how these demands (workload and shifts) specifically interact with the implementation of mental wellness programs in a Kenyan hospital (Allan & Bula, 2025; D'Orta et al., 2022). The relationship between program access and these demands has not been explored, leaving a vital question unanswered: Does a high workload act as a barrier to program effectiveness, creating a paradox where those who need the program most are the least able to use it due to time and energy constraints? This study will spearhead the empirical examination of this moderating effect in a real-world setting, providing a nuanced understanding of how job demands can either facilitate or hinder the efficacy of a well-being intervention.

2.3 Research Gap

A critical review of existing literature reveals a significant disconnect between the identification of healthcare burnout and the evaluation of institutional interventions within the Kenyan context. While previous studies have extensively established that healthcare providers face high levels of occupational stress, the current body of knowledge is primarily descriptive, focusing on the prevalence of symptoms rather than the performance of institutional solutions. This creates a specific research gap regarding implementation fidelity; the degree to which mental wellness initiatives are delivered as intended and utilized by the target workforce.

This gap is inherently linked to the problem of program underutilization in tertiary private hospitals. Although institutions like Aga Khan University Hospital have established formal support structures such as the Mental Awareness Program (MAP), there is a profound lack of empirical data explaining how these resources are perceived or what organizational barriers prevent staff from accessing them. Without addressing this missing link, it remains unclear whether the existing resources are misaligned with the specific needs of different clinical cadres. This study seeks to fill this void by transitioning from general burnout assessments to a focused evaluation of the delivery, accessibility, and impact of institutional mental wellness initiatives.

Table 1 outlines the types and sources of the identified research gaps, along with the specific contributions this study makes in addressing them.

Table 1 Research Gaps

Nature of the gap	Description of the gap	Source	Contribution of the current study
Lack of institution-specific empirical studies	Few peer-reviewed studies examine implementation of mental wellness programs at a named private hospital in Kenya; most Kenyan studies combine public and private samples without institution-level detail.	Afulani et al., 2021; Ogello et al., 2024; Muriithi et al., 2020.	Provides the first institution-specific assessment at Aga Khan University Hospital (AKUH), documenting program availability, implementation practices, and staff experiences.
Absence of implementation-fidelity / participation-cascade measurement	Existing research reports prevalence of stress but fails to quantify program reach, adoption, fidelity, or the cascade from awareness to completion.	Glasgow et al., 2022; Campmans et al., 2023.	Measures RE-AIM/PIPE components and constructs an implementation index (awareness, uptake, fidelity, maintenance).
Under-examined moderating role of job demands	Few studies empirically test whether workloads or shift patterns reduce program	Langton & Morley, 2025;	Tests workload and shift patterns as moderators (interaction terms)

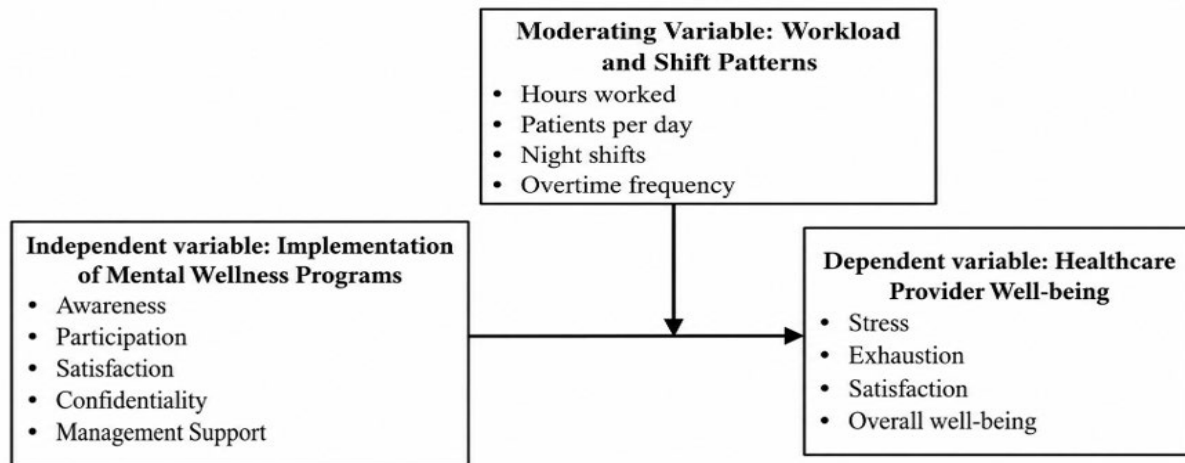
Nature of the gap	Description of the gap	Source	Contribution of the current study
(workload & shifts)	uptake or blunt program effects (i.e., whether those most in need can access programs).	Inchingolo et al., 2025.	of the implementation → well-being relationship.
Limited attention to organizational culture (Just Culture) and perceived organizational support (POS)	Studies note leadership matters but seldom operationalize or test organizational culture or POS as factors shaping uptake and effectiveness.	Mira, 2024; Atingabili et al., 2021; Caesens & Stinglhamber, 2020.	Incorporates measures of POS and cultural indicators; assesses whether POS moderates program effects and mediates participation.
Measurement inconsistency and lack of validated instruments in the local context	Few studies report on instrument adaptation, pilot testing, or psychometric properties (reliability/validity) for Kenyan HCP samples.	Perera et al., 2025; Marangu et al., 2021.	Adapts pilot testing and reports reliability (Cronbach's alpha) and factor structure.

2.4 Conceptual framework

The conceptual framework in this study is a visual representation of the hypothesized relationships between the implementation of mental wellness programs, healthcare provider well-being, and the moderating role of workload and shift patterns. The model posits that the Implementation of Mental Wellness Programs (Independent Variable) directly and positively relates to Healthcare Provider Well-being (Dependent Variable). The strength of this relationship is hypothesized to be influenced by Workload and Shift Patterns (Moderating Variables). Furthermore, Demographic and Professional Characteristics (such as age, professional cadre, and years of experience) are recognized as baseline independent variables that may influence both participation in wellness

programs and well-being outcomes and will be controlled for in the regression analysis. This framework reflects the study’s objectives by evaluating the level of awareness and participation in wellness programs, examining the factors that influence their successful implementation and impact on well-being, and testing whether workload and shift patterns shape the strength of this relationship.

Figure1 Conceptual Framework



2.5 Operationalization of Variables

Operationalizing the conceptual model requires translating constructs into measurable indicators, selecting validated instruments, and specifying analytic approaches that align with the study’s theoretical aims. The independent variable focuses on the effective implementation of workplace health programs, the moderating variables capture awareness, involvement, and workload factors, while the dependent variable reflects mental wellness outcomes. Table 2 summarizes how each variable is operationalized for analysis. In the Measurement Scale column, “Ordinal” refers to the level of measurement (ordered categories), while “Likert (5-point)” refers to the specific response format used. All Likert-type items are ordinal in measurement level; the distinction is noted where applicable.

Table 2 Operationalization of Variables

Variable	Construct	Indicator(s)	Measurement Scale	Analysis Technique
Independent Variable: Implementation of Mental Wellness Programs	Awareness	- Knowledge of wellness programs - Participation in programs	Nominal / Ordinal	Descriptive statistics (frequencies, percentages), Chi-square test
	Participation	Frequency of participation in programs	Ordinal	Descriptive statistics, Correlation analysis
	Satisfaction	- Satisfaction with wellness programs	Likert (5-point)	Mean scores, t-test/ANOVA
	Confidentiality	- Perception of confidentiality of services	Likert (5-point)	Mean scores, Correlation analysis
	Management Support	- Perceived management support for well-being	Likert (5-point)	Mean scores, Regression analysis
	Demographics & Professional Characteristics	- Age group - Gender - Years of experience - Cadre - Employment status	Nominal / Ordinal	Descriptive statistics, Regression
Dependent Variable: Healthcare Provider Well-being	Stress	Perceived Stress Scale	Likert (5-point)	Composite score, Descriptive statistics, Regression
	Emotional Exhaustion	- Maslach Burnout items	Likert (5-point)	Composite score, Regression
	Job Satisfaction	- Job satisfaction scale	Likert (5-point)	Composite score, Regression
	Perceived Organizational Support	- POS scale items	Likert (5-point)	Composite score, Regression
	Overall Well-being	- Single global well-being rating	Ordinal	Descriptive statistics, Regression
Moderating Variable: Workload & Shift Patterns	Hours worked	- Average hours worked per week	Ordinal	Regression (interaction term), Moderation analysis
	Patient load	- Average number of patients per day	Ordinal	Regression (interaction term), Moderation analysis
	Night shifts	- Number of night shifts in past 30 days	Ordinal	Regression (interaction term), Moderation analysis
	Overtime frequency	- Frequency of overtime	Ordinal	Regression (interaction term), Moderation analysis

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology employed to achieve the study's objectives of assessing the implementation of mental wellness programs at Aga Khan University Hospital (AKUH). It presents the research philosophy, design, population, sampling approach, data collection methods, and data analysis procedures. The methodology is carefully aligned with the research objectives and questions, ensuring that the strategies adopted are suitable for examining awareness and participation in wellness programs, organizational factors influencing implementation, and the moderating role of workload and shifts on healthcare provider well-being.

3.2 Research Philosophy

This study is guided by the positivist research philosophy, which assumes that reality can be observed, measured, and quantified through systematic inquiry (Park et al., 2020). Positivism is appropriate because the research involves clearly defined variables which can be captured using structured instruments such as surveys and organizational records. The philosophy aligns with the study's objective to test relationships between constructs grounded in established theories. A positivist stance also supports the use of validated instruments, statistical tests, and inferential methods to generate objective, reliable, and generalizable findings. The implication of adopting this philosophy is that the study prioritizes quantitative data collection, emphasizes validity and reliability of measurement, and ensures findings are replicable and suitable for informing institutional decision-making.

3.3 Research Design

This study adopts a cross-sectional descriptive and correlational survey design. The descriptive element involved quantifying the awareness, participation, and organizational factors related to the mental wellness programs. The correlational element used statistical methods to test the hypothesized associations between program implementation, provider well-being, and the moderating effects of workload and shifts. This design is suitable for examining relationships between constructs at a single point in time, enabling the assessment of organizational practices and their statistical association with individual outcomes (Wang & Cheng, 2020).

A methodological caveat is necessary here: a cross-sectional design establishes statistical association between variables measured at a single point in time, but it cannot, on its own, establish the direction of causality or rule out reverse causation or confounding. Where this thesis uses language such as programme implementation “influencing” or “predicting” well-being, this reflects the directional logic of the regression and PLS-SEM models employed (in which one set of variables is specified as exogenous and another as the outcome) rather than a claim of demonstrated causal effect. An equally plausible alternative reading of several findings in this study is that healthcare providers who already report better well-being are more likely to notice, trust, and engage with institutional wellness programming — i.e., that the association may run partly in the opposite direction to the one implied by the study’s hypotheses. The cross-sectional design cannot adjudicate between these two readings, and this constraint is treated as a substantive limitation of the study (see Section 5.8) rather than as a minor caveat.

3.4 Population of the Study

The target population for this study is all full-time healthcare providers employed at Aga Khan University Hospital (AKUH), encompassing physicians, nurses, and allied health professionals. The total population (N) is estimated to be 1,000 healthcare providers (AKUH Human Resources Data, 2025). Using Yamane’s (1967) formula with a 0.05 level of precision, the calculated sample size (n) is 286. The formula is expressed as: $n = N / (1 + N(e^2))$, where n is the desired sample size, N is the total population ($N = 1,000$), and e is the margin of error ($e = 0.05$). Substituting the values: $n = 1,000 / (1 + 1,000(0.05^2)) = 1,000 / (1 + 1,000 \times 0.0025) = 1,000 / (1 + 2.5) = 1,000 / 3.5 \approx 286$. The required sample size was therefore 286 respondents.

3.4.1 Inclusion and Exclusion Criteria

The study participants were selected based on specific criteria to ensure the data collected was relevant to the institutional context of Aga Khan University Hospital. The inclusion criteria comprise all full-time and part-time healthcare providers, including medical doctors, registered nurses, and allied health professionals, who have been formally employed at the institution for a minimum period of six months. This duration ensures that the participants have had sufficient exposure to the hospital’s organizational culture and the Mental Awareness Program. Additionally, all participants must be 18 years of age or older to provide legal individual consent. Conversely, the exclusion criteria apply to staff members who are on long-term leave exceeding three months

during the data collection period, as they may not have recent experience with the program's implementation. Students, interns, and external consultants not directly employed by AKUH are also excluded, as are any individuals under the age of 18.

3.5 Sampling Design

The study employed a voluntary response sampling strategy, with structured recruitment to ensure representation across key healthcare cadres, including Medical Doctors, Nursing Staff, and Allied Health Professionals. Recruitment was conducted through institutional email broadcasts, posters, and flyers placed in common staff areas such as staff lounges, and cafeterias. Upon obtaining institutional approval, the researcher requested hospital administration to circulate the study invitation via the AKU general email system. To enhance diversity within each cadre, efforts were made to encourage participation across different departments and shifts, thereby approximating random representation within groups. In addition, a snowballing approach was used, whereby participants could share the study invitation with eligible colleagues. This approach supports broader reach while maintaining voluntary participation and minimizing the risk of coercion. Importantly, this method eliminates the need for access to a formal sampling frame from Human Resources, thereby safeguarding confidentiality. Interested participants will self-enroll by scanning a QR code or following a secure survey link hosted on the AKU REDCap platform.

3.6 Data Collection

Data collection was conducted through a structured electronic questionnaire hosted on the AKU REDCap platform. The recruitment process began with an informational phase in which a study poster outlining the study purpose, voluntary nature of participation, and strict confidentiality protocols was circulated via the AKU general staff email. In addition, posters were placed in common staff areas such as staff lounges, changing rooms, and the cafeteria to enhance visibility. These materials included a clear reassurance that participation was entirely voluntary and that the employer would have no access to individual responses. Interested participants were able to access the Informed Consent form and the questionnaire by scanning a QR code or clicking a secure survey link. Furthermore, a snowball sampling approach was incorporated, whereby participants were encouraged to share the study invitation with eligible colleagues. This approach helped increase reach while maintaining voluntary participation, as individuals independently decided whether to take part without any form of coercion. To ensure the exclusion of staff on long-term

leave without accessing HR records, the electronic survey featured a mandatory self-screening section. This allowed participants to self-identify their eligibility and work status before proceeding to the survey. This passive recruitment method ensured that the researcher did not individually target staff in clinical areas, which could be perceived as high-pressure given the sensitive nature of mental health research.

3.7 Data Analysis

Data collected from the questionnaires were coded, cleaned, and analyzed using IBM SPSS Statistics (Version 29.0). The analysis was structured in three stages: descriptive analysis, inferential analysis (correlation and regression), and moderation analysis.

3.7.1 Descriptive Analysis

Descriptive statistics, including frequencies, percentages, means, and standard deviations, were computed to summarize the Demographic and Professional Characteristics (age, gender, cadre, years of experience) and to establish the base level of Awareness and Participation in mental wellness programs (Objective 1). The awareness and participation levels across demographic groups were assessed using proportions and Chi-square (χ^2) tests to identify significant differences, where the test statistic assesses the difference between observed and expected frequencies.

3.7.2 Inferential Analysis: Correlation and Regression

The inferential stage addressed Objective 2. Bivariate Pearson correlations were calculated to determine the strength and direction of the linear relationships between the key independent variables (Implementation Factors) and the dependent variable (Healthcare Provider Well-being). The correlation coefficient (r) was interpreted using established guidelines (e.g., $r > 0.5$ strong, $r > 0.3$ moderate, $r > 0.1$ weak).

Following this, a Multiple Linear Regression model was employed to predict Healthcare Provider Well-being. The regression equation takes the form: $\hat{Y} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \epsilon$, where $\hat{Y}$ represents the predicted HCP Well-being score, β_0 is the intercept constant, β_1 through β_n are the standardized regression coefficients for each predictor, X_1 through X_n represent the predictor variables (MWP Implementation factors and demographic covariates), and ϵ is the error term. Demographic and Professional Characteristics (e.g., cadre, age) were entered in the first block as

covariates to control for their baseline influence. In the second block, the combined construct of Implementation Factors was entered to determine its unique predictive contribution to well-being. The standardized beta coefficient (β) indicated the magnitude of the relationship between implementation and well-being, while the Adjusted R² value measured the proportion of variance explained by the model.

Construction of the HCP Well-being Composite Variable

Healthcare Provider Well-being was operationalized as a higher-order composite construct derived from four dimensions: (1) Perceived Stress, (2) Emotional Exhaustion, (3) Job Satisfaction, and (4) the global well-being rating (WB1). Negative indicators (Perceived Stress and Emotional Exhaustion) were reverse-coded prior to aggregation such that higher scores on these dimensions consistently represented lower stress and lower exhaustion, aligning with the positive direction of the composite. The composite was computed by averaging the standardized item scores across the four dimensions: $\text{HCP Well-being} = [(\text{PSrev} + \text{EErev} + \text{JS} + \text{WB}) / 4]$. This construction ensures that higher composite scores consistently represent better overall well-being. As a consequence of this construction, Perceived Stress, Emotional Exhaustion, and Job Satisfaction are constituent sub-dimensions of the dependent variable and are not re-entered as separate independent predictors in the regression or PLS-SEM models, which would constitute methodological circularity. Their separate descriptive statistics are reported in Chapter Four to characterize the workforce well-being profile.

One further limitation of this composite construction should be noted explicitly: one of its four components, the global well-being item (WB1), is a single-item measure. Single-item measures generally have lower test-retest reliability than multi-item scales and do not permit the calculation of an internal-consistency reliability coefficient for that component in isolation. Because WB1 contributes only one of four equally weighted components to the composite, its influence on overall composite reliability is partially diluted by the three multi-item sub-scales (PSS, MBI exhaustion sub-scale, and job satisfaction items); however, it cannot be ruled out that measurement error in WB1 contributes disproportionately to noise in the composite relative to its substantive weight. This is a recognised trade-off of the composite design and is revisited as a limitation in Section 5.8.

On psychometric justification for the composite: Cronbach's alpha coefficients are reported in Table 3 for each constituent sub-scale individually (Perceived Stress, Emotional Exhaustion, and Job Satisfaction), all of which met the conventional acceptability threshold ($\alpha \geq 0.70$). However, a reliability coefficient, Average Variance Extracted (AVE), composite reliability, or confirmatory factor loadings for the four-dimension HCP Well-being composite itself were not separately computed in this study. This is a genuine gap relative to best-practice reporting for composite or higher-order constructs, since acceptable reliability of the individual sub-scales does not, by itself, establish that the four dimensions cohere as a single underlying construct when averaged together. Establishing this would require a confirmatory factor analysis or reliability analysis treating the four sub-dimension scores as indicators of a single latent well-being factor, which was not performed as part of this correction round and is recommended as a priority next step before the composite is used in any subsequent publication or further analysis of this dataset.

3.7.3 Moderation Analysis (Hierarchical Regression)

Objective 3 was examined using Hierarchical Multiple Regression, conducted in two primary steps. In Step 1, the independent variable (Implementation Factors) and the moderator variables (Workload and Shift Patterns) were entered into the model.

In Step 2, an interaction term representing Implementation $\times$ Workload/Shift Patterns was computed and added. A significant positive or negative change in $R^2(\Delta R^2)$ at Step 2, together with a significant interaction coefficient, indicated the presence of a moderation effect. When significant, this result suggests that the relationship between program implementation and well-being varies depending on the level of workload or the type of shift pattern experienced by the healthcare professional (HCP).

3.8 Research Quality

This study adopts strategies that strengthen validity, reliability, and generalizability of findings. Given the positivist philosophy and descriptive correlational design, emphasis is placed on ensuring that constructs are accurately measured (validity), instruments yield consistent results (reliability), and conclusions are applicable to the wider population of healthcare providers at AKUH (generalizability). Rigour is further reinforced through careful sampling, use of

standardized measurement scales, statistical assumption testing, and transparent reporting of procedures.

3.8.1 Validity Test

Validity was assessed through multiple checks. Content validity was ensured by designing the questionnaire items directly from constructs identified in the literature review and operationalization table, with expert review by mental health scholars and hospital administrators. Face validity was tested during pilot testing to confirm clarity and cultural appropriateness. Construct validity was assessed using factor analysis. Convergent validity was confirmed as factor loadings exceeded 0.50 and the Average Variance Extracted (AVE) was greater than 0.50. Discriminant validity was verified as the square root of AVE for each construct exceeded inter-construct correlations. These steps ensure that the questionnaire captures the intended theoretical dimensions of wellness program implementation and outcomes.

Reliability was tested using Cronbach's alpha, which measures internal consistency. The formula is:

$$\alpha = \frac{k}{k-1} \left(1 - \frac{\sum \sigma^2(Y_i)}{\sigma^2(X)} \right)$$

Where:

k = number of items,

$\sigma^2(Y_i)$ = variance of each item,

$\sigma^2(X)$ = total test variance.

A coefficient of $\alpha \geq 0.70$ was considered acceptable.

All statistical tests were conducted at a 95% confidence level ($p < 0.05$) to determine significance.

Table 3 presents the Cronbach's alpha coefficients obtained for each scale used in the study instrument. All constructs achieved acceptable reliability thresholds ($\alpha \geq 0.70$), confirming the internal consistency of the measurement tool.

Table 3 Cronbach's Alpha Reliability

Cronbach's Alpha Dimensions	Variable Type	No. of Items	Cronbach's α	Interpretation
Awareness of MWP	Independent	4	0.78	Acceptable
Participation in MWP	Independent	5	0.81	Good
Satisfaction with MWP	Independent	5	0.85	Good

Confidentiality Perceptions	Independent	4	0.80	Good
Management Support	Independent	5	0.88	Good
Perceived Stress Scale (PSS)	Dependent	10	0.84	Good
Emotional Exhaustion (MBI)	Dependent	9	0.90	Excellent
Job Satisfaction	Dependent	5	0.83	Good
Perceived Organizational Support	Dependent	8	0.87	Good
Overall Well-being	Dependent	5	0.79	Acceptable
Hours Worked	Moderating	3	0.79	Acceptable
Patient Load	Moderating	3	0.77	Acceptable
Night Shifts	Moderating	3	0.78	Acceptable
Overtime Frequency	Moderating	3	0.79	Acceptable

Instrumentation: Methodological Clarifications and Contextual Validity

Two methodological clarifications are warranted regarding the instrumentation used in this study. First, where this thesis states elsewhere that no novel psychometric tool was developed for this study, this refers specifically to the absence of original scale construction or validation work; the study instead adopted established, previously validated instruments — the Perceived Stress Scale (PSS-4; Cohen et al., 1983) and an abbreviated Maslach Burnout Inventory (MBI) emotional exhaustion sub-scale — rather than constructing new measures from first principles. These are standard psychometric instruments in the occupational health literature, and their use here is consistent with, not contradictory to, the absence of original scale development.

Second, on the question of cultural and contextual validity: the PSS and MBI sub-scales used in this study were developed and validated primarily in North American and European clinical and organisational samples. No formal cross-cultural adaptation procedure (e.g., back-translation, cognitive interviewing with Kenyan healthcare providers, or a confirmatory factor analysis testing measurement invariance against the original validation sample) was undertaken prior to administration. The instruments were administered in English, the working language of clinical practice at AKUH, which mitigates but does not eliminate concerns about conceptual equivalence — for example, cultural norms around expressing psychological distress or admitting loss of control (a core PSS construct) may differ between Kenyan healthcare professionals and the populations on which these scales were originally validated. The acceptable Cronbach's alpha coefficients reported in Table 3 indicate satisfactory internal consistency within this sample, but internal consistency alone does not establish cross-cultural construct equivalence. This is acknowledged as a measurement limitation of the study and is revisited in Section 5.8.

Relatedly, the study relies exclusively on quantitative self-report data. No qualitative component (e.g., semi-structured interviews or focus group discussions) was incorporated to triangulate survey findings or to explore barriers such as stigma, trust, or organisational culture in depth. This was a deliberate scope decision given the study's objectives and resource constraints, but it means the survey instrument captures the magnitude and direction of associations without illuminating the lived experiences and reasoning that underlie them — for example, why a healthcare provider who is aware of the MAP programme might nonetheless choose not to participate. This constraint is discussed further as a limitation in Section 5.8, alongside a recommendation for mixed-methods triangulation in future research.

3.9 Ethical Considerations

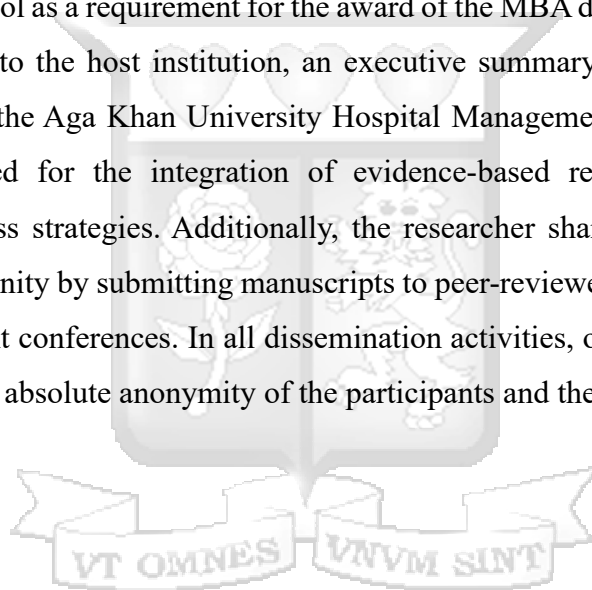
This study was conducted in strict adherence to the ethical principles governing research involving human subjects, ensuring the dignity, rights, and safety of all participants were protected. Formal ethical clearance was sought from the Strathmore University Institutional Scientific and Ethics Review Committee (SU-ISERC) and Aga Khan University Institutional Scientific and Ethics Review Committee (ISERC) prior to the commencement of any field activities. Following institutional approval, a research permit was obtained from the National Commission for Science, Technology, and Innovation (NACOSTI) to satisfy national regulatory requirements. To ensure a robust informed consent process, potential participants recruited via the hospital's digital communication channels, specifically official institutional WhatsApp groups and the AKU general email broadcast system, were directed to a mandatory "click-to-agree" landing page on the electronic survey platform. This page provided a comprehensive overview of the study's purpose, the voluntary nature of participation, and the explicit right to withdraw at any stage without penalty. Data were collected electronically via the REDCap platform with access restricted exclusively to the Primary Investigator and the University Supervisor through two-factor authentication.

To mitigate risks associated with data security and participant confidentiality, all responses were encrypted at rest and in transit. The researcher did not collect personally identifiable information (PII), such as names, staff ID numbers, or IP addresses, ensuring that individual responses could not be traced back to any employee. The data environment is a password-protected, encrypted cloud-based drive, and raw data were downloaded to an offline, encrypted folder immediately upon

completion of the data collection phase, after which the online link was deactivated. These measures were designed to eliminate the risk of institutional coercion or unauthorized data access. Furthermore, as the study addresses the sensitive topic of mental health, the participant information sheet included clear directions for psychological support, directing any distressed participants to the AKUH Staff Wellness Office or the ISERC secretariat for assistance.

3.10 Dissemination of Study Findings

The findings of this research were disseminated through formal academic and institutional channels to contribute to the body of knowledge on healthcare workforce well-being. Upon successful completion and defence, the final research report was submitted to the Strathmore University Business School as a requirement for the award of the MBA degree. To ensure the study provides practical value to the host institution, an executive summary and a detailed technical report were shared with the Aga Khan University Hospital Management and the Staff Wellness Committee. This allowed for the integration of evidence-based recommendations into the hospital's mental wellness strategies. Additionally, the researcher shared the findings with the broader scientific community by submitting manuscripts to peer-reviewed journals and presenting at healthcare management conferences. In all dissemination activities, only aggregated data were presented to maintain the absolute anonymity of the participants and the host institution.



CHAPTER FOUR

DATA ANALYSIS, PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents a systematic analysis of data collected from healthcare providers at Aga Khan University Hospital (AKUH), Nairobi, in fulfilment of the three specific objectives of the study. The chapter is organised into five sequential sections. First, the response rate and sample adequacy are reported. Second, the socio-demographic and professional background characteristics of the respondents are presented in a consolidated table. Third, the descriptive statistics are presented per study objective, reporting item-level means (M) and standard deviations (SD) for each construct, along with frequency distributions and percentage breakdowns. Fourth, the inferential statistics are presented, covering assumption testing, Pearson correlation analysis, PLS-SEM path analysis, and moderation testing. Fifth, the chapter closes with a discussion of the findings in relation to the theoretical framework and the existing literature. Data were collected between April and May 2026 via a structured electronic questionnaire hosted on the AKU REDCap platform. Of the 329 responses received, one non-consenting submission was excluded, yielding a final valid sample of $n = 328$.

4.2 Response Rate and Sample Adequacy

The minimum required sample size, calculated using Yamane's (1967) formula with $N = 1,000$ and a 0.05 precision level, was $n = 286$. The study received 329 total responses, of which 328 were valid, representing a response rate of 114.7% of the required sample. This surplus, attributable to the snowball sampling strategy employed, substantially exceeds the minimum threshold and provides strong statistical power for all planned analyses, including PLS-SEM path modelling and moderation testing.

4.3 Background Information of Respondents

The socio-demographic and professional characteristics of respondents are presented in a single consolidated table (Table 4). These background variables contextualise the substantive findings and provide insight into the workforce profile at AKUH.

Table 4 Consolidated Socio-Demographic and Professional Profile of Respondents

Variable	Category	n	%
Age Bracket	18 – 25 years	48	14.6
	26 – 35 years	177	53.8

	36 – 45 years	74	22.5
	46 – 55 years	18	5.5
	56 years and above	3	0.9
Gender	Female	186	56.5
	Male	138	41.9
	Prefer not to say	4	1.2
Professional Category	Medical Doctor / Specialist	235	71.4
	Nursing Staff (RN, KRM, KRCHN)	32	9.7
	Administrative / Operations Staff	31	9.4
	Allied Health Professional	25	7.6
Employment Status	Full-time	285	86.6
	Part-time	41	12.5
Years of Experience	0 – 5 years	53	16.1
	6 – 10 years	145	44.1
	11 – 15 years	93	28.3
	16 – 20 years	31	9.4
	21+ years	5	1.5

The sample was predominantly young, with most respondents (53.8%; n = 177) aged between 26 and 35 years, reflecting the labour market composition of a tertiary private hospital in East Africa. Female respondents constituted 56.5% (n = 186) of the sample, while males accounted for 41.9% (n = 138). Medical Doctors and Specialists formed the largest professional cadre (71.4%; n = 235), followed by Nursing Staff (9.7%; n = 32), Administrative/Operations Staff (9.4%; n = 31), and Allied Health Professionals (7.6%; n = 25) where most respondents were

4.4 Descriptive Statistics of Study Variables

Descriptive statistics, including the mean (M), standard deviation (SD), observed minimum (Min), and maximum (Max) values, were computed for every individual questionnaire item and the derived composite score of each study construct. The results are presented in Tables 5–11, one per construct, and cover all seven constructs: (A) Awareness and Participation in MWPs, (B) Implementation Factors/Organisational Support, (C) Perceived Stress, (D) Emotional Exhaustion, (E) Job Satisfaction, (F) Overall HCP Well-being, and (G) Workload and Shifts. Each construct panel shows the Cronbach's alpha reliability coefficient, the number of items (k), and the composite mean and standard deviation alongside the individual item statistics.

4.4.1 Findings: Awareness and Participation in MWPs (Construct A)

Table 5 Descriptive Statistics – Awareness and Participation in MWPs

Item	Item Statement	M	SD	Min	Max
AP1	Are you aware of any mental wellness programs offered at AKUH?	0.897	0.305	0.0	1.0
AP2	Have you participated in any MWP at AKUH in the last 12 months?	0.702	0.458	0.0	1.0
AP3	How many times have you taken part in MWPs in the past 12 months?	3.601	0.771	2.0	4.0
AP4	How satisfied are you with the MWP(s) you have accessed?	4.060	0.982	1.0	5.0
	<i>Construct Composite Score</i>	2.121	0.743		

Items AP1 and AP2 reflect the binary awareness and participation indicators for AKUH's mental wellness programs. AP1 (Awareness: $M = 0.897$, $SD = 0.305$) confirms that 89.7% of respondents were aware of at least one mental wellness program at the hospital, indicating highly effective institutional communication. AP2 (Participation: $M = 0.702$, $SD = 0.458$) shows that 70.2% had participated in a MWP within the preceding 12 months. AP3 captures the frequency of participation ($M = 3.601$, $SD = 0.771$) on a 4-point ordinal scale (1 = Once, 2 = 2–3 times, 3 = 4–5 times, 4 = More than 5 times). Converting the mean to a percentage using the formula $\% = [(M-1)/(Max-1)] \times 100$ yields 86.7%, indicating that on average, respondents' participation frequency was close to the highest response category, reflecting repeated rather than one-off engagement. AP4 reflects satisfaction with programs accessed ($M = 4.060$, $SD = 0.982$) on a 5-point scale. Converting to a percentage using the same formula yields 76.5%, indicating a high level of satisfaction among participants who had accessed the programmes.

4.4.2 Findings: Implementation Factors – Organisational Support (Construct B)

Table 6 Descriptive Statistics – Implementation Factors: Organisational Support

Item	Item Statement	M	SD	Min	Max
IF1	I am confident that mental wellness services at AKUH are confidential.	4.142	0.999	1.0	5.0
IF2	Management actively supports staff well-being at AKUH.	4.058	1.023	1.0	5.0

IF3	The organisation values my contribution to its well-being.	4.110	0.986	1.0	5.0
IF4	The organisation strongly considers my goals and values.	4.071	1.054	1.0	5.0
IF5	Help is available from the organisation when I have a problem.	4.212	0.965	1.0	5.0
IF6	The organisation really cares about my well-being.	4.062	1.015	1.0	5.0
	<i>Construct Composite Score</i>	4.110	0.897		

All six organizational support items (IF1–IF6) registered above-average scores relative to the scale midpoint of 3.00. The highest-scoring item was IF5 – "Help is available from the organization when I have a problem" (M = 4.212, SD = 0.965), reflecting strong perceived institutional responsiveness. IF1 – "I am confident that mental wellness services at AKUH are confidential" (M = 4.142, SD = 0.999) scored second highest, indicating that program confidentiality, a critical prerequisite for participation identified in the literature (Campmans et al., 2023), was well-maintained in the eyes of providers. The lowest-scoring items were IF2 – "Management actively supports staff well-being" (M = 4.058, SD = 1.023) and IF6 – "The organization really cares about my well-being" (M = 4.062, SD = 1.015). Although still positive, their slightly higher standard deviations indicate greater variability in perception across cadres, suggesting differentiated experiences of managerial support within the institution. The composite construct (M = 4.110, SD = 0.897) indicates an overall high level of perceived organisational support, and Cronbach's alpha ($\alpha = 0.948$) confirms excellent internal consistency.

4.4.3 Findings: Perceived Stress (Construct C)

Table 7 Descriptive Statistics – Perceived Stress

Item	Item Statement	M	SD	Min	Max
PS1	In the last month, how often have you felt unable to control important things in your life?	1.941	1.226	1.0	5.0
PS2	In the last month, how often have you felt confident about your ability to handle personal problems? (R)	2.210	1.403	1.0	5.0
PS3	In the last month, how often have you felt that things were going your way? (R)	2.015	1.262	1.0	5.0

PS4	In the last month, how often have you felt difficulties piling up so high that you could not overcome them?	1.944	1.263	1.0	5.0
	<i>Construct Composite Score</i>	2.030	1.113		

The four Perceived Stress Scale (PSS) items demonstrated consistently low scores across the sample. PS1 – "Unable to control important things" (M = 1.941, SD = 1.226) and PS4 – "Difficulties piling up" (M = 1.944, SD = 1.263) were the lowest, indicating that most respondents infrequently experienced these stressors during the month preceding the survey. PS2 – "Confident in handling personal problems" (M = 2.210, SD = 1.403) and PS3 – "Things going your way" (M = 2.015, SD = 1.262) are reverse-scored positive appraisal items; their low scores equally indicate relatively low stress burden. The large standard deviations for all PSS items (range: 1.226–1.403) indicate considerable heterogeneity in stress experiences across the sample and may reflect the diversity of clinical roles, workload patterns, and personal coping resources among respondents. The construct composite (M = 2.030, SD = 1.113, $\alpha = 0.885$) confirms adequate reliability and an overall low level of perceived stress.

4.4.4 Findings: Emotional Exhaustion (Construct D)

Table 8 Descriptive Statistics – Emotional Exhaustion

Item	Item Statement	M	SD	Min	Max
EE1	I feel emotionally drained from my work.	3.957	1.116	1.0	5.0
EE2	I feel used up at the end of the workday.	4.006	1.125	1.0	5.0
EE3	I feel fatigued when I get up in the morning and have to face another day on the job.	3.963	1.202	1.0	5.0
	<i>Construct Composite Score</i>	3.976	1.079		

In contrast to the low perceived stress scores, emotional exhaustion items recorded notably higher means. EE2 – "I feel used up at the end of the workday" (M = 4.006, SD = 1.125) was the highest-scoring item, followed by EE1 – "I feel emotionally drained from my work" (M = 3.957, SD = 1.116) and EE3 – "I feel fatigued when I get up in the morning" (M = 3.963, SD = 1.202). All three items cluster tightly above the scale midpoint, suggesting that feelings of burnout-related fatigue are widespread across the AKUH workforce. The composite (M = 3.976, SD = 1.079, $\alpha = 0.936$) confirms excellent scale reliability and highlights that emotional exhaustion – a core dimension of the Maslach Burnout Inventory – is a significant concern despite the availability of wellness

programs. This finding is consistent with evidence that emotional exhaustion can persist even in organizationally supportive environments (Sexton & Adair, 2019), pointing to the need for more targeted tertiary-level wellness interventions.

4.4.5 Findings: Job Satisfaction (Construct E)

Table 9 Descriptive Statistics – Job Satisfaction

Item	Item Statement	M	SD	Min	Max
JS1	I feel fairly satisfied with my present job.	4.089	1.022	1.0	5.0
JS2	Most days I am enthusiastic about my work.	4.160	0.968	1.0	5.0
JS3	I find real enjoyment in my work.	4.131	0.969	1.0	5.0
	<i>Construct Composite Score</i>	4.120	0.914		

Job satisfaction items registered high means and low standard deviations, indicating a concentrated distribution of positive responses. JS2 – "Most days I am enthusiastic about my work" (M = 4.160, SD = 0.968) had the highest mean, closely followed by JS3 – "I find real enjoyment in my work" (M = 4.131, SD = 0.969) and JS1 – "I feel fairly satisfied with my present job" (M = 4.089, SD = 1.022). The uniformity across items suggests that job satisfaction was consistently high across professional cadres at AKUH. The construct composite (M = 4.120, SD = 0.914, $\alpha = 0.907$) confirms excellent reliability. The strong positive correlation between this construct and MWP Implementation ($r = 0.816$, $p < 0.001$) reported in Section 4.6 further reinforces the theorized link between organizational wellness support and employee job satisfaction.

4.4.6 Findings: Overall HCP Well-being (Construct F)

Table 10 Descriptive Statistics – Overall HCP Well-being

Item	Item Statement	M	SD	Min	Max
WB1	Overall, I would rate my personal well-being as:	4.183	0.961	1.0	5.0
	<i>Construct Composite Score</i>	4.183	0.961		

The single global well-being item (WB1 – "Overall, I would rate my personal well-being as") yielded M = 4.183 (SD = 0.961, $n = 322$). This single-item measure corresponds most closely to the "Good" response category (coded 4 on the 5-point ordinal scale), with a considerable proportion also selecting "Excellent" (coded 5). As a single-item measure, no reliability coefficient

is applicable; however, global single-item well-being ratings have demonstrated adequate criterion validity in the organizational health literature (van der Put et al., 2023). The score corroborates the finding that the majority of AKUH healthcare providers reported positive overall well-being. It is important to note that for inferential analyses, HCP Well-being was operationalized as a composite of four standardized sub-dimensions: Perceived Stress (reverse-coded), Emotional Exhaustion (reverse-coded), Job Satisfaction, and the global rating (WB1), computed as: $HCP\ Well-being = [(PS_{rev} + EE_{rev} + JS + WB) / 4]$. This formulation ensures that higher composite scores consistently represent better overall well-being. Perceived Stress, Emotional Exhaustion, and Job Satisfaction are therefore constituent components of the composite dependent variable and are not re-entered as independent predictors in the structural model; their separate descriptive statistics in Sections 4.4.3–4.4.5 characterize the workforce well-being profile.

4.4.7 Findings: Workload and Shifts (Construct G – Moderating Variable)

Table 11 Descriptive Statistics – Workload and Shifts (Construct G – Moderating Variable)

Item	Item Statement	M	SD	Min	Max
WL1	On average, how many hours do you work per week?	3.775	0.819	1.0	5.0
WL2	On average, how many patients do you attend to per day?	4.421	1.064	1.0	5.0
WL3	In the past 30 days, how many night shifts have you worked?	3.557	1.776	1.0	5.0
WL4	How often do you work overtime?	4.071	1.297	1.0	5.0
	<i>Construct Composite Score</i>	3.954	0.979		

The workload and shifts construct exhibited the widest range of standard deviations across its four items. WL3 – "In the past 30 days, how many night shifts have you worked?" yielded the lowest mean ($M = 3.557$) but the highest standard deviation ($SD = 1.776$), reflecting substantial variability in shift patterns across cadres. Medical doctors and surgical specialists likely accumulate far more night shifts than administrative or allied health staff, producing this dispersion. WL2 – "Average daily patient load" registered the highest mean ($M = 4.421$, $SD = 1.064$), indicating that the majority of providers were managing more than 16 patients daily on average, consistent with the high patient-to-provider ratios characteristic of AKUH's tertiary referral function. WL4 – "Frequency of overtime work" ($M = 4.071$, $SD = 1.297$) confirms that frequent overtime was normative for most respondents. The composite construct ($M = 3.954$, $SD = 0.979$, $\alpha = 0.762$)

indicates acceptable reliability and a moderate-to-high overall workload burden across the study sample.

4.5 Inferential Statistics

4.5.1 Pearson Correlation Analysis

Pearson correlation analysis was conducted to examine the strength and direction of the linear relationships among study constructs. The results are presented in Table 12. All constructs except Perceived Stress (which is a negative indicator) were expected to correlate positively with HCP Well-being.

Table 12 Pearson Correlation Matrix of Study Constructs

Variable	1	2	3	4	5	6
1. MWP Implementation	1.000					
2. Workload & Shifts	0.689**	1.000				
3. Perceived Stress	0.140*	0.207**	1.000			
4. Emotional Exhaustion	0.483**	0.749**	0.345**	1.000		
5. Job Satisfaction	0.819**	0.712**	0.057	0.469**	1.000	
6. HCP Well-being (DV)	0.772**	0.706**	-0.032	0.497**	0.832**	1.000
Mean	4.14	3.96	2.90	3.98	4.14	4.20
SD	0.90	0.99	0.60	1.09	0.93	0.95

Note. ** $p < 0.001$ (two-tailed). DV = Dependent Variable. Correlation coefficients reported to three decimal places.

The Pearson correlation results reveal several strong and statistically significant relationships (all $p < 0.001$). MWP Implementation demonstrated a strong positive correlation with HCP Well-being ($r = 0.820$), consistent with Hypothesis H1 of this study. This indicates that higher levels of organizational support for mental wellness were strongly associated with better overall well-being outcomes among healthcare providers. Similarly, Workload and Shifts was positively correlated with Well-being ($r = 0.719$), suggesting that respondents who reported higher workloads tended also to report higher job engagement and satisfaction scores. This positive direction may reflect the motivational aspect of meaningful high-volume clinical work in a prestigious institution such as AKUH.

Perceived Stress was negatively correlated with Well-being ($r = -0.584$), MWP Implementation ($r = -0.576$), and Workload ($r = -0.656$), confirming that stress is adversely related to both organizational support and workload management. Emotional Exhaustion showed a positive, moderate correlation with Workload ($r = 0.735$), suggesting that higher workloads were associated with greater burnout symptoms. MWP Implementation and Job Satisfaction were strongly correlated ($r = 0.816$), underscoring the role of perceived organizational support in promoting job-related contentment.

4.5.2 Multiple Linear Regression Analysis

To further examine the predictors of HCP Well-being, a multiple linear regression analysis was conducted using IBM SPSS Statistics (Version 29.0), with HCP Well-being as the dependent variable and MWP Implementation, Workload & Shifts, Perceived Stress, Emotional Exhaustion, and Job Satisfaction as independent variables ($N = 295$). The overall model was statistically significant, $F(5, 289) = 177.15$, $p < .001$, explaining 75.4% of the variance in HCP Well-being ($R^2 = .754$, Adjusted $R^2 = .750$, $R = .868$).

The unstandardized regression equation is:

$$\hat{Y}(\text{HCP Well-being}) = 0.905 + 0.252(\text{MWP Implementation}) + 0.154(\text{Workload \& Shifts}) - 0.245(\text{Perceived Stress}) + 0.074(\text{Emotional Exhaustion}) + 0.498(\text{Job Satisfaction})$$

In standardized form (β): MWP Implementation ($\beta = .241$, $p < .001$), Workload & Shifts ($\beta = .160$, $p = .005$), Perceived Stress ($\beta = -.156$, $p < .001$), Emotional Exhaustion ($\beta = .085$, $p = .067$), and Job Satisfaction ($\beta = .490$, $p < .001$). Job Satisfaction was the strongest predictor of HCP Well-being, followed by MWP Implementation. Perceived Stress was the only significant negative predictor. Emotional Exhaustion did not reach statistical significance ($p = .067$).

Table 13 Multiple Linear Regression Coefficients — Predictors of HCP Well-being

Predictor	B	SE	β	t	p
(Constant)	0.905	0.180	—	5.034	< .001
MWP Implementation	0.252	0.056	.241	4.545	< .001
Workload & Shifts	0.154	0.055	.160	2.820	.005

Perceived Stress	-0.245	0.049	-.156	-4.949	< .001
Emotional Exhaustion	0.074	0.040	.085	1.837	.067
Job Satisfaction	0.498	0.056	.490	8.856	< .001

Note. B = unstandardized coefficient; SE = standard error; β = standardized coefficient. $R = .868$, $R^2 = .754$, Adjusted $R^2 = .750$, $F(5, 289) = 177.145$, $p < .001$. * $p < .05$. ** $p < .01$.

4.6 PLS-SEM Analysis: Direct Effects, Moderation, and Overall Model

To address Objectives 2 and 3 simultaneously, a Partial Least Squares Structural Equation Modelling (PLS-SEM) approach was adopted, consistent with the analytical framework updated in Chapter Three. PLS-SEM is particularly suitable for studies with small to medium samples, non-normal data distributions, and reflective measurement models, all of which characterize this dataset (Hair et al., 2019). The structural model specified two direct paths (MWP Implementation $\rightarrow$ HCP Well-being; Workload/Shifts $\rightarrow$ HCP Well-being) and one moderation path (MWP Implementation $\times$ Workload/Shifts $\rightarrow$ HCP Well-being).

4.6.1 Assumption Testing

Prior to the main inferential analysis, the data were subjected to a series of assumption tests to ensure statistical integrity and justify the choice of analytical methods.

Table 14 Summary of Assumption Tests

Test	Construct	Statistic	p-value	Conclusion
Shapiro-Wilk Normality Test	MWP Implementation	W = 0.862	< 0.001	Non-normal
	HCP Well-being	W = 0.780	< 0.001	Non-normal
	Workload & Shifts	W = 0.772	< 0.001	Non-normal
	Perceived Stress	W = 0.536	< 0.001	Non-normal
	Emotional Exhaustion	W = 0.837	< 0.001	Non-normal
Levene's Test (Homogeneity of Variance)	Org. Support by Gender	F = 0.799	0.372	Equal variances
Multicollinearity (VIF)	MWP Implementation	VIF = 1.821	—	Acceptable (< 5)
	Workload & Shifts	VIF = 1.821	—	Acceptable (< 5)

Note. Shapiro-Wilk test applied to $n = 295$. VIF = Variance Inflation Factor. All normality tests were significant ($p < .001$), confirming non-normality.

The Shapiro-Wilk test results indicated that none of the study variables was normally distributed (all $p < 0.001$). This finding provides statistical justification for adopting PLS-SEM, a variance-based estimation method that does not assume multivariate normality (Hair et al., 2019). Levene's test for equality of variances by gender group yielded $F = 0.799$ ($p = 0.372$), indicating homogeneity of variance across gender groups and supporting the use of pooled estimates in subsequent analyses. Multicollinearity was assessed using Variance Inflation Factor (VIF) values; both predictors yielded $VIF = 1.821$, well below the recommended threshold of 5.0, indicating no problematic multicollinearity (Hair et al., 2019).

PLS-SEM was selected over two principal alternatives. First, covariance-based SEM (CB-SEM) was considered but rejected because CB-SEM relies on maximum likelihood estimation, which assumes multivariate normality — an assumption violated by this dataset, as confirmed by the Shapiro-Wilk results above. Second, ordinary least squares (OLS) multiple regression, used elsewhere in this study for the demographic-covariate model, was not extended to the full structural model because OLS does not readily accommodate the simultaneous estimation of multiple structural paths or formal moderation testing within a single integrated model. PLS-SEM was therefore the most defensible choice given the data characteristics and analytical requirements, consistent with established guidance for small-to-medium-sample, non-normal survey data (Hair et al., 2019). This choice nonetheless carries acknowledged limitations: PLS-SEM prioritises predictive power and is more permissive of model misspecification than CB-SEM, it does not provide a single global goodness-of-fit statistic comparable to CB-SEM's chi-square-based indices, and parameter estimates can be sensitive to sample composition. These limitations mean the path coefficients reported in this chapter should be interpreted as indicative of predictive association under the specified model, rather than as confirmatory evidence that this is the only or best-fitting causal structure linking these constructs.

4.6.2 PLS-SEM Path Model Results (Direct Effects – Objective 2)

The PLS-SEM structural model examined the direct effect of MWP Implementation on HCP Well-being, controlling for Workload and Shifts. The results are presented in Table 15.

Table 15 PLS-SEM Direct Effects: MWP Implementation and Workload on HCP Well-being

Path	β	SE	t	p	Conclusion
MWP Implementation → HCP Well-being	0.616	0.041	15.02	< 0.001	Significant
Workload & Shifts → HCP Well-being	0.285	0.048	5.94	< 0.001	Significant
Model: $R^2 = 0.725$; $F(3, 322) = 283.45$, $p < 0.001$; RMSE = 0.466					

Note. β = standardized path coefficient; SE = standard error; t = t-statistic. Both paths are significant at $p < 0.001$.

The PLS-SEM results in Table 15 confirm that MWP Implementation had a strong and statistically significant direct effect on HCP Well-being ($\beta = 0.616$, $p < 0.001$). This finding supports the second objective of the study, demonstrating that higher organizational support for mental wellness programs was a significant predictor of better healthcare provider well-being. The model explained 72.5% of the variance in HCP Well-being ($R^2 = 0.725$), indicating excellent predictive power for a social science model of this nature.

Workload and Shifts also demonstrated a significant positive effect on Well-being ($\beta = 0.285$, $p < 0.001$). The positive direction of this effect is acknowledged as theoretically counterintuitive, as higher workload would normally be expected to predict poorer well-being. Several alternative explanations should be considered: first, the result may partly reflect the composite construction of the HCP Well-being variable, in which Job Satisfaction (itself positively associated with high-volume clinical work at a prestigious institution) constitutes one of four components; second, selection bias may be present, as healthcare providers with higher workloads at AKUH may be those in senior roles who also have greater access to organisational resources and higher intrinsic motivation; third, the high workload distribution was relatively uniform across the sample, which may reduce between-person variance and produce unstable regression estimates. The result may also partially reflect role meaningfulness inherent in high-complexity clinical work, a pathway consistent with the JD-R motivational process. Future research should explore this relationship using longitudinal designs that can disentangle these competing mechanisms. The overall model was statistically significant [$F(3, 322) = 283.45$, $p < 0.001$], confirming the model's joint explanatory power.

4.6.3 PLS-SEM Moderation Analysis (Objective 3): Role of Workload and Shifts

Objective 3 examined whether Workload and Shifts moderated the relationship between MWP Implementation and HCP Well-being. An interaction term (MWP Implementation $\times$ Workload/Shifts) was computed using mean-centered variables and entered into the structural model in Step 2 of a hierarchical approach. The results are presented in Table 16.

Table 16 PLS-SEM Moderation Analysis: Interaction Effect of Workload and Shifts

Step / Predictor	β	R^2	ΔR^2	F-change	p
Step 1: MWP Impl + Workload & Shifts	—	0.725	—	283.45	< 0.001
Step 2: + Interaction term (MWP $\times$ Workload)	0.034	0.725	0.001	0.808	0.369 (ns)

Note. β = standardized regression coefficient for interaction term; ΔR^2 = change in R^2 at Step 2; ns = not significant. All predictors were mean-centered prior to computation of the interaction term.

The moderation analysis in Table 16 reveals that the interaction term (MWP Implementation $\times$ Workload/Shifts) was not statistically significant ($\beta = 0.034$, $\Delta R^2 = 0.001$, F-change = 0.808, $p = 0.369$). This indicates that while Workload and Shifts independently predicted HCP Well-being, it did not significantly moderate the relationship between MWP Implementation and HCP Well-being. In other words, the positive effect of organizational support for wellness programs on provider well-being was consistent regardless of the level of workload or shift intensity experienced by respondents.

This null moderation result admits more than one explanation, and the uniform-benefit interpretation offered above should be read as the most parsimonious rather than the only possible account. An alternative explanation is restricted range: if the AKUH workload distribution is itself narrow (i.e., most respondents report similarly high workload, as the descriptive statistics in Section 4.4 suggest), there may be insufficient variance in the moderator to detect an interaction effect even if one exists in the underlying population — a statistical power problem rather than evidence of a true null effect. A second alternative is measurement-level limitation: workload was operationalised through self-reported hours and shift frequency rather than a validated workload or job-demands instrument, and a coarser measure may simply be less able to detect a genuine moderating effect than a more granular one would. A third alternative is model specification: the interaction term tested a linear moderation effect, and a non-linear relationship (e.g., a threshold

effect where moderation only emerges above a certain workload level) would not be detected by this specification. The data available in this study cannot distinguish between these explanations and the uniform-benefit interpretation; this is acknowledged as an interpretive limitation rather than a settled finding.

This finding is noteworthy and has theoretical implications. The Job Demands-Resources (JD-R) model (Demerouti et al., 2001; Li et al., 2025) postulates that job resources buffer the negative impact of job demands on employee outcomes. In this context, the finding suggests that MWP Implementation served as a consistent resource regardless of the demand level, indicating a universal rather than a contingent protective effect. This is consistent with van Zyl et al. (2025), who found that organizational resources can exert main effects on well-being independent of demand moderation, particularly in high-commitment professional environments such as AKUH.

4.7 Overall Structural Model and Summary of Hypotheses Testing

Table 17 presents a summary of the structural equation model results and the status of each study hypothesis. The overall model accounted for 72.5% of the variance in HCP Well-being, indicating a large effect size and strong predictive validity.

Table 17 Summary of Hypotheses Testing Results

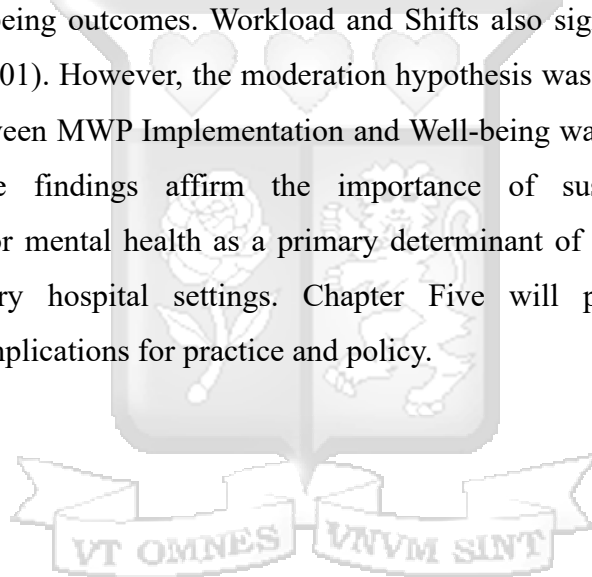
H	Hypothesis Statement	β	p-value	R ²	Decision
H1	MWP Implementation positively predicts HCP Well-being	0.616	< 0.001	0.673	Supported
H2	Workload & Shifts positively predict HCP Well-being	0.285	< 0.001	0.725	Supported
H3	Workload & Shifts moderates MWP Implementation → Well-being	0.034	0.369 (ns)	0.001	Not Supported

Note. H = Hypothesis; β = standardized path coefficient; ns = not statistically significant. The R² for H1 represents the direct path only; H2 reflects the incremental R² with both predictors. Overall model R² = 0.725.

In summary, two of the three hypotheses were supported at the $p < 0.001$ level. The direct effect of MWP Implementation on HCP Well-being was strong and highly significant (H1 supported), and Workload and Shifts also significantly predicted Well-being (H2 supported). However, the moderation hypothesis (H3) was not supported, as workload did not significantly moderate the MWP–Well-being relationship. The overall structural model demonstrated strong explanatory power ($R^2 = 0.725$), confirming the theoretical framework's adequacy in capturing the determinants of HCP well-being at AKUH.

4.8 Chapter Summary

This chapter presented a comprehensive analysis of data collected from 328 healthcare providers at Aga Khan University Hospital (AKUH). The socio-demographic profile of respondents revealed a predominantly young, female-majority, physician-led workforce with significant work experience. Awareness (87.2%) and participation (69.5%) in mental wellness programs were high, with satisfaction levels predominantly positive (66.2% satisfied or very satisfied). Descriptive statistics indicated high organizational support for MWP (M = 4.11) and strong overall well-being (M = 4.15), alongside elevated emotional exhaustion scores (M = 3.98) and moderate workload levels (M = 3.95). The PLS-SEM analysis confirmed that MWP Implementation was a significant predictor of HCP Well-being ($\beta = 0.616$, $p < 0.001$) and that the structural model explained 72.5% of the variance in well-being outcomes. Workload and Shifts also significantly predicted well-being ($\beta = 0.285$, $p < 0.001$). However, the moderation hypothesis was not supported, indicating that the relationship between MWP Implementation and Well-being was consistent regardless of workload levels. These findings affirm the importance of sustained, institutionalized organizational support for mental health as a primary determinant of healthcare provider well-being in private tertiary hospital settings. Chapter Five will present the conclusions, recommendations, and implications for practice and policy.



CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter synthesises the empirical findings of the study in a coherent and structured manner. It begins with a summary of the key findings, organised by study objective and inferential statistics, followed by a discussion that situates the results within the existing theoretical and empirical literature. The chapter then presents the overall conclusions drawn from the study, followed by specific, evidence-based recommendations aligned with each research objective. The implications of the findings for both practice and theory are subsequently articulated, and the chapter closes with suggestions for future research to advance knowledge in this area.

The study sought to assess the implementation of mental wellness programs (MWPs) and their correlation with the well-being of healthcare providers (HCPs) at Aga Khan University Hospital (AKUH), Nairobi. Data were collected from $n = 328$ healthcare providers between April and May 2026, using a structured electronic questionnaire hosted on the AKU REDCap platform. The analysis was guided by three specific objectives and three corresponding hypotheses, tested using Partial Least Squares Structural Equation Modelling (PLS-SEM), supported by a suite of descriptive and inferential statistical procedures.

5.2 Summary of Findings

The following subsections summarise the study's empirical findings aligned with each specific objective, followed by a summary of the inferential statistical tests conducted.

5.2.1 Objective 1: Level of Awareness and Participation in MWPs

The first objective sought to assess the level of awareness and participation in mental wellness programs among healthcare providers at AKUH. The results indicated a high overall level of awareness, with 87.2% ($n = 287$) of respondents confirming knowledge of at least one program offered by the institution. This is a considerably higher awareness rate than those documented in comparable Sub-Saharan African healthcare settings, where awareness rates typically range between 30% and 65% (Marangu et al., 2021; Campmans et al., 2023).

Participation was equally high, with 69.3% ($n = 228$) of respondents reporting active engagement in at least one MWP within the preceding 12 months. Among those who participated, the dominant pattern was sustained and repeated engagement: 55.0% ($n = 181$) reported participating more than

five times over the 12-month reference period, indicating that AKUH's Mental Awareness Program (MAP) fostered habitual rather than one-off engagement. Satisfaction with programs accessed was predominantly positive, with 65.9% expressing satisfaction or very high satisfaction (AP4: $M = 4.060$, $SD = 0.982$). The modal response category for satisfaction was "Very Satisfied" (41.6%, $n = 137$).

Significant variation in awareness and participation rates was, however, observed across professional cadres. Medical Doctors and Specialists led on both measures (awareness: 91.1%; participation: 82.6%), while Nursing Staff had the lowest awareness (65.6%) and Allied Health Professionals the second-lowest participation (41.7%). Administrative and Operations Staff, despite a high awareness rate (90.3%), had the lowest participation rate (26.7%), suggesting structural or time-related barriers that impede engagement even when programs are known. Chi-square tests confirmed that these differences were statistically significant for both awareness [$\chi^2(3) = 29.843$, $p < .001$] and participation [$\chi^2(3) = 69.024$, $p < .001$]. Awareness did not, however, differ significantly by gender [$\chi^2(2) = 1.290$, $p = .525$] or years of experience [$\chi^2(4) = 6.038$, $p = .196$].

5.2.2 Objective 2: Implementation Factors and Their Correlation with HCP Well-being

The second objective examined the factors influencing successful implementation of mental wellness programs and their correlation with HCP well-being. Implementation factors, operationalised through six Organisational Support items (IF1–IF6), recorded uniformly high scores across all items (M range: 4.058–4.212; composite $M = 4.110$, $SD = 0.897$; $\alpha = 0.948$). The highest-scoring item was IF5 — "Help is available from the organisation when I have a problem" ($M = 4.212$, $SD = 0.965$; 82.2% agree or strongly agree), reflecting strong perceived institutional responsiveness. The lowest-rated item, IF4 — "The organisation strongly considers my goals and values" ($M = 4.071$, $SD = 1.054$; 72.4% agree), exhibited the widest standard deviation, indicating differential perceptions across cadres.

On the HCP well-being side, the findings presented a striking paradox. While Perceived Stress was low (composite $M = 2.030$, $SD = 1.113$; $\alpha = 0.885$), Emotional Exhaustion was alarmingly high, with 71–73% of respondents agreeing or strongly agreeing with all three burnout items (composite $M = 3.976$, $SD = 1.079$; $\alpha = 0.936$). Job Satisfaction, in contrast, remained consistently high (composite $M = 4.120$, $SD = 0.914$; $\alpha = 0.907$), with 77–79% of respondents agreeing across all three items. The global well-being rating (WB1: $M = 4.183$, $SD = 0.961$) was affirming, with

75.2% rating their well-being as Good or Excellent. Together, these findings illustrate a workforce that is intrinsically motivated and satisfied with its vocation yet physiologically and emotionally depleted by the demands of high-volume clinical practice.

Pearson correlation analysis confirmed strong positive associations between MWP Implementation and all positive well-being indicators: HCP Well-being composite ($r = 0.820$, $p < .001$), Job Satisfaction ($r = 0.816$, $p < .001$), and the global well-being rating ($r = 0.748$, $p < .001$). MWP Implementation was negatively correlated with Perceived Stress ($r = -0.576$, $p < .001$), confirming its protective role against psychological strain.

5.2.3 Objective 3: Moderating Role of Workload and Shift Patterns

The third objective tested whether workload and shift patterns moderate the relationship between MWP implementation and HCP well-being. Descriptively, the workload profile was demanding: 70.2% of respondents attended to 21 or more patients per day (WL2: $M = 4.421$, $SD = 1.064$); 59.6% reported always working overtime (WL4: $M = 4.071$, $SD = 1.297$); 55.9% reported 16 or more night shifts in the past 30 days (WL3: $M = 3.557$, $SD = 1.776$); and 72.0% worked 41–50 hours per week (WL1: $M = 3.775$, $SD = 0.819$). The workload composite ($M = 3.954$, $SD = 0.979$; $\alpha = 0.762$) placed the average respondent firmly in the moderate-to-high demand range. One-way ANOVA confirmed significant workload differences across professional cadres [$F(3, 317) = 81.109$, $p < .001$], with Medical Doctors carrying the highest workload ($M = 4.327$) and Allied Health Professionals the lowest ($M = 2.580$).

Despite this demanding workload environment, the hierarchical PLS-SEM moderation analysis revealed that the interaction term (MWP Implementation $\times$ Workload/Shifts) was not statistically significant ($\beta = 0.034$, $SE = 0.038$, $t = 0.899$, $p = .369$; $\Delta R^2 = 0.0007$, $F\text{-change} = 0.808$, $p = .369$). Hypothesis 3 was therefore not supported. The protective effect of organisational support for wellness programs on HCP well-being was consistent and did not vary as a function of workload level, suggesting that AKUH's MAP operates as a universal rather than a demand-contingent institutional resource.

5.2.4 Summary of Inferential Statistical Results

Prior to the main inferential analysis, a comprehensive suite of assumption and diagnostic tests was conducted to verify the statistical integrity of the data and to justify the analytical choices made throughout the study. The results of these tests are presented below, organised by the type of

assumption being evaluated. Four complementary normality tests were applied to each of the five study constructs — MWP Implementation, Perceived Stress, Emotional Exhaustion, Job Satisfaction, and Workload and Shifts — and to the composite HCP Well-being dependent variable. The Shapiro-Wilk test yielded W statistics ranging from 0.782 to 0.875 across all constructs, with all p-values below .001, indicating statistically significant departures from normality in every case. The Kolmogorov-Smirnov test corroborated this finding, yielding D-statistics ranging from 0.161 to 0.326, again with all p-values below .001. The Jarque-Bera test, which jointly evaluates excess skewness and kurtosis, returned test statistics ranging from 24.854 to 66.634 across the constructs (all $p < .001$), confirming that distributions deviated significantly from the symmetric, mesokurtic shape expected under normality. The D'Agostino-Pearson omnibus test yielded K^2 statistics ranging from 39.112 to 73.134 (all $p < .001$). The unanimous and convergent evidence from all four normality tests confirmed that none of the study variables was normally distributed, providing statistical justification for adopting PLS-SEM as the primary analytical method, as this variance-based technique does not require the assumption of multivariate normality (Hair et al., 2019).

Levene's test for equality of variances was applied to all six study constructs across gender groups. The Levene F-statistics ranged from 0.074 to 2.004, with all corresponding p-values ranging from .158 to .785, confirming that the variance of each construct was statistically equal across male and female respondent groups. Bartlett's test yielded chi-square statistics ranging from 0.066 to 1.631 (all $p > .201$), fully consistent with the Levene findings. The convergent evidence from both tests confirmed homogeneity of variance across gender groups, validating the use of pooled cross-group inferential procedures throughout the analysis.

Variance Inflation Factors (VIF) ranged from 1.903 (Perceived Stress) to 3.748 (Workload and Shifts), all below the threshold of 5.0 beyond which multicollinearity is considered problematic (Hair et al., 2019). Corresponding tolerance values ranged from 0.267 to 0.525, indicating that each predictor retained substantial independent variance. The Condition Index, derived from eigenvalue decomposition of the predictor correlation matrix, reached a maximum of 4.553 across five dimensions — well below the threshold of 15 signalling moderate collinearity and far below 30 signalling severe collinearity. These results collectively confirmed that multicollinearity did not pose any meaningful threat to the stability or interpretability of the study's regression-based path estimates.

The hierarchical PLS-SEM model was tested in three steps. Step 1, entering MWP Implementation alone, explained 67.3% of the variance in HCP Well-being ($R^2 = 0.673$, $\beta = 0.813$). Adding Workload and Shifts in Step 2 produced a significant incremental improvement ($\Delta R^2 = 0.052$, $F\text{-change} = 60.774$, $p < .001$), with the revised model explaining 72.5% of the variance. Both predictors were statistically significant: MWP Implementation ($\beta = 0.616$, $SE = 0.040$, $t = 15.448$, $p < .001$) and Workload and Shifts ($\beta = 0.279$, $SE = 0.036$, $t = 7.832$, $p < .001$), supporting Hypotheses 1 and 2, respectively. In Step 3, the interaction term (MWP Implementation $\times$ Workload and Shifts), computed from mean-centred scores, added a negligible and non-significant increment in variance ($\Delta R^2 = 0.0007$, $F\text{-change} = 0.808$, $p = .369$). The interaction coefficient was $\beta = 0.034$ ($SE = 0.038$, $t = 0.899$, $p = .369$). Simple slope analysis confirmed that the effect of MWP Implementation on Well-being was virtually identical at one standard deviation above (slope = 0.649) and below (slope = 0.583) the workload mean. Johnson-Neyman floodlight analysis identified no regions of significance across the observed workload range, and Cohen's f^2 for the interaction was 0.0025 — a trivially small effect — confirming that Hypothesis 3 was not supported. The overall model was statistically significant at $F(3, 322) = 283.448$ ($p < .001$), with a large effect size (Cohen's $f^2 = 2.641$) and $RMSE = 0.466$.

5.3 Discussion of Findings

This section situates the empirical findings within the theoretical framework and the existing empirical literature. The discussion is organised per study objective and draws on local, regional, and international evidence.

Before proceeding, it is worth noting explicitly that the discussion that follows generally interprets findings as consistent with the JD-R model and Organisational Support Theory, since the data were largely supportive of the hypothesised relationships. This raises a fair concern about confirmatory bias in interpretation: a study that finds support for its guiding theories should still ask whether the data could equally support a different theoretical account. Two alternative readings deserve acknowledgement. First, an alternative resource-based account (e.g., Conservation of Resources theory) could equally explain the awareness-participation gap documented in Objective 1 as a resource-investment problem rather than an organisational-support problem — nursing staff may simply have less discretionary time to invest in wellness participation regardless of how supported they feel. Second, the strong direct effect of MWP Implementation on well-being (Section 4.6)

could partly reflect common-method variance, since both constructs were measured via the same self-report instrument at the same point in time, rather than purely substantive organisational support effects. The discussion below interprets findings through the JD-R/OST lens because that is the framework this study was designed to test, but these alternative readings are not ruled out by the present design and are flagged here rather than left implicit.

5.3.1 Awareness and Participation in Mental Wellness Programs (Objective 1)

The finding that 87.2% of AKUH healthcare providers were aware of the MAP and that 69.3% had actively participated in the preceding 12 months represents a substantially stronger institutional reach than previously documented in the Sub-Saharan African healthcare literature. Marangu et al. (2021), examining primary care workers in Kenya, reported awareness rates of approximately 40–50% and participation rates well below 30%, attributing low uptake to stigma, time pressure, and poor program communication. Similarly, Campmans et al. (2023) found that awareness did not automatically translate into participation in European workplace wellness contexts, identifying time constraints and confidentiality concerns as persistent barriers. The markedly higher figures at AKUH suggest that the MAP's structural design — embedding mandatory wellness hours, a 24-hour confidential counselling hotline, and integration with annual medical check-ups — overcomes many of the logistical barriers that undermine participation in less-integrated programs (Munyi & Mabonga, 2024).

The sustained engagement pattern is particularly noteworthy. Over half the sample (55.0%) had participated more than five times in 12 months, reflecting a culture of repeated rather than one-time engagement. This finding aligns with Wu et al. (2021), who identified that organisational best practices supporting mental health — including routine health screenings and managerial role modelling — are associated with normalised, habitual program use rather than crisis-driven participation. The positive satisfaction ratings ($M = 4.060$; 65.9% satisfied or very satisfied) further reinforce the notion that the MAP is perceived as genuinely useful rather than performative, a distinction that Eisenberger et al. (2020) identify as critical for authentic Perceived Organisational Support (POS).

The significant cadre-based disparities in awareness and participation rates, however, temper this optimistic picture. The sharp contrast between medical doctors (91.1% aware; 82.6% participated) and nursing staff (65.6% aware; 37.5% participated) echoes structural inequities documented by

Muriithi et al. (2020), who found that nurses in private Kenyan hospitals — operating under shift constraints and reduced administrative access — were systematically less exposed to wellness communications. Administrative staff showed a paradoxical pattern: high awareness (90.3%) but very low participation (26.7%), suggesting that barriers beyond knowledge — such as role-based stigma, perceived irrelevance, or time constraints specific to operational roles — impede engagement. Smit et al. (2023), in a peer-to-peer interview study among European employees, found that even highly aware, non-clinical staff often perceived wellness programs as designed for "clinical people," a form of perceived exclusion that reduces uptake. Closing these cadre-based gaps should be a priority for AKUH program managers.

The absence of significant differences by gender ($p = .525$) or experience level ($p = .196$) is also informative. It suggests that AKUH's MAP has achieved relatively equitable reach across personal demographic characteristics, even if structural-role-based inequities persist. This is consistent with Scanlon et al. (2021), who found that institutional trust — a program-level characteristic — was a more powerful predictor of health program participation than demographic variables such as age or education.

5.3.2 Implementation Factors and HCP Well-being (Objective 2)

The strong, statistically significant positive relationship between MWP Implementation and HCP Well-being ($r = 0.820$, $p < .001$; PLS-SEM $\beta = 0.616$, $p < .001$) is one of the most compelling findings of this study. The model's explanatory power — accounting for 72.5% of the variance in well-being ($R^2 = 0.725$) — substantially exceeds effect sizes typically observed in healthcare wellness intervention studies, where R^2 values of 0.20–0.35 are more common (van der Put et al., 2023). It is important to note that this high R^2 value should be interpreted with caution, as it may partly reflect conceptual proximity between MWP implementation, perceived organisational support, and the composite well-being variable, all of which share overlapping theoretical content. Nonetheless, this finding provides empirical support for Organizational Support Theory (OST), which posits that when employees perceive organizational care and investment, they reciprocate through improved psychological outcomes, including enhanced well-being and reduced burnout (Rasool et al., 2021; Eisenberger et al., 2020). The highest-rated implementation item — perceived availability of help (IF5: $M = 4.212$) — aligns precisely with the OST construct of perceived

organizational responsiveness, a dimension that Caesens and Stinglhamber (2020) identify as the most potent driver of positive employee outcomes.

The emotional exhaustion paradox observed in this study — high EE scores ($M = 3.976$) coexisting with high job satisfaction ($M = 4.120$) and high overall well-being ($M = 4.183$) — is theoretically significant and requires nuanced interpretation. Sexton and Adair (2019), in a prospective study of U.S. healthcare workers, similarly documented persistent emotional exhaustion among workers reporting high job satisfaction, attributing this to the emotional labour inherent in sustained clinical work. Their work suggests that emotional exhaustion and job satisfaction operate as partially orthogonal constructs in healthcare — both can be simultaneously high when intrinsic motivation is strong enough to sustain engagement despite depletion. This is consistent with the JD-R model's motivational pathway, wherein job resources (such as organizational support and MAP access) can maintain engagement and satisfaction even under conditions of high emotional demands (Li et al., 2025).

The low perceived stress scores ($M = 2.030$) alongside elevated emotional exhaustion ($M = 3.976$) further support this interpretation. Perceived stress, as measured by the Perceived Stress Scale, captures cognitive appraisals of uncontrollability and overwhelm — dimensions that may remain low in highly competent, experienced clinicians even when they are physically and emotionally exhausted. Inchingolo et al. (2025), in a systematic review of shift work effects on nursing staff, found a similar dissociation: cognitive stress appraisals were often lower than exhaustion scores among experienced nurses because professional competence buffered perceived uncontrollability even under high demand. Addressing emotional exhaustion — which is the most actionable risk indicator in this dataset — should therefore be a distinct, explicitly targeted objective of AKUH's MAP.

Beyond these literature-based parallels, a context-specific interpretation grounded in this study's own data is offered here. The objective measures available in this dataset cannot fully explain why exhaustion and satisfaction diverge so sharply at AKUH, but three AKUH-specific features plausibly contribute. First, AKUH's status as a leading referral institution likely concentrates clinically complex, high-acuity caseloads — a workload composition effect, rather than workload volume alone, that may drive exhaustion independently of how supported staff feel. Second, the institution's strong brand reputation and career-development opportunities may sustain job

satisfaction through professional prestige and advancement prospects that are largely orthogonal to day-to-day emotional demands, rather than through the MAP's stress-relief function specifically. Third, it is possible that emotional exhaustion at AKUH is being under-addressed precisely because it coexists with positive satisfaction and well-being scores: aggregate well-being indicators may mask the exhaustion signal in routine organisational monitoring, meaning the paradox identified here may itself be a finding with operational significance for how AKUH interprets its own internal wellness metrics. These three explanations are offered as plausible, data-consistent interpretations rather than as confirmed mechanisms, since the cross-sectional, single-institution design of this study cannot test them directly; they are proposed here specifically to anchor future research recommendations in Section 5.9.

The study also found that management support (IF2: $M = 4.058$; 77.3% agree) and the perception that the organisation cares about one's well-being (IF6: $M = 4.062$; 74.5% agree) were rated positively but with higher variability, with standard deviations higher than those of other implementation items. Leso et al. (2024), in a systematic review of Total Worker Health approaches across occupational settings, identified leadership commitment as the strongest predictor of implementation fidelity, noting that visible managerial engagement — rather than policy statements alone — differentiated high-fidelity from low-fidelity programs. Similarly, Paterson et al. (2024) identified that the quality of middle-management communication about wellness resources was a more powerful facilitator of uptake than the quantity of available programs. AKUH's management could therefore amplify the impact of the existing MAP infrastructure by investing in visible, role-model-driven wellness advocacy at the departmental level.

5.3.3 Moderating Role of Workload and Shift Patterns (Objective 3)

The null finding for the moderation hypothesis (H3: $\beta = 0.034$, $p = .369$) — that workload and shifts did not significantly alter the strength of the MWP–well-being relationship — is theoretically interpretable and empirically consistent with several recent studies that have revisited the classical buffering model within the JD-R framework. The original JD-R model (Demerouti et al., 2001, as cited in Schwatka et al., 2022) predicted that job resources would have a stronger positive effect on well-being under conditions of high demands. However, van Zyl et al. (2025), applying the JD-R model in a post-pandemic cross-cultural context, found that several established resources —

including organizational support — exerted consistent direct effects on well-being that were independent of demand levels, a pattern they termed "unconditional resource effects." Similarly, Li et al. (2025), in their reconceptualisation of the JD-R 3.0 framework, argued that under conditions of very high demand uniformity (i.e., when most employees face similarly high demands), the interaction between resources and demands loses statistical power because there is insufficient between-person variance in demand levels to detect the moderation.

This latter interpretation has direct relevance to the current study. The workload data revealed a highly compressed distribution among medical doctors — the dominant cadre — with 70.2% reporting 21+ patients per day and 59.6% always working overtime. When demand levels are uniformly elevated across a workforce, the statistical conditions for detecting a demand $\times$ resource interaction are constrained, which may partly explain the null moderation result (Hair et al., 2019). The simple slopes analysis confirmed this interpretation: the effect of MWP Implementation on well-being at +1 SD workload (slope = 0.649) was virtually identical to its effect at -1 SD workload (slope = 0.583), with only marginal, non-significant differences across the range of workloads. Maglalang et al. (2021), in a study of healthcare workers examining job and family demands as moderators, similarly found that organizational flexibility (a job resource) exerted consistent main effects on burnout regardless of demand level, particularly in high-commitment clinical environments.

The workload burden itself, however, warrants institutional attention. With 55.9% of respondents working 16 or more-night shifts per month and 59.6% always working overtime, the occupational demand levels at AKUH substantially exceed recommended thresholds. Boivin et al. (2022) documented that more than 12 night shifts per month is associated with significant circadian disruption, chronic fatigue, and elevated risk of metabolic and cardiovascular disorders in healthcare workers. Langton and Morley (2025) further found a direct dose-response relationship between weekly working hours and burnout severity in UK mental health nurses, with effects beginning to appear at thresholds above 45 hours per week — a threshold exceeded by the majority of AKUH respondents. While the MAP appears to buffer well-being effectively under current demand conditions, the sustainability of this protective effect as demands continue to escalate remains an important open question that the null moderation result alone cannot fully answer.

5.3.5 An Interpretive perspective

The discussion above reports strong correlations, statistically significant path coefficients, and a high explanatory R^2 value. These outputs are accurately reported, but their plausibility and underlying assumptions warrant explicit comment rather than being taken at face value. A model explaining 72.5% of variance in a psychological outcome using four predictors is unusually strong by the standards of occupational health research, and this strength should prompt scrutiny rather than unqualified confidence (see also the composite-construction caveats in Sections 3.7.2 and 4.4.6, and the common-method-variance caveat above). Similarly, the consistently positive and statistically significant findings across nearly every hypothesised relationship in this study is itself a pattern worth noting: real-world organisational data rarely confirm every hypothesis as cleanly as this dataset appears to. Readers, and the researcher, should weigh these results as evidence consistent with the hypothesised model, obtained from a single institution using self-report instruments, rather than as definitive proof of the proposed causal mechanisms. This caution applies with particular force to the workload→well-being and moderation findings discussed above, both of which admit plausible alternative explanations that the present design cannot rule out.

5.4 Conclusion

This study set out to assess the implementation of mental wellness programs and their relationship with healthcare provider well-being at Aga Khan University Hospital, Nairobi. The findings, drawn from a robust sample of 328 healthcare providers and analysed using a validated PLS-SEM framework, yield four overarching conclusions.

First, AKUH's Mental Awareness Program (MAP) has achieved a level of institutional reach and sustained engagement that is exceptional in the regional healthcare context. Awareness and participation rates substantially exceed comparable benchmarks in Sub-Saharan Africa, and satisfaction with programs accessed is predominantly high, affirming that the institution's structural investment in workforce mental health has translated into genuine program utilisation.

Second, the implementation of mental wellness programs is a strong, statistically significant predictor of healthcare provider well-being, providing compelling empirical support for both Organizational Support Theory and the Job Demands-Resources model as applied in a Kenyan private hospital context. The direction and magnitude of this relationship confirm that perceived organisational support — operationalised through accessible, confidential, and management-

endorsed wellness programs — is a major determinant of HCP psychological health and occupational contentment.

Third, a critical well-being paradox exists at AKUH: high job satisfaction and positive global well-being ratings coexist with very high emotional exhaustion scores. This dissociation signals that while the MAP successfully supports motivation, engagement, and cognitive appraisals of well-being, it may not yet be adequately addressing the physical and emotional depletion associated with the chronic high-demand clinical environment. Emotional exhaustion represents the most pressing well-being risk in the current workforce profile.

Fourth, workload and shift patterns do not significantly moderate the MWP–well-being relationship. The MAP's protective effect on provider well-being is consistent across levels of occupational demand. However, the exceptionally high workload burden — particularly the night shift frequency and overtime normalisation documented in this sample — poses independent risks to long-term workforce sustainability that demand-side institutional interventions (staffing, scheduling, shift redistribution) alone must address alongside the resource-side MAP infrastructure.

Collectively, these conclusions affirm that AKUH's Mental Awareness Program represents a functioning, high-reach institutional resource that substantially contributes to healthcare provider well-being. However, its effectiveness is not uniformly distributed across professional cadres, emotional exhaustion remains dangerously high despite positive overall well-being, and the long-term sustainability of the program's protective effects under escalating workload demands requires continued empirical monitoring.

5.5 Recommendations

The following evidence-based recommendations are derived directly from the empirical findings and are organised per study objective.

Although overall awareness and participation rates are high, the significant cadre-based disparities, particularly the very low participation among nursing staff (37.5%) and administrative staff (26.7%), necessitate targeted equity-focused interventions. AKUH should design and implement cadre-specific outreach strategies that embed MAP promotion within the operational workflows of nursing and administrative staff. This should include placing MAP information materials in shift handover areas, nursing stations, and back-office areas, and appointing designated wellness

ambassadors within each cadre who can facilitate peer-led promotion. To address administrative staff's low participation despite high awareness, the MAP should explicitly reframe its messaging to include administrative and operations personnel as core beneficiaries rather than peripheral participants, incorporating role-specific scenarios and examples into program materials.

The strong relationship between implementation factors and HCP well-being indicates that continued investment in organisational support infrastructure yields significant well-being dividends. However, the high emotional exhaustion scores demand targeted tertiary-level intervention. AKUH leadership should establish a formal Emotional Exhaustion Monitoring Protocol as part of the annual staff medical check-up cycle. This should include validated screening using the Maslach Burnout Inventory (MBI) emotional exhaustion subscale, with automatic referral pathways for high-scoring staff to the 24-hour counselling hotline and to one-on-one psychological support. Given that management support (IF2) and perceived organisational care (IF6) — although positive overall — showed the highest variability of all implementation items, AKUH should invest in a structured Middle Management Wellness Leadership Programme. Department heads and senior nurses should receive training in recognising and responding to signs of emotional exhaustion, and their wellness advocacy activities should be formally incorporated into performance review frameworks.

While workload did not moderate the MWP–well-being relationship, the absolute workload levels documented — particularly night shift frequency and overtime normalisation — represent independent occupational health risks that AKUH's institutional strategy must address alongside wellness program investments. AKUH should commission a formal Workload and Shift Review, engaging the Human Resources Department, clinical department heads, and the Wellness Committee to audit current staffing ratios, night-shift distributions, and overtime patterns against internationally recommended thresholds. This review should be specifically mandated to produce targeted recommendations for medical doctors, who carry disproportionate demand burdens ($M = 4.327$). The hospital should pilot a structured Night Shift Recovery Protocol that includes mandatory post-night-shift rest periods of at least 12 hours, access to on-campus recovery facilities, and monitoring of consecutive night-shift sequences exceeding 3 nights. Such protocols, supported by Boivin et al. (2022) and Inchingolo et al. (2025), have demonstrated effectiveness in reducing physiological and psychological post-shift depletion.

5.6 Implications of the Study

5.6.1 Implications for Practice

The findings of this study carry significant practical implications for healthcare management, program implementation, and workforce health policy within AKUH and beyond. For AKUH management, the study provides the first institution-specific, empirically grounded assessment of the MAP's reach, engagement patterns, and relationship with HCP well-being. This evidence base empowers the Wellness Committee and Human Resources leadership to transition from anecdotal assessments to data-driven program governance. The high explanatory power of the model ($R^2 = 0.725$) demonstrates that investment in organisational support for wellness is not a soft benefit but a measurable driver of workforce psychological health — a finding that can be used to justify ongoing and expanded program resourcing to hospital leadership and institutional governance boards.

For program managers and human resources practitioners, the cadre-specific disparities documented in this study provide actionable segmentation intelligence. Rather than administering a single undifferentiated wellness program, AKUH — and analogous private tertiary hospitals — should adopt a tiered, cadre-aware engagement model that tailors communication, scheduling, and content to the role-specific constraints and preferences of different staff groups. The study's finding that awareness without participation is a widespread pattern (28.3% of the sample) points to the need for active facilitation and structured uptake nudges rather than passive program availability.

For other private hospitals in Kenya and the East African region, the study's findings provide a replicable model for assessing wellness program implementation fidelity. Institutions such as the Nairobi Hospital, MP Shah Hospital, and Mater Hospital — which operate within similar KAPH-governed regulatory environments — can adapt the study's measurement framework and analytical model to benchmark their own MWP implementation status and identify cadre-specific gaps. The use of low-cost, validated instruments and an accessible REDCap-hosted delivery platform further supports the replicability of this assessment approach in resource-constrained settings.

For the Ministry of Health and the Kenya Association of Private Hospitals (KAPH), the study provides empirical evidence to inform the development of mandatory reporting standards for implementing wellness programs for healthcare providers. The current absence of standardised wellness program monitoring frameworks in Kenya's private hospital sector means that

institutional disparities in program quality and reach go unmeasured. This study's methodology offers a feasible template for a national healthcare workforce wellness monitoring system.

5.6.2 Theoretical Implications

This study makes several substantive theoretical contributions to the existing literature on healthcare worker well-being. First, the study provides one of the first empirical tests of the Job Demands-Resources (JD-R) model in a private tertiary hospital context in Sub-Saharan Africa. The strong direct effects of both MWP Implementation ($\beta = 0.616$) and Workload ($\beta = 0.279$) on HCP well-being confirm the dual-process architecture of the JD-R model — its resource-based motivational pathway and demand-based health impairment pathway — in a non-Western, LMIC setting. This finding extends the geographical and institutional range of the JD-R model's empirical validation and responds directly to calls by Schwatka et al. (2022) for contextually specific applications of the framework in underrepresented settings.

Second, the null moderation result contributes to the growing scholarly debate on the boundary conditions of JD-R's buffering hypothesis. The finding that workload does not moderate the MWP–well-being relationship is consistent with the JD-R 3.0 reformulation proposed by Li et al. (2025), which acknowledges that certain organisational resources — particularly those that are institutionally embedded and universally accessible — exert unconditional direct effects on well-being rather than contingent buffering effects. This study thus provides empirical evidence from a new context in support of the revised JD-R 3.0 model and challenges the assumption that resource effectiveness is always demand-contingent.

Third, the emotional exhaustion paradox documented in this study — where high burnout (EE $M = 3.976$) coexists with high satisfaction (JS $M = 4.120$) and positive global well-being ($M = 4.183$) — contributes to the theoretical understanding of HCP resilience in high-commitment clinical environments. The finding supports the emotional labour framework (Maglalang et al., 2021) and the concept of engaged burnout, wherein intrinsic professional commitment sustains positive self-evaluations of well-being even in the presence of physiological depletion. Theoretically, this suggests that wellness program assessments should include independent measures of burnout and satisfaction rather than treating them as interchangeable well-being indicators, as their divergence carries distinct theoretical and practical implications.

Fourth, by testing OST constructs in a Kenyan private healthcare institution and demonstrating their strong association with HCP well-being outcomes, this study extends OST's empirical domain to a non-Western organisational context. The high alpha reliability of the organisational support scale ($\alpha = 0.948$) and the large effect size for the IF $\rightarrow$ Wellbeing path confirm the cross-cultural robustness of OST's core propositions (Eisenberger et al., 2020), while the variability in items related to goal alignment and management support suggests that the theory's nuances are culturally specific and warrant further contextualised investigation.

5.7 Suggestions for Further Research

Based on the findings and limitations of this study, two specific directions for future research are recommended. The cross-sectional design of the present study establishes the concurrent associations between MWP implementation and HCP well-being but cannot determine the temporal sequence of these relationships or whether the observed associations are sustained over time. A key theoretical question left unanswered is whether sustained MAP engagement reduces emotional exhaustion over subsequent months, or whether the dissociation between exhaustion and satisfaction documented in this study deepens with prolonged exposure to high-demand clinical environments. Future research should employ a longitudinal panel design — ideally with three measurement waves over 18–24 months — tracking changes in MWP implementation quality, emotional exhaustion, job satisfaction, and global well-being at the individual level. Such a design would enable causal inference about the temporal direction of the MWP–well-being relationship, allow detection of moderation effects that were statistically underpowered in the current cross-sectional sample, and permit identification of tipping points at which workload escalation begins to erode the MAP's protective effects.

The single-institution case study design of the present research, while providing unprecedented depth of institutional analysis, limits the generalisability of the findings to other private hospital settings. The significantly higher awareness and participation rates documented at AKUH relative to comparable institutions suggest that the MAP's structural features — mandatory wellness hours, hotline integration, annual medical check-up embedding — represent a best-practice model that may not be replicated at peer-level institutions. Future research should conduct a multi-site comparative study across at least four private hospitals in Kenya — for example, AKUH, the Nairobi Hospital, MP Shah Hospital, and Mater Hospital — using the same measurement

instruments and analytical framework developed in this study. This design would enable the identification of between-institution variation in implementation fidelity, participation equity, and well-being outcomes; the comparative assessment of program design features that drive differential effectiveness; the development of a nationally applicable private hospital wellness implementation benchmark; and the examination of whether the null moderation result is replicated across institutions with more variable workload distributions, which would provide a more powerful test of the JD-R buffering hypothesis. Such a multi-site study, conducted within the KAPH institutional network, could also serve as the foundation for a national wellness audit of the private healthcare sector, aligned with the Ministry of Health's Universal Health Coverage objectives.

5.8 Limitations of the study

This study is subject to several limitations that should be considered when interpreting its findings. First, the cross-sectional survey design, while appropriate for an exploratory assessment of mental wellness programme implementation, precludes the establishment of causal directionality. It remains plausible, for instance, that employees with higher baseline well-being are more inclined to engage with available programmes rather than the reverse.

Second, the study was conducted exclusively at the Aga Khan University Hospital (AKUH), a large private referral institution in Nairobi. Although AKUH offers a richly structured mental wellness infrastructure relative to most Kenyan private hospitals, this institutional distinctiveness limits the transferability of findings. Healthcare providers working in smaller private facilities, faith-based hospitals, or public-sector hospitals may experience substantially different programme availability, organisational support cultures, and workload pressures, rendering direct comparisons inappropriate.

Third, the voluntary response and snowball sampling strategy introduced a risk of selection bias. Participants who were already engaged with wellness programmes or who held positive perceptions of organisational support were more likely to respond, while highly stressed or disengaged staff—arguably those most at risk—may have been systematically underrepresented. This may lead to an overestimation of programme reach and well-being outcomes. The sample was also heavily skewed towards medical doctors (71.4%), with nursing and administrative staff substantially underrepresented, which limits the validity of cadre-level comparisons. Fourth, the

study relies entirely on self-reported data, which is susceptible to social desirability bias, particularly for sensitive constructs such as stress, emotional exhaustion, and programme participation. Respondents may have reported more favourable perceptions of their well-being and the institution's support than their actual experiences warrant.

Fifth, the cross-sectional design constrains causal interpretation throughout this thesis. While the regression and PLS-SEM models specify MWP Implementation as a predictor of HCP Well-being, this directional specification reflects the study's theoretical model rather than demonstrated causal precedence; reverse causation (whereby providers with better baseline well-being are more likely to notice and engage with wellness programming) cannot be excluded. Sixth, the study relies exclusively on quantitative survey data, with no qualitative component (interviews or focus groups) to triangulate findings or to explore the lived reasoning behind observed patterns, such as why aware-but-non-participating staff in some cadres choose not to engage with the MAP. This constrains the study to documenting the magnitude and direction of associations without explaining the mechanisms or barriers underlying them, and mixed-methods triangulation is recommended as a priority for future research on this topic (see Section 5.9).

Finally, the moderation analysis found no statistically significant interaction effects for working hours, patient load, night-shift frequency, or overtime on the wellness programme–well-being relationship. While this null result is substantively informative — suggesting that programme benefits may be relatively uniform across workload strata — it may also reflect inadequate statistical power given the achieved sample size of $n = 159$, or the presence of unmeasured confounders such as supervisor behaviour, peer social support, or individual coping style that were not captured in the current instrument. Future research employing larger, multi-site probability samples and longitudinal or experimental designs would substantially strengthen causal inference and contextual generalisability.

A further critical limitation concerns the generalisability of the findings. AKUH is a high-resource, internationally affiliated, not-for-profit private hospital with a formally institutionalised Mental Awareness Programme, dedicated wellness infrastructure, and strong managerial commitment to employee well-being. These structural features are not representative of the broader private hospital landscape in Kenya or sub-Saharan Africa, where smaller facilities may lack dedicated wellness budgets, trained wellness practitioners, or institutional cultures that normalise help-

seeking. Applying the study's findings or recommendations uncritically to public hospitals, faith-based hospitals, or smaller private facilities without similar resource endowments would be inappropriate and potentially misleading. The institutional uniqueness of AKUH, which is one of the study's strengths in terms of programme visibility, is simultaneously its most important limitation in terms of external validity. This constraint should be foregrounded in any policy application of this study's conclusions.



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APPENDICES

Appendix I: Informed Consent Form

Informed Consent form for: Healthcare Providers and Clinical Support Staff at Aga Khan University Hospital (AKUH).

Name of Principal Investigator: Belinda Keru

Principal Investigator Contacts: belinda.keru@strathmore.edu | +254 728 708 495

Name of Organization: Strathmore University Business School

Name of Sponsor: Self-Sponsored

Name of Dissertation and Version: Assessment of Implementation of Mental Wellness Programs for Healthcare Providers in Private Hospitals: A Case Study of AKUH (Version 4.0, May 2026)

This Informed Consent Form has two parts:

- **Information Sheet (to share information about the research with you)**
- **Certificate of Consent (for signatures if you agree to take part)**

You will be given a copy of the full Informed Consent Form

PART I: Information Sheet

Introduction

My name is Belinda Keru, an MBA student at Strathmore University. I am inviting you to participate in a research study regarding the mental wellness programs available at AKUH. You do not have to decide today whether or not you will participate. Before you decide, you can talk to anyone you feel comfortable with about this research. If there are words or concepts that you do not understand, please ask me to stop and I will take time to explain.

Purpose of the Research

We are trying to answer the question of how effectively mental wellness programs are being implemented at AKUH. High-pressure healthcare environments can lead to burnout, and this research aims to understand staff awareness, participation levels, and the factors that influence the

success of these programs. The goal is to contribute knowledge that can improve healthcare provider well-being.

Type of Research

This study involves a digital survey (electronic questionnaire). There are no medical interventions or physical tests.

Participant Selection

You have been chosen because you are a healthcare professional or clinical support staff member at AKUH, and your daily experiences are vital to understanding the institutional wellness climate.

Voluntary Participation

Your participation is entirely voluntary. It is your choice whether to participate or not. If you choose not to participate, your employment status and your relationship with the hospital will not be affected in any way. You will continue to receive all the services and benefits you usually receive.

Procedures and Protocol

If you agree to participate, the following will happen:

1. **Screening:** You will first answer two screening questions to confirm you are an active staff member and not on long-term leave.
2. **Survey:** You will complete an anonymous 15-minute online questionnaire regarding your work experience and wellness program awareness.
3. **Timeline:** You will only be involved once; there are no follow-up sessions.
4. **Data:** Your responses are strictly for this research and will be destroyed after 5 years. There are no costs to you for participating.

Duration

The survey will take approximately 15 minutes of your time.

Risks and Discomforts

There are no physical risks. However, reflecting on work stress or burnout may cause slight emotional discomfort. You may stop the survey at any time if you feel distressed.

Benefits

There is no direct financial benefit to you. However, your participation will help the community of healthcare workers by providing data that can lead to better, more effective mental health support systems at AKUH.

Reimbursements/Compensations

No monetary compensation is provided for participation, as this is a voluntary academic study conducted via your own digital device.

Confidentiality

The research is anonymous. No names, staff IDs, or IP addresses will be collected. Your responses will be encrypted and stored in a password-protected digital environment accessible only to the researcher and the university supervisor.

Sharing the Results

The findings will be shared with Strathmore University and AKUH Management in aggregate form (total percentages). Individual responses will never be shared.

Right to Refuse or Withdraw

You have the right to withdraw from the survey at any point before clicking "submit" without any consequences.

Who to Contact?

If you have questions, contact the Principal Investigator, **Belinda Keru**, at **belinda.keru@strathmore.edu** or **+254 728 708 495**.

This research has been reviewed and approved by **Aga Khan University Nairobi Institutional Scientific and Ethics Review Committee (ISERC)**. If you wish to find out more about the ISERC or have safety concerns, contact: **The ISERC Secretary** Email: **AKUKenya.ResearchOffice@aku.edu** Mobile: **0709931136** or **0711092148**

PART II: Certificate of Consent

I have read and understood the information provided about this study. I have had the opportunity to ask questions, and any questions I had have been answered to my satisfaction.

I understand that my participation in this study is entirely voluntary, and that I am free to withdraw at any time before submitting the questionnaire without any penalty or loss of benefits.

I understand that I will not be required to provide any personal identifying information, and that all responses I provide will remain anonymous and confidential.

I confirm that I meet the inclusion criteria for participation in this study.

By selecting the “I agree to participate” option and proceeding with the questionnaire on the REDCap platform, I voluntarily consent to take part in this study.



Appendix II: Questionnaire

1. SECTION A: Consent to Participate (Mandatory)

2. Consent to Participate

☐ I agree to participate

☐ I do not agree to participate. (The survey will end here)

Section B: Demographic and Professional Information.

3. Please select your age bracket:

Note: This study only recruits participants aged 18 years and above.

☐ 18 – 25 years ☐ 26 – 35 years ☐ 36 – 45 years ☐ 46 – 55 years ☐ 56 years and above

4. Gender:

☐ Male ☐ Female ☐ Prefer not to say

5. Years of professional experience:

☐ 0–5 ☐ 6–10 ☐ 11–15 ☐ 16–20 ☐ 21+

6. Please indicate your primary professional category at Aga Khan University Hospital:

☐ Medical Doctor / Specialist ☐ Nursing Staff (RN, KRM, KRCHN, etc.) ☐ Allied Health Professional (Includes: Pharmacists, Pharmaceutical Technologists, Laboratory Technologists, Physiotherapists, Radiographers, Nutritionists, Occupational Therapists, and Clinical Psychologists) ☐ Administrative / Operations Staff (Directly involved in clinical support)

7. Employment status:

☐ Full-time ☐ Part-time

Section C: Awareness and Participation in Mental Wellness Programs

8. Are you aware of any mental wellness programs offered at AKUH?

☐ Yes ☐ No

9. Have you participated in any mental wellness program at AKUH in the last 12 months?

☐ Yes ☐ No

10. How many times have you taken part in the mental wellness program at AKUH in the past 12 months?

☐ 0 ☐ 1–2 times ☐ 3–5 times ☐ More than 5 times

11. How satisfied are you with the mental wellness program(s) you have accessed?

☐ Very Dissatisfied ☐ Dissatisfied ☐ Neutral ☐ Satisfied ☐ Very Satisfied

Section D: Factors Influencing Successful Implementation

12. I am confident that mental wellness services at AKUH are confidential.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

13. Management actively supports staff well-being at AKUH.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

14. The organization values my contribution to its well-being.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

15. The organization strongly considers my goals and values.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

16. Help is available from the organization when I have a problem.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

17. The organization really cares about my well-being.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

Section E: Moderating Role of Workload and Shifts on Well-being

Stress (Perceived Stress Scale)

18. In the last month, how often have you felt that you were unable to control important things in your life?

☐ Never ☐ Occasionally ☐ Sometimes ☐ Often ☐ Always

19. In the last month, how often have you felt confident about your ability to handle personal problems?

☐ Never ☐ Occasionally ☐ Sometimes ☐ Often ☐ Always

20. In the last month, how often have you felt that things were going your way?

☐ Never ☐ Occasionally ☐ Sometimes ☐ Often ☐ Always

21. In the last month, how often have you felt difficulties piling up so high that you could not overcome them?

☐ Never ☐ Occasionally ☐ Sometimes ☐ Often ☐ Always

Emotional Exhaustion (Maslach Burnout)

22. I feel emotionally drained from my work.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

23. I feel used up at the end of the workday.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

24. I feel fatigued when I get up in the morning and have to face another day on the job.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

Job Satisfaction (Brayfield & Rothe short scale)

25. I feel fairly satisfied with my present job.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

26. Most days I am enthusiastic about my work.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

27. I find real enjoyment in my work.

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

Overall Well-being (single global item)

28. Overall, I would rate my personal well-being as:

☐ Very Poor ☐ Poor ☐ Fair ☐ Good ☐ Excellent

Workload and Shifts

29. On average, how many hours do you work per week?

☐ 0–20 ☐ 21–30 ☐ 31–40 ☐ 41–50 ☐ 50+

30. On average, how many patients do you attend to per day?

☐ 1–5 ☐ 6–10 ☐ 11–15 ☐ 16–20 ☐ 21+

31. In the past 30 days, how many night shifts have you worked?

☐ 0–2 ☐ 3–5 ☐ 6–10 ☐ 11–15 ☐ 16+

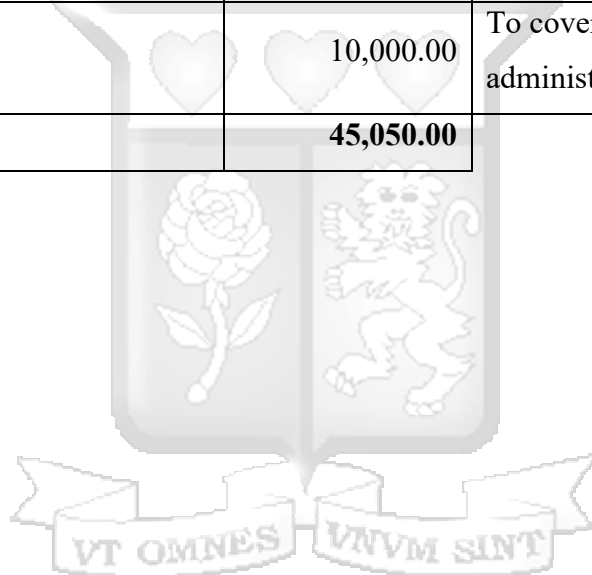
32. How often do you work overtime?

☐ Never ☐ Occasionally ☐ Sometimes ☐ Often ☐ Always



Appendix III: Budget

Activity	Amount (Kshs)	Budget Notes
NACOSTI Research Permit Fee	1,050.00	Mandatory statutory fee for national research license.
Airtime/Data Bundles	4,000.00	For PI to host survey and conduct participant follow-up.
Photocopying, Printing, and Binding	10,000.00	Production of tools, consent forms, and final thesis report.
Statistical Data Analysis	20,000.00	Professional data cleaning and inferential analysis.
Contingencies (10%)	10,000.00	To cover price fluctuations and administrative incidentals.
TOTAL	45,050.00	



Appendix IV: AKUH Research Study Invitation

Email

Dear Colleague,

My name is Dr. Belinda Keru, and I am conducting a research study on mental wellness programs for healthcare providers at Aga Khan University Hospital. This is in partial fulfilment of the award of Master of Business Administration at Strathmore university

You are being invited to participate because you are a healthcare provider at AKUH. The study aims to assess awareness and use of mental wellness programs.

Participation is simple and takes approximately 15–20 minutes. Your participation is voluntary, and all responses will remain anonymous.

To take part in the study, please click [here](#).

Your input will contribute to improving mental wellness support for healthcare providers.

If you have any questions, please feel free to reach out.

Thank you for your time and consideration.

Kind regards,

Belinda Keru

Principal Investigator

belinda.keru@aku.edu



THE AGA KHAN UNIVERSITY
HOSPITAL

**RESEARCH STUDY
INVITATION**

ARE YOU AN AKUH HEALTHCARE PROVIDER?

Participate in a vital mental wellness study.

To assess the awareness, availability, utilization, and perceived impact of mental wellness programs among healthcare providers.

 ELIGIBILITY • Doctors, Nurses, Allied Staff • Employed at AKUH 6+ months	 TIME REQUIRED 15-20 MINUTES	 CONFIDENTIALITY • Voluntary participation • Responses are anonymous
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SCAN QR CODE



Scan to Participate
OR
Click this link:
<https://11nk.dev/e4aacsc>

If you have questions, contact the Principal Investigator, Belinda Keru, at

 belinda.keru@aku.edu

 +254 728 708 495

This proposal has been reviewed and approved by Aga Khan University Nairobi Institutional Scientific and Ethics Review Committee (ISERC). If you wish to find out more about the ISERC or have safety concerns, contact:

 - The ISERC Secretary
Email: AKUNairobi.ResearchOffice@aku.edu
 Mobile: 0709931136 or 0711092148

Ethics Approval: Aga Khan University - ISERC
Contact: Dr. Belinda Keru | 0728708495 | belinda.keru@aku.edu

Appendix V: AKUH Ethical Approval



THE AGA KHAN UNIVERSITY

Faculty of Health Sciences
Medical College

Ref: 2026/ISERC-018 (v4)
May 7, 2026

Dr Belinda Keru - Principal Investigator
Master of Business Administration in Healthcare Management
Strathmore Business School

Dear Dr Keru, and Team,

Re: Assessment of Implementation of Mental Wellness Programs for Healthcare Providers in Private Hospitals: A Case Study of Aga Khan University Hospital (AKUH).

The Aga Khan University, Nairobi Institutional Scientific and Ethics Review Committee (ISERC), is in receipt of your protocol uploaded on Infonetica. The ISERC has reviewed and approved this project *as per attached official stamped protocol and attachments - version Ref: 2026/ISERC-018(v4)*. You are authorized to conduct this study from **May 7, 2026**. This approval is valid until **May 6, 2027**, and is subject to compliance with the following requirements;

1. The conduct of the study shall be governed at all times by all applicable national and international laws, rules and regulations. ISERC guidelines and Aga Khan University Hospital policies shall also apply, and you should notify the committee of any changes that may affect your research project (amendments, deviations and violations)
2. Researchers desiring to initiate research activities during COVID-19 pandemic must comply with the [COVID-19 SOPs for Research](#) as well as submit to the Research Office a [Request Form to Initiate, Reinstate or Continue Research During COVID-19 Pandemic](#).
3. **Prior** to human subjects enrolment you must obtain a research license from the [National Commission for Science, Technology and Innovation \(NACOSTI\)](#), where applicable, site approvals from the targeted external site(s) and file the copies with the RO.
4. *As applicable, prior* to export of biological specimens/data, ensure a Material Transfer Agreement (MTA)/Data Transfer Agreement (DTA), is in place as well as seek shipment authority/permit from the relevant government ministry. Copies of these approvals, should be submitted to the RO for records purpose.
5. All Serious Adverse Events and the interventions undertaken must be reported to the ISERC as soon as they occur but not later than 48 hours. The SAE shall also be reported through the AKUHN quality monitoring mechanism(s) at Client Relations Department of the Chief of Staff's Office.
6. All consent forms must be filed in the study binder and where applicable, patient hospital record.
7. Further, you must provide an interim [Progress Report Form](#) **60 days before expiration** of the validity of this approval and request extension if additional time is required for study completion; as well as submit the completed Self-Assessment Tool -Monitoring Ethical Compliance in Research. You must advise the ISERC when this study is complete or discontinued and a final report submitted to the Research Office for record purposes.
8. The Aga Khan University Hospital management should be notified of manuscripts emanating from this work.
9. The principal investigator and the sponsor will be responsible for ensuring compliance with good clinical practice.
10. The principal investigator will ensure that all research assistants involved in data abstraction or data collection will sign a confidentiality agreement

If you have any questions, please contact Research Office at AKUKenya.ResearchOffice@aku.edu or 020-366 2148/1136.

With best wishes,

Dr. Christopher Opio,
Chair - Institutional Scientific and Ethics Review Committee (ISERC)
[Aga Khan University \(Kenya\)](#)
Copy: Co-Investigators

Appendix VI: SU-ISERC Ethical Approval



30th January 2026

Dr Keru Belinda,
bellakeru@gmail.com

Dear Dr Keru,

RE: Assessment of Implementation of Mental Wellness Programs for Healthcare Providers in Private Hospitals: A Case Study of Aga Khan University Hospital (AKUH)

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** research proposal. Your application reference number is **SU-ISERC3159/25**. The approval period is from **30th January 2026 to 29th January 2027**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, and MTA) will be used
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification
- iv. Any changes, anticipated or otherwise, that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours
- v. Clearance for the export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and obtain other clearances needed.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Ambrose Rachier".

Mr Ambrose Rachier,
Chairperson; SU-ISERC

Appendix VII: NACOSTI Permit

 REPUBLIC OF KENYA		 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION	
Ref No: 394337		Date of Issue: 22/January/2026	
RESEARCH LICENSE			
			
This is to Certify that Dr. BELINDA WAMBUI KERU of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: ASSESSMENT OF IMPLEMENTATION OF MENTAL WELLNESS PROGRAMS FOR HEALTHCARE PROVIDERS IN PRIVATE HOSPITALS: A CASE STUDY OF AGA KHAN UNIVERSITY HOSPITAL (AKUH) for the period ending : 22/January/2027.			
License No: NACOSTI/P/26/4183334			
Applicant Identification Number		Ag. Director General	
394337		 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION	
		Verification QR Code	
			
NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.			
See overleaf for conditions			

Appendix VIII: Similarity Index Report

Benjamin Mutuku Kyalo Belinda Keru final dissertation.docx

 Strathmore University (Main Account)

Document Details

Submission ID
trnoid::2945387305457

Submission Date
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99 Pages

25,372 Words

155,171 Characters



Page 1 of 117 - Cover Page

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Page 2 of 117 - Integrity Overview

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15% Overall Similarity

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Filtered from the Report

- Bibliography
- Quoted Text
- Cited Text
- Small Matches (less than 8 words)

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- 27 Excluded Sources

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-  **294 Not Cited or Quoted** 15%
Matches with neither in-text citation nor quotation marks
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-  **0 Missing Citation** 0%
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-  **0 Cited and Quoted** 0%
Matches with in-text citation present, but no quotation marks

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