

**Enhancing Employee Retention in the Healthcare Sector: Evidenced Based Strategies from  
the Literature and The Usage of a Psychological Debriefing Session Intervention**

By

Amir Ali Aghili Dehkordi

Supervised by

Dr. Travor C. Brown

A thesis submitted to the  
School of Graduate Studies  
in partial fulfilment of the  
requirements for the degree of

Master of Science in Management (Organizational Behavior/Human Resources Specialization)

**Faculty of Business Administration**

Memorial University of Newfoundland

**May 2025**

St. John's

Newfoundland

## **Abstract**

Employee retention is a critical issue for global healthcare organizations, especially given increasing turnover and declining job satisfaction. This two-part thesis explores strategies for enhancing employee retention within the healthcare sector. In part one I present a comprehensive retention plan informed by scholarly literature, emphasizing strategies such as organizational culture change, employee engagement, and professional development. In part two I investigate the potential of a psychological debriefing session on improving perceived organizational support and self-efficacy while reducing burnout and intention to leave among medical laboratory professionals. Using a one-group pretest-posttest design, I used variables such as workload, burnout, and self-efficacy. Although a small sample size limits the ability to draw definitive conclusions, the study contributes to the literature by applying the Job Demands-Resources (JD-R) model and underscores the importance of targeted interventions to address workload-related stressors and improve retention.

Keywords: employee retention, healthcare, psychological debriefing, perceived organizational support, burnout, Job Demands-Resources (JD-R) model, medical laboratory professionals

## **Acknowledgements**

This thesis would not have been possible without the guidance, support, and encouragement of many people, to whom I am deeply grateful. First and foremost, I would like to express my sincere gratitude to my thesis supervisor, Dr. Trevor Brown, for their invaluable guidance, expertise, and patience throughout this journey. Their constructive feedback and unwavering support have been instrumental in shaping this research.

I would also like to extend my sincere thanks to Memorial University of Newfoundland for providing the resources and academic environment that made this research possible. I would also like to acknowledge the healthcare professionals who participated in this study. Without their contributions, this research would not have been possible.

I would like to express my appreciation to the members of the healthcare authority involved in this study for their valuable insights and support. While I must keep their identities and the organization confidential, their contributions were crucial to the success of this research.

I am immensely thankful to my family and friends for their constant encouragement, understanding, and love. Your support has been a source of strength and motivation throughout this challenging yet rewarding process.

## Table of Contents

Abstract.....	ii
Acknowledgements.....	iii
Introduction.....	1
Part 1: Evidence-Based Strategies for Enhancing Employee Retention in The Healthcare Sector	3
Retention Plan.....	9
Implementation Strategies .....	12
Core Strategies.....	16
1. Leadership and Empowerment .....	18
2. Mental Health and Wellness Supports.....	19
2.1. Moral Distress and Injury Care.....	21
2.2. Vacation and Time-Off.....	22
3. Safe and Supportive Work Environment .....	22
3.1. Safe Staffing Frameworks.....	23
3.2. Supporting Healthcare Workers.....	23
3.3. Communication and Conflict Resolution.....	23
4. Professional Development and Career Progression.....	24
4.1. Transition Programs.....	24
4.2. Career Pathways and Bridging Programs .....	25
4.3. Job Environment .....	26
4.4. Training Needs Assessment and Gap Analysis .....	29
5. Workplace Flexibility and Autonomy .....	29
5.1. Flexible Work Design.....	29
5.2. Modernized Scheduling Systems.....	30
6. Reduced Administrative Burden.....	30
6.1. Reevaluation of Administrative Duties.....	30
6.2. Integration of Technological Solutions.....	31
6.3. Simplification of Documentation Practices .....	32
7. Technological and Organizational Innovations .....	32
7.1. The Role of Information Technology in Healthcare.....	33
7.2. Overcoming Challenges in Innovation Rollout .....	33

7.3. Impact of Innovations on Job Retention .....	33
7.4. Expanding Access and Improving Service Delivery in Mental Healthcare .....	34
7.5. AI and the Ethical Implications of Technological Advancements in Healthcare .....	34
8. Recruitment and Staffing Strategies .....	35
8.1. Strategic Recruitment Approaches .....	35
8.2. Onboarding and Transition Programs .....	36
8.3. Professional Development and Continuous Learning .....	36
8.4. Mentoring and Support Systems .....	37
8.5. Cultural Fit and Employee Wellbeing .....	37
Part One: Conclusion .....	37
Part 2: The Effectiveness of a Psychological Debriefing Session Intervention on Employee Retention .....	39
Theoretical Background and Literature Review .....	46
Theoretical background .....	46
Workload .....	49
Burnout .....	51
Hypothesis 1 .....	53
Intention to Leave .....	53
Hypothesis 2 .....	55
Perceived Organizational Support .....	55
Hypothesis 3 .....	58
Hypothesis 4 .....	58
Self-Efficacy .....	58
Hypothesis 5 .....	59
Hypothesis 6 .....	59
Hypothesis 7 .....	60
Intervention .....	60
Hypothesis 8 .....	61
Hypothesis 9 .....	61
Hypothesis 10 .....	61
Hypothesis 11 .....	61
Research Gap .....	62

Methodology.....	63
Research Design.....	63
Data collection procedure.....	66
Participants.....	68
Measures.....	68
Workload, Burnout and POS.....	69
Intention to Leave.....	70
Self-efficacy.....	71
Other Variables.....	71
Results.....	72
Descriptive Statistics.....	72
Discussion.....	74
Scholarly Implications.....	74
Practical Implications.....	75
Limitation and future research.....	76
Conclusion.....	78
References.....	80

#### List of Figures

Figure 1.....	49
Figure 2.....	61

#### List of Appendices

Appendix A: Ethical Amendment Approval.....	110
Appendix B: Research Materials.....	111

## Introduction

In the past few years, employee retention has emerged as a key issue for organizations across various sectors, particularly in healthcare (Marufu et al., 2021). The increase in turnover and the drop in employee satisfaction highlight the urgent need for more effective retention plans within that sector (Brook et al., 2019). In an effort to address retention in healthcare, my thesis consists of two parts. Firstly, I develop evidence-based strategies for enhancing employee retention in the healthcare sector. This is consistent with a movement within the field of human resources towards evidence based management (Allen et al., 2010; Rousseau & Gunia, 2016). In brief, the crux of evidenced-based management is that management practices should be based on the best possible evidence. In particular, it emphasises the need to ground practices in scholarly literature (Gubbins & Rousseau, 2015). Thus, in this part of the thesis, I present a comprehensive retention plan, implementation strategies, and core strategies that can be utilized within the healthcare context that are grounded in scholarly literature.

Secondly, I design a study to examine the effectiveness of a psychological debriefing session intervention which was designed as part of a broader retention strategy for a healthcare organization. More specifically, I sought to examine the effectiveness of this strategy as it relates workload, perceived organizational support, intention to leave and self-efficacy – all of which have relationships with retention. As I discuss in more detail later in the thesis, the intervention and variable choices were influenced by the first part of the thesis.

The literature review in part one highlighted several critical challenges, including burnout, workload, and gaps in perceived organizational support, which are key contributors to healthcare worker turnover. These findings directly informed the focus of part two, which explores how a psychological debriefing session might address these issues. The intervention

was chosen specifically to target the challenges highlighted in the literature, providing a focused and actionable response grounded in the evidence-based retention strategies developed in part one.

The layout of this thesis is as follows. I first overview part one by presenting the importance of retention of employees in healthcare, overviewing a retention plan, as well as overviewing key implementation and core strategies that can be used within healthcare context. Then, in part two, I present information concerning an intervention designed to improve retention and associated measures. This includes a presentation of the psychological debriefing intervention, hypotheses, measures, study design, and analyses. I also present limitations and future research. In the last section of this thesis, I provide a general conclusion, including implications and future research ideas.



## **Part 1: Evidence-Based Strategies for Enhancing Employee Retention in The Healthcare Sector**

This literature review explores the complexities and implications of employee retention within the healthcare sector, drawing on various sources to understand the depth of the problem. It concludes with the development of literature informed, evidence-based strategies for enhancing employee retention within healthcare.

The importance of examining employee retention within healthcare cannot be over emphasised. The substantial costs associated with high turnover rates, the impact of staffing levels on patient care standards, and the continuous difficulty of attracting qualified professionals in a competitive job market are just a few of the key reasons healthcare organizations need to prioritize robust retention strategies (Kiel, 2020). High turnover rates can negatively impact organizational morale and patient care continuity, which in turn can affect the community's general health (Chen et al., 2022). Hence, retention strategies must be dynamic, encompassing immediate needs while anticipating future challenges.

Compounding these challenges, the World Health Organization (WHO) (2024) predicts that by 2030 there will be a global shortage of approximately 4.5 million nurses while a Canadian study forecasts a shortage of about 117,600 nurses by 2030 (Scheffler & Arnold, 2019). The aging workforce in the field of nursing makes this problem worse because many of the nurses who offer direct care are over 50 and close to retirement (RNAO, 2022). Moreover, these estimates relate to only a single occupation within healthcare.

As I outline more fully below, healthcare turnover, though not a new problem, consistently undermines care quality, inflates costs, and hampers the efficiency of healthcare

services. Particularly high turnover rates harm the continuity of patient care and incur hefty costs for recruiting and training replacements (Hayes et al., 2012; Jones & Gates, 2007). Turnover involves both voluntary and involuntary departures. According to Shaw et al., (1998), "An instance of voluntary turnover, or a quit, reflects an employee's decision to leave an organization, whereas an instance of involuntary turnover, or a discharge, reflects an employer's decision to terminate the employment relationship" (p. 511). Currivan (1999) discusses the complex nature of the turnover process by characterizing it as a combination of involuntary and voluntary departures. This process encompasses more than just employee departures; it includes dysfunctional turnovers, which happen when important or diverse talent leaves, negatively affecting the organization.

The financial burden of turnover in the healthcare sector is significant. For example, in the U.S., it costs between \$10,000 to \$88,000 to fill a nursing position, while the costs to recruit a physician can range from \$88,000 to as much as \$1 million per position (Heavey et al., 2013; Shanafelt et al., 2017). This economic strain is also felt in Canada, where healthcare budgets are carefully controlled, making these high costs particularly challenging (Flood et al., 2023). In Canada, the cost of nurse turnover is estimated to be 1.2 to 1.3 times the annual salary of a registered nurse (Campbell et al., 2020). An estimated 20% of nurses working in hospitals quit their jobs each year, costing the hospitals anywhere from CAD \$25,000 to over CAD \$60,000 per nurse during the transition (Berry & Curry, 2012; O'Brien-Pallas et al., 2010). In addition to the evident financial consequences, turnover has a negative impact on patient care quality. Studies have indicated that high nurse turnover rates in hospitals can lead to unfavorable consequences for patients, including higher mortality, longer hospital stays, and a reduction in the standard of care given (Abelsen et al., 2020; Marufu et al., 2021). According to Pappas et al.

(2022) physician turnover negatively impacts care continuity as well, leading to patient discontent and further financial losses from interrupted services. While this research has focused on the roles of physicians and nurses, it would be reasonable to extrapolate that similar findings could occur for any member of the healthcare team such as the medical laboratory professionals who were the focus of Part 2 of my thesis.

High employee turnover has psychological effects that go beyond the individual workers themselves, impacting the remaining staff members' morale and overall job satisfaction. Increased turnover lowers work satisfaction and may even lead to turnover since it fosters an environment of instability (Mueller & Price, 1990). Experienced staff leaving further contributes to a loss of institutional knowledge, which is essential for both the effectiveness of patient care and the organization's efficiency (Poon et al., 2022).

The success of healthcare systems heavily relies on employee satisfaction and their capacity to deliver top-notch services (Trivellas, Gerogiannis, et al., 2013). Numerous studies have focused on job satisfaction, identifying it as a factor closely associated with performance. This is especially true for industries with high levels of emotional labor, where keeping and attracting qualified employees depend on job satisfaction (Platis et al., 2015; Trivellas, Reklitis, et al., 2013). In addition, a longitudinal study by Pierce et al. (1996) showed that workplace environment and job characteristics are more strongly associated with satisfaction than demographic or economic factors. The study also highlighted that autonomy plays a significant role in shaping nurse satisfaction and their decisions to remain with or leave an organization.

Mobley (1977) identified turnover intention as closely related to job satisfaction, a relationship further explored by De Simone et al. (2018), who found a negative correlation between turnover intention and factors such as job satisfaction, work engagement, and self-

efficacy. This suggests that job satisfaction may act as a predictor of turnover intention. Similarly, research by Valentine et al. (2011) found an association between commitment to corporate ethical standards, group creativity, and higher levels of job satisfaction, along with reduced turnover intentions. Trust and safety are enhanced when workers perceive their workplace to be moral (Gullifor et al., 2023), which supports creativity and leads to positive job attitudes (Wang et al., 2020). The perception of managers' behavior has a substantial impact on these positive views; moral behavior reduces conflict, addresses workplace violence, and increases employee satisfaction (Davis & Rothstein, 2006; Schwepker et al., 1997).

In exploring the factors influencing overall job satisfaction, Collini et al. (2015) and Matthews et al. (2018) found that relationships with supervisors and senior management are significant facets contributing to satisfaction. They also noted the importance of compensation, job security, the use of skills and abilities, and trust between employees and management, among other elements like communication, working conditions, autonomy, career advancement, training, organizational financial stability, and corporate culture on satisfaction.

Moreover, the healthcare sector faces additional challenges such as violence against staff. Studies indicate that a significant portion of nurses face violent episodes from patients or their family members, leading to increased stress and burnout. Burnout, as defined by Maslach et al. (2001), is a state of emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment that occurs as a result of chronic workplace stress. This condition pushes many healthcare professionals to consider leaving their jobs or the profession altogether (Abou-Abbas et al., 2023; Laeeque et al., 2018). Addressing violence and improving the overall work environment and satisfaction levels are important steps towards mitigating the widespread

professional shortages impacting recruitment and retention issues in the healthcare industry today (Liu et al., 2019; Liu et al., 2018).

Canada's healthcare system is experiencing high turnover rates, which requires a robust and unified approach that blends national policy changes with tailored strategies at the organizational level (Baumann & Crea-Arsenio, 2023). Recent data indicate that these rates are not only a persistent challenge but are also growing. According to the report "Nursing Through Crisis: A Comparative Perspective," 68.5% of surveyed Canadian nurses plan to leave their current positions within the next five years. Of these, 12.6% plan to leave the nursing profession altogether, while 29.4% plan to retire (RNAO, 2022). To address this issue, improving job satisfaction, compensation, and benefits is necessary. Additionally, creating a more supportive work environment and making the profession more appealing to younger generations are crucial steps given that young people may currently find the healthcare profession less attractive due to difficult working conditions and lower pay (Gaudenz et al., 2019).

The success in overcoming these challenges hinges on effective collaboration between healthcare institutions and government bodies (De Vries et al., 2023). Together, they must formulate and implement a comprehensive strategy that addresses immediate turnover concerns and helps foster a more stable and contented workforce.

This review underscores the importance of an all-encompassing approach to keeping employees, focusing on effective management, strong leadership, and thoughtful strategic planning as key to reducing turnover impacts in healthcare. With a deep understanding and proactive management of the factors causing employee dissatisfaction and turnover, Canadian healthcare organizations will be better equipped to serve the needs of their communities and patients today and in the future.

Before delving into the details of the retention plan, implementation strategies, and core strategies, I present the structure and purpose of these components of the retention framework, which I developed based on insights from Allen et al. (2010), Caddy et al. (2018), De Vries et al. (2023), Nursing Retention Toolkit (2024) and Twigg and McCullough (2014). Note that I have structured the sections of this part of the thesis around these three elements.

**Table 1** Sections Structure

<b>Section</b>	<b>Description</b>	<b>Purpose</b>
<b>Retention Plan</b>	The "Retention Plan" outlines the overall strategy for addressing employee turnover in healthcare. It emphasizes a multifaceted approach that includes changing organizational culture, gathering data on employee departures, understanding turnover causes, identifying training needs, and conducting gap analyses.	Provides the foundational framework, explaining why these strategies are essential and how they align with broader organizational goals.
<b>Implementation Strategies</b>	The "Implementation Strategies" section translates the retention plan into specific, actionable steps. It details practical measures such as reducing workload, comprehensive onboarding, continuous training and development, job design, performance-based compensation, benefits packages, and employee engagement.	Converts high-level goals into operational actions. Ensures the retention plan is effectively implemented through practical steps.
<b>Core Strategies</b>	The "Core Strategies" section integrates the implementation strategies into a cohesive approach that ensures sustainability. It highlights long-term strategies crucial for maintaining a positive organizational culture and enhancing retention, including leadership and empowerment, professional development, workplace flexibility, mental health and wellness supports, safe staffing frameworks, reducing administrative burden, technological and organizational innovations, and recruitment and staffing strategies.	Ensures implementation strategies are part of a broader, ongoing effort to embed these practices into the organization's daily operations for long-term success.

## **Retention Plan**

The proposed retention plan is designed to address the complex and varied reasons behind employee turnover in healthcare. This strategic approach should not only benefit the employees but should also improve the overall quality of patient care, aligning with the organization's broader objectives of excellence in healthcare delivery. Building on evidence-based, best practices and research in healthcare retention, this plan aims to create a supportive work environment that fosters employee engagement, growth, and wellbeing. By adopting a multifaceted approach, we can address the unique needs and challenges of our diverse healthcare workforce, promoting a culture of retention and excellence.

This retention plan builds on the prioritized strategies of empowering leadership, mental health and wellness supports, and fostering safe and supportive work environments. These strategies address critical issues such as burnout, workload, and perceived organizational support, which are pivotal for healthcare worker retention (Bruyneel et al., 2023; J. Liu & Liu, 2016; Xiaoming, 2014). By focusing on these priorities, the plan provides a structured approach to tackling challenges unique to healthcare, ensuring that interventions are practical, evidence-based, and impactful.

As noted by Allen et al. (2010), Brook et al. (2019) and Twigg and McCullough (2014), such plans include several key steps. One of the first steps centers on the fact that changing an organization's culture is often necessary to address underlying issues contributing to high turnover and employee dissatisfaction. A culture that fails to support employee engagement, well-being, or inclusivity can hinder retention efforts. Therefore, cultural change is a key component of the strategy to create a more supportive and adaptive work environment. This process requires a strategic approach that includes setting short-, mid-, and long-term goals, all

anchored in clearly defined core values and principles of inspired leadership. Managing this cultural shift effectively requires a change management plan to address potential resistance from various stakeholders, ensuring that concerns are acknowledged and support is gained at all levels. This plan should include key performance indicators for employee satisfaction and retention. These indicators help in measuring and evaluating the progress towards the desired cultural transformation. Importantly, for the change to be enduring, it is crucial that these strategic plans are not seen as mere temporary fixes but are continuously monitored and adapted, ensuring they achieve a lasting impact. As such a change management approach may be needed.

Another step involves gathering detailed data on employee departures. This is crucial for assessing workforce stability, especially in departments experiencing the highest turnover rates. Organizations must determine whether these departures are predominantly among lower-performing employees or if they are losing valuable team members (Caddy et al., 2018). Understanding this distinction is key to identifying the underlying causes of turnover and addressing them effectively.

Successfully managing turnover requires more than just monitoring the rate at which employees leave; thus, a third step centers on the need to understand the reasons behind their departures. According to Cotton and Tuttle (1986), turnover is influenced by three main variables: (1) external factors like employment perceptions and the unemployment rate, (2) structural factors such as the organizational environment and leadership, and (3) personal characteristics of employees. Lee et al. (2017) further emphasize the significant impact that specific external shocks or events have on employee turnover, thus underscoring the importance of external factors. They note that the reactions within an organization's environment and leadership can either mitigate or intensify these effects. Particularly significant is an employee's



perception of their workplace, which depends on the organization's management, leadership style, and the quality of communication (Gaudenz et al., 2019). Positive perceptions generally improve job performance and satisfaction, potentially reducing turnover. While external and personal factors are less controllable, improving structural or work related aspects can significantly boost employee retention and satisfaction (Caddy et al., 2018).

One critical structural factor linked to employee retention is training and development (Kossivi et al., 2016). Employees who feel their organization invests in their growth and career development are more likely to stay, as professional growth opportunities signal that their contributions are valued (Russell et al., 2021). Therefore, identifying the most pressing training needs of employees and addressing them strategically is an essential component of a retention strategy. Often, this process begins with conducting a training needs assessment for all eligible employees. According to the Society of Human Resources Management (SHRM, 2024), this assessment measures an individual's current competence, skills, or knowledge levels against those required for their role or another position within the organization. This important step determines the training necessary to enhance employee competence and satisfaction, thus improving overall skills and job performance. By addressing gaps identified through these assessments, organizations can enhance employee competence and satisfaction, which are critical for improving overall job performance and reducing turnover. These assessments are most effective when carried out after new hires come on board, during regular performance evaluations, or amidst changes in job responsibilities, serving as a strategic foundation for introducing new training programs within an organization (Caddy et al., 2018).

Finally, conducting a gap analysis that compares an employee's current capabilities with the levels they need to achieve is a key part of effectively addressing training needs (Russell et

al., 2021). This can be done using several techniques such as analyzing HR documents, holding individual interviews, setting up focus groups, distributing surveys, or direct observation of workplace behaviours. For example, an organization might deploy surveys to ascertain the resources employees need to enhance job efficiency. Furthermore, conducting focus groups allows for direct engagement with staff to discuss their specific training needs and the challenges they face (Tang & Hudson, 2019). When utilized effectively, focus groups provide a collaborative and informal setting for employees to brainstorm and propose solutions collectively, ultimately improving staff satisfaction and elevating patient care and safety.

### **Implementation Strategies**

The implementation strategies outlined in this section are comprehensive, addressing many areas of human resources. These strategies include ensuring staff are not overworked, starting processes as soon as the employee starts work, as well as examining key human resource functions such as orientation, training and development, job design, development, compensation, benefits and engagement. More details on each now follows.

A successful retention plan should prioritize immediate improvements in staff and patient satisfaction (Rangachari & Woods, 2020). A key strategy is to ensure that employees are not overloaded with work, which often leads to a reduction in errors in documentation and medication, creating a less stressful environment (Zaheer et al., 2019). In order to evaluate the effectiveness of these initiatives, organizations could adopt a method of periodically reviewing the documentation accuracy of staff involved in direct patient care, such as nurses and other healthcare professionals responsible for maintaining medical records. This helps maintain a check on the quality and efficiency of record keeping without prior notice.

To enhance employee retention effectively, a comprehensive strategy should start from the moment a new employee joins the organization (De Vries et al., 2023). This approach includes a thorough orientation process that not only introduces the new hire to the organizational culture, mission, and values but also sets the stage for a deep, lasting relationship with the company. The orientation should be engaging and informative, utilizing interactive methods to ensure that employees feel connected to the company's goals from day one.

Following orientation, the focus shifts to training and development, crucial for equipping employees with the necessary skills for their roles and providing opportunities for further education (Russell et al., 2021). For example, a policy of reimbursing employees for relevant coursework encourages continuous personal and professional development, which is essential for career satisfaction and growth.

Job design and career development are also key components of the retention strategy. Jobs should be clearly defined with responsibilities that challenge the employees while providing them clear paths for advancement within the organization (Caddy et al., 2018). Regular job evaluations ensure that these roles continue to align with organizational goals and employee growth.

Compensation is another critical aspect. A performance-based compensation system that rewards employees for meeting and exceeding standards helps in recognizing and rewarding hard work and success (Kondo et al., 2016). Bullock et al. (2015) found that skilled public employees in sectors where money is a significant motivator often experience higher quit rates and declining quality indicators than those in the private sector. Public and nonprofit sector employees, on the other hand, often value public service-oriented motives and view their work as socially important rather than focusing on high income

Further extending these practices, Brown et al. (2019) highlight the importance of integrating such compensation systems within a comprehensive performance management framework. This integration ensures that performance reviews are not only periodic assessments but are part of a continuous feedback mechanism that aligns employee objectives with organizational goals, thereby enhancing overall job satisfaction and commitment to the organization.

A robust benefits package enhances this strategy, offering health insurance, retirement plans, and wellness programs that contribute to employee satisfaction (Thibault Landry et al., 2017). Research has emphasized the holistic view employees take toward pay and benefits, considering them together as a package (Xavier, 2014). Compensation systems influence the relationship between organizations and employees, as well as overall workforce composition by signaling factors that affect employee attraction and retention (Gerhart & Rynes, 2003). Additionally, discretionary employee benefits can be tailored to align with organizational strategies and enhance retention goals (Barringer & Milkovich, 1998). Employees often prefer a combination of compensation and benefits, reflecting their individual preferences and needs (Eriksson & Kristensen, 2014). Organizations should ensure employees are fully aware of all the benefits available to them, as this can enhance both their initial and long-term satisfaction with the company.

Exploring the effects of monetary and non-monetary incentives, Dzurainin and Stuart (2012) suggested that companies could benefit from adding non-monetary rewards to their performance incentive systems. These include opportunities for career growth, a supportive environment, and work conditions that allow employees to balance personal and professional spheres. Peluso et al. (2017) identified four major components of this approach: base pay

(including salary, variable pay, recognition, and stocks), benefits (such as health care, retirement, savings, and time off), training and development opportunities (including career development, performance management, succession planning, and training), and work environment (encompassing organization climate, leadership, performance support, and work/life balance).

Non-financial compensation is particularly important for employees, especially when financial limitations exist (Boselie, 2014). In the non-profit sector, non-monetary rewards are more strongly related to employee engagement than monetary rewards (Leete, 2000). Financial compensation remains a primary reason for work, providing sustenance, security, and privilege (Jurgensen, 1978). Employee alignment with the organization often depends on payment schemes (Deckop et al., 2006). Despite extensive research on the income-happiness relationship in psychology (Diener & Seligman, 2004), the relationship between base pay and employee attitudes remains largely untested. Studies have shown that perceptions of fair pay correlate with pay satisfaction, intent to remain with a company, and extra-role behavior (Gardner et al., 2004; Scholl et al., 1987).

Discretionary behaviors are primarily supported by intrinsic or non-monetary rewards, which go beyond formal job requirements (Konovsky & Pugh, 1994). Opportunities for growth and development consistently predict positive outcomes such as attitude, motivation, and empowerment (Aguinis & Kraiger, 2009). Training improves individual, team, and organizational effectiveness, while development facilitates personal growth Goldstein and Ford (2002). Adopting human resource management practices in training and development can significantly enhance employees' positive affective reactions at work. This leads to improved overall satisfaction and quality of work life.

Engagement extends beyond the workplace, with encouragement for employees to participate in community activities and organizational events (Abelsen et al., 2020). This not only helps employees feel more connected to their workplace but also to the community, increasing job satisfaction and retention. Programs that involve employees in their community and show interest in their lives outside of work deepen their commitment and make it less likely for them to leave. The workplace setting is increasingly recognized as key to promoting employee motivation and performance. Favorable work environment characteristics positively impact employee commitment (Janakiraman et al., 2011). Conditions that provide greater physical comfort and convenience are preferred, as their absence can negatively impact well-being (Greenberg & Baron, 2003). Social exchange theory suggests that when organizations show they value their employees, employees reciprocate with positive attitudes and behaviors (Dawley et al., 2008).

In summary, the strategies outlined above—empowering leadership, mental health and wellness supports, and safe work environments—offer a practical roadmap for healthcare organizations aiming to improve retention and well-being. Implementing these strategies through specific actions, such as team huddles, counseling services, and feedback mechanisms, ensures that interventions are both evidence-based and tailored to the unique needs of healthcare workers.

### **Core Strategies**

The implementation strategies outlined previously provide foundational actions that support and strengthen the broader core strategies essential for sustaining a positive organizational culture and enhancing retention. These strategies focus on specific, actionable areas such as workload management, performance reviews, and compensation adjustments.

Together, they create a practical framework that enables the successful execution of the core strategies. Each core strategy is designed not only to address immediate operational needs but also to embed these practices into the fabric of the organization, ensuring they contribute to long-term goals. This integration ensures that both immediate improvements and long-term developments in staff and patient satisfaction effectively align with and advance the strategic objectives, which are focused on building a supportive and thriving work environment.

Supporting healthcare workers requires targeted strategies tailored to their unique challenges, including burnout, workload, and organizational support gaps. While a wide array of HR practices is relevant, in this thesis I emphasize three strategies that have the most significant impact: leadership and empowerment, mental health and wellness supports, and fostering a safe and supportive work environment. These strategies are prioritized based on their relevance to healthcare-specific contexts and their demonstrated effectiveness in mitigating burnout and improving retention. I will first examine these three strategies and then move to a discussion of six other strategies. Thus, in total nine core strategies, all grounded in the literature, are presented. Each is tailored to meet particular challenges encountered in healthcare settings, ranging from creating a positive culture of leadership and empowerment, to advancing professional development, to fostering a supportive work culture. While I present 9 strategies in this section, I must be clear that these are not unique and have come overlap. For example, leadership and empowerment (strategy one) could be seen to play role across many of the other eight strategies. In addition, in reviewing these strategies, I would assert that perceived organizational support (which considers the extent that employees perceive that their organization values their contributions and cares about their well-being (Eisenberger et al., 1986)) plays an important role here.

In reviewing this section, I further note that these strategies are designed to be flexible and applicable in different healthcare contexts, thereby improving working conditions for all staff members. By doing so, they encourage dedication and long-term engagement among healthcare workers, helping to minimize turnover. The details that follow provide a comprehensive plan for cultivating a committed and contented healthcare workforce.

## **1. Leadership and Empowerment**

A culture of leadership and empowerment is essential for enhancing employee satisfaction and improving patient care across all healthcare roles. This strategy is designed to empower healthcare professionals at every level, enabling them to find fulfillment and become leaders within their organizations.

The initiative starts with a commitment from senior leadership to model the behaviors and values that epitomize inspirational leadership (Rangachari & Woods, 2020). This commitment is demonstrated through daily interactions and decision-making processes, ensuring that leadership qualities such as integrity, transparency, and inclusiveness are consistently represented at the highest levels. To support this, the organization will focus on developing and maintaining leadership roles that are essential for driving strategic visions and integrating healthcare perspectives into organizational policies (Aarons et al., 2014).

In addition, leadership that promotes perceived organizational support is crucial, as it fosters an environment where employees feel valued and supported. Healthcare unit managers contribute to perceived organizational support by maintaining open lines of communication, providing recognition for staff efforts, and supporting professional development, all of which strengthen employees' sense of belonging and commitment (Gadolin et al., 2022; Neves & Eisenberger, 2012). By fostering an atmosphere where staff feel appreciated and supported,



managers can positively influence job satisfaction, reduce burnout, and improve overall retention in healthcare settings (Gadolin et al., 2022).

One critical aspect of this approach involves transitioning from autocratic to inclusive leadership styles. As described by Bowers et al. (2012), autocratic leadership, characterized by individual control over all decisions with little input from group members, contrasts sharply with inclusive leadership; inclusive leadership, which values and seeks input from all staff members (Nembhard & Edmondson, 2006), especially those providing direct patient care. This leadership style not only invites contributions but also appreciates them, creating a culture where everyone's point of view is considered valuable. Such a shift promotes a leadership approach that recognizes and incorporates diverse perspectives into decision-making, enhancing organizational effectiveness and facilitating easier implementation of change.

Comprehensive training programs aimed at developing diverse healthcare leaders will provide skills in clinical leadership, emotional intelligence, conflict resolution, and effective communication. These programs are designed to equip leaders to manage diverse teams effectively and empathetically. This approach will foster a positive and inclusive work environment, leading to better patient outcomes and improved overall performance (Sonnino, 2016).

## **2. Mental Health and Wellness Supports**

Healthcare workers face immense stress in their day-to-day roles, which can impact their mental health and overall well-being (Brand et al., 2017). To address this, healthcare organizations must provide comprehensive mental health and wellness supports to create a safe and healthy work environment. This strategy aims to increase access to both preventative and

acute mental health resources, focusing on building a supportive culture that addresses violence, bullying, and racism.

One key initiative in this strategy is adopting a zero-tolerance policy towards violence, bullying, and racism. According to Skiba and Knesting (2001, p. 20) zero tolerance is “a disciplinary policy that is intended primarily as a method of sending a message that certain behaviors will not be tolerated, by punishing all offenses severely, no matter how minor.” This involves creating strict and enforceable policies that set clear standards for behavior within the workplace. To ensure these policies are effective, organizations need to educate all healthcare workers about what constitutes unacceptable behavior and provide avenues for reporting incidents safely and confidentially (Wand & Coulson, 2006). Raising awareness about anti-racism is also important, as it fosters a more inclusive environment where everyone feels valued and respected (Smart, 2021).

An important aspect of this strategy is collaborating with unions and regulatory bodies to ensure accountability measures are in place for enforcing policies related to workplace safety (Jugessur & Iles, 2009). Organizations should engage stakeholders at all levels to gather feedback and refine their approaches to mental health and wellness. These collaborations can also help promote cultural safety and support healthcare workers through training and education. Effective mental health and wellness supports are those that directly address the specific stressors and risks associated with healthcare work (Søvold et al., 2021). Examples include providing access to psychological counseling, establishing support groups, and offering programs that teach coping mechanisms for handling the high stress of medical emergencies. These supports aim to prevent mental health issues from developing and to address them promptly when they arise.

Burnout, as extensively documented in the helping professions, is a significant challenge for healthcare organizations (Schaufeli et al., 1993). Research has shown that comprehensive mental health and wellness programs can mitigate the effects of burnout by reducing emotional exhaustion, improving job satisfaction, and fostering resilience among healthcare workers (Liao et al., 2022; Y. Liu & Aunguroch, 2019). By integrating such evidence-based interventions, healthcare organizations can create a work environment that supports mental health, promotes employee well-being, and enhances retention.

### ***2.1. Moral Distress and Injury Care***

Healthcare workers are often exposed to morally distressing situations that can have a lasting impact on their mental health (Williamson et al., 2018). Moral distress is defined as the feeling of frustration and powerlessness when unable to act according to one's ethical beliefs due to external constraints, is a common experience in healthcare settings (Riedel et al., 2022).

To address moral distress effectively, healthcare organizations should encourage workers to apply trauma-informed care to their own experiences and support them through comprehensive care programs. A single reporting system can help reduce the need for healthcare workers to relive traumatic experiences by allowing them to report moral injury or distress through a streamlined process (Yatchmenoff et al., 2017). Additionally, standardized care programs ensure consistent support for healthcare workers during and after distressing situations (Damian et al., 2017).

Moral injury, which occurs when individuals perpetrate, witness, or fail to prevent actions that transgress deeply held moral beliefs, requires developing a trauma-informed culture (Riedel et al., 2022). This involves engagement with mental health professionals and ongoing education for healthcare leaders. Nurse managers and other leaders should be trained to respond

effectively to both moral distress and injury, offering appropriate support and guidance (Hossain & Clatty, 2021). Organizations should also develop clear referral procedures and pathways for healthcare workers to access support, ensuring they have access to the necessary resources without facing additional barriers.

## ***2.2. Vacation and Time-Off***

Vacation and time-off policies play a significant role in the well-being of healthcare workers. By implementing best practices for vacation and time-off, healthcare organizations can prevent burnout and improve overall job satisfaction (Shanafelt et al., 2003). Additionally, implementing policies that distinguish between vacation and sick time can prevent healthcare workers from using vacation days when they need time off for health reasons.

Creating a cultural shift that supports the benefits of taking vacation is essential. Leadership must reinforce the importance of work-life balance and encourage healthcare workers to disconnect from work during their time off. This approach can help prevent burnout and foster a healthier work environment (De Bloom et al., 2010).

## **3. Safe and Supportive Work Environment**

Creating a safe and supportive work environment is key to healthcare workers' well-being and job satisfaction (Blanchard et al., 2022). Healthcare organizations can create this environment by implementing staffing practices that consider patient acuity, staff experience, and workload balance (Sir et al., 2015). By focusing on these factors, healthcare organizations can build an atmosphere that not only supports healthcare workers but also leads to better retention and improved patient care.

### ***3.1. Safe Staffing Frameworks***

Watkin (2005) outlines that safe staffing frameworks are designed to maintain appropriate staffing levels by balancing patient needs with healthcare worker expertise. According to Watkin (2005) the key to effective staffing frameworks is flexibility; they should allow departments and units to adjust based on their specific needs. Watkin (2005) further emphasizes that evidence-based staffing ratios can help ensure that each healthcare worker is managing a reasonable workload, reducing the risk of burnout. In addition, feedback mechanisms are essential for assessing the effectiveness of these frameworks and identifying areas for improvement. Healthcare organizations should also encourage healthcare workers to provide input on safety, allowing for a more tailored approach to staffing.

### ***3.2. Supporting Healthcare Workers***

Healthcare workers frequently encounter high stress levels, which can lead to burnout and increased turnover rates; thus, healthcare organizations need to emphasize social support and introduce various initiatives to reduce stress (Woodhead et al., 2016). Such initiatives may include structured events and digital interventions that enhance communication and support among staff (De Kock et al., 2022). Programs that promote positive experiences, mindfulness, and resilience are particularly effective. By fostering a supportive work environment through these initiatives, organizations can help mitigate stress and reduce the likelihood of turnover, thereby maintaining a more stable and satisfied workforce.

### ***3.3. Communication and Conflict Resolution***

Another essential component of a safe and supportive work environment is effective communication. Healthcare organizations should encourage employees to express their concerns

and maintain open lines of communication (Heath et al., 2020). Mechanisms such as staff meetings, unit huddles, and one-on-one consultations can support transparency and give healthcare professionals a chance to express their thoughts. In order to foster a healthy environment, managers should proactively confront problems and find constructive solutions (Haas, 2020). This strategy promotes trust among healthcare professionals, creating a more supportive and cohesive work environment.

#### **4. Professional Development and Career Progression**

Healthcare organizations recognize the importance of supporting the professional growth and development of their healthcare workers (De Vries et al., 2023). To achieve this, a comprehensive approach to professional development and career progression is essential. Dawson et al. (2014) emphasise the vital role of training opportunities in combatting turnover of nurses. Interventions should be targeted to the needs and aspirations of staff. Findings suggest that a nurturing work environment that provides comprehensive training and ongoing professional development opportunities can lower turnover. Their data show that improving work environments and providing consistent professional development are key strategies to nurse staff retention and to increase job satisfaction and organization commitment. Such strategies need to be implemented across all levels of the organization and needs to be tailored to different groups of employees to meet their unique needs.

##### ***4.1. Transition Programs***

For those newly entering healthcare or returning to the workforce, effective transition programs can help to prepare and support them in this process. Such programs should have a dedicated leader, who is an experienced healthcare professional, who can provide education,

training, and mentoring for new employees, enabling them to have a better understanding and adaptation to their new work environment (De Vries et al., 2023). Transition programmes are especially useful in complex settings such as hospitals, community care and home care, where they provide structured orientations and clinical experiences with advanced nurse preceptors to help new graduates apply their knowledge and integrate into their positions, improving their competency and retention (Blegen et al., 2015).

Further, these programmes often include elements such as supernumerary time (where new staff do not have to take on a full load of responsibilities) where they can shadow and participate in all that they are observing (Morphet et al., 2015). This helps to facilitate professional development but also significantly enhances job satisfaction and retention by providing a positive learning environment.

#### ***4.2. Career Pathways and Bridging Programs***

Healthcare organizations are encouraged to develop career pathways and bridging programs to support healthcare workers in advancing their careers (Nursing Retention Toolkit, 2024). Such programmes can help workers explore new roles and develop skills, while providing a platform to broaden their career horizons. This is particularly relevant for internationally educated healthcare workers who experience more challenges in transitioning to new jobs.

Organizational support for career development can strengthen organizational commitment and reduce turnover intentions among healthcare workers, which has a stabilising effect on the workforce. These types of programmes can ease stress regarding a new role, improve job satisfaction, and make the employee feel valued and construct a sense of organizational growth (Wu & Liu, 2022). Moreover, these programmes can also have a mixed structure, combining elements of formal training and informal support (e.g. mentoring) – both essential for

professional development and adaptation to the complex work environment in healthcare (Salminen & Miettinen, 2019). This multifaceted approach can foster a supportive work climate that promotes professional development and organizational commitment, two key factors for ensuring a competent and satisfied workforce in healthcare.

### ***4.3. Job Environment***

The creation of a positive environment for workers is very important for those in the healthcare field to stay motivated and satisfied with the job, and therefore will help reduce turnover (Adams et al., 2019). Healthcare organizations should focus on fostering a workplace where healthcare workers feel valued and appreciated (De Vries et al., 2023). This involves not only recognizing their contributions but also providing them with opportunities for professional growth and development. Key elements to achieving this include the implementation of evidence-based practices to ensure the highest standards of care, allowing dual roles to diversify experience, and emphasizing the importance of work-life balance (Allen et al., 2010). These practices help to promote overall well-being and morale, making the workplace a more attractive and fulfilling environment.

Perceived Organizational Support (POS) plays a critical role in this context, as employees who feel supported by their organization are more likely to experience higher job satisfaction and lower levels of stress and burnout (Arnold & Dupré, 2012). By ensuring that employees perceive strong organizational backing, organizations can create a more positive and stable work environment, which in turn fosters greater commitment and reduces turnover (O'Driscoll & Randall, 1999). Research suggests that when healthcare professionals believe their organization values their contributions and well-being, they are more resilient to job-related stressors and exhibit a stronger dedication to their roles (Gadolin et al., 2022; Sheng et al., 2023).



To realistically improve job satisfaction and the work environment for healthcare professionals, several practical strategies have been suggested. Creating a positive work context involves targeting specific job outcomes with varied programs to develop a broad range of positive work experiences (Valentine et al., 2011). The Canadian Federation of Nurses Unions (CFNU) recommends measures such as providing targeted funding for initiatives that improve nursing workloads and patient outcomes, standardizing healthcare data collection, and involving nurses at all levels in healthcare solutions. Additionally, addressing governance issues, clarifying nursing scopes of practice and ensuring proper integration of services between units are critical steps (Berry & Curry, 2012).

The stressful nature of nursing work environments, with long hours and demanding tasks, necessitates strategies to reduce job strain and overload, improve leadership support, and lessen physical demands. While nursing is often highlighted due to its direct patient care responsibilities and high rates of burnout, these challenges are not unique to this profession. Similar strategies can be applied to other roles within the sector, such as physicians, medical laboratory professionals, and allied health workers, who also face significant work-related stressors. Offering well developed educational programs and professional development opportunities can make healthcare roles more attractive and sustainable across professions (Oliver & Care, 2019). Positive work environments, with good physical and psychological conditions and opportunities for work-life balance, enhance employee commitment and performance. (Peluso et al., 2017).

Interventions aimed at improving the work environment have been effective in increasing job satisfaction and reducing stress, burnout, and depression (Barrientos-Trigo et al., 2018; Buruck et al., 2019). Comprehensive programs focusing on various aspects of the individual and their environment yield the best results. Short term interventions with follow up periods are

particularly effective as they are less likely to be perceived as additional burdens (Eva et al., 2023). The following strategies, derived from a comprehensive review by Barrientos-Trigo et al. (2018), outline the various macro- meso- and micro-management levels at which improvements in job satisfaction and work environment can be achieved for healthcare professionals:

At the macro-management level, implementing minimum nurse-to-patient ratios has been shown to reduce burnout and increase job satisfaction. Organizational measures, such as changes in work organization and continuous quality improvement programs, have also proven effective in reducing stress and improving working conditions. Additionally, flexible work shifts and better resource distribution further enhance commitment and job satisfaction. The physical work environment also plays a role, as well-resourced locations help reduce stress levels.

At the meso-management level, interventions like coaching and mentoring programs, frequent professional-supervisor meetings, and fostering genuine collaboration and leadership significantly improve the working environment. These measures lower burnout and absenteeism while enhancing job satisfaction and organizational commitment. Psychosocial improvements, effective coping strategies and the use of new technologies also contribute to better outcomes for healthcare staff.

At the micro-management level, personal interventions such as coaching programs that combine physical and psychological strategies have been beneficial. Activities like physical exercise, stress management, and introspection techniques improve stress handling, reduce burnout and enhance overall health. Furthermore, emotional intelligence and communication strategies are crucial for reducing burnout and improving occupational quality of life.

#### ***4.4. Training Needs Assessment and Gap Analysis***

Healthcare organizations should systematically conduct training needs assessments and gap analyses in order to maximize the effectiveness of professional development activities (Caddy et al., 2018). In this type of analysis, the existing skills, knowledge and competencies of healthcare workers are assessed, and compared with those required for optimal performance where there are specific gaps in skills or knowledge, training can be tailored to address those specific deficiencies. This approach enhances the relevance and effectiveness of development efforts, while also improving patient care. Furthermore, an organization's commitment to operational excellence and the professional development of its employees can both be effectively demonstrated by demonstrating its commitment to identifying and meeting training needs (Bulut & Culha, 2010).

### **5. Workplace Flexibility and Autonomy**

Healthcare organizations should prioritize promoting workplace flexibility and autonomy for all healthcare workers to enhance job satisfaction, work-life balance (Finn, 2001), and career progression (Nursing Retention Toolkit, 2024). This can be achieved through various initiatives:

#### ***5.1. Flexible Work Design***

Flexible work design allows healthcare organizations to meet the diverse needs of healthcare workers. This approach includes offering part-time roles, job sharing, provincial float pools, dual roles, weekend-only positions, and casual opportunities (Kelliher & Anderson, 2008; *Nursing Retention Toolkit*, 2024). These flexible arrangements make healthcare organizations more attractive to a broader range of professionals, fostering a better work-life balance and improving job satisfaction.

## ***5.2. Modernized Scheduling Systems***

Digital scheduling systems that are user friendly and transparent empower healthcare workers by giving them greater control over their schedules. These systems, designed for easy modifications and timely responses to changes, significantly reduce the administrative burden and potential for errors often encountered with traditional scheduling methods. As Deliberato et al. (2017) have noted, the implementation of such advanced scheduling systems can lead to more efficient shift exchanges, reduce time wasted, and prevent conflicts that lead to physician dissatisfaction. This flexibility not only helps healthcare professionals manage their work-life balance according to their preferences, contributing to greater job satisfaction but also enhances patient outcomes by ensuring optimal staffing at all times.

## **6. Reduced Administrative Burden**

In the field of healthcare, reducing administrative burdens on medical professionals is critical for increasing job satisfaction and allowing them to focus on tasks that require their specific skills (Woolhandler & Himmelstein, 2014). Healthcare facilities can make sure that medical professionals have more time for patient interaction and care delivery by optimizing their operational procedures. This change contributes to a more encouraging and productive healthcare environment by improving workflow overall and maximizing the utilization of resources.

### ***6.1. Reevaluation of Administrative Duties***

To mitigate physician burnout related to administrative burdens, the reassignment of non-clinical tasks to clerical personnel is a promising approach. Research indicates that healthcare professionals particularly primary care doctors spend as much as 33% of their working hours

undertaking administrative tasks: data entry, appointments scheduling and paperwork (Rao et al., 2017). This administrative burden reduces time available for direct patient care, which results in low job satisfaction and high turnover rates (Woolhandler & Himmelstein, 2014). Integrated central preauthorization services and giving routine administrative jobs to clerks will enable the facilitation of more interaction between patients and clinical service providers (Rao et al., 2017). Similarly, the performance of non-nursing duties by nurses has serious implications for workload and patient care. A study conducted in Newfoundland and Labrador revealed that non-nursing tasks such as cleaning, transporting patients and clerical work are regularly performed by nursing staff, further contributing to an already busy schedule (Kearney et al., 2016). Using the Non-Nursing Duties Tracking Tool, developed by the researchers, revealed activities that can be reassigned to housekeeping, transport, and clerical staff. Both frontline nurses and managers expressed the necessity for administrative support to reallocate non-nursing tasks appropriately. While concerns about the support from managers in other departments were raised, there was little resistance when adequate resources were provided (Kearney et al., 2016). Not only does reducing these burdens improve the overall work environment, but it also directly impacts patient care by giving healthcare providers and nurses more time to focus on their primary responsibilities

## ***6.2. Integration of Technological Solutions***

Technological advancements can significantly diminish administrative burdens as outlined by (Ayer, 2023). By employing digital tools to streamline operations, healthcare organizations can facilitate more efficient completion of tasks such as documentation and record-keeping. User-friendly digital systems can also decrease redundancy and enhance accuracy. The integration of technology into healthcare workflows allows professionals to spend increased time

with patients and less on bureaucratic tasks, leading to more consistent healthcare practices and improved team communication.

### ***6.3. Simplification of Documentation Practices***

Documentation demands frequently contribute significantly to administrative burdens. Streamlining these requirements allows healthcare workers to focus predominantly on patient care (Nursing Retention Toolkit, 2024). This process involves re-evaluating existing documentation protocols to eliminate superfluous tasks and redundancies. Establishing definitive guidelines for essential documentation can lighten the workload for healthcare staff while maintaining regulatory compliance. Technological integration to automate certain functions and harmonize documentation across various care settings can further alleviate administrative pressures (Nursing Retention Toolkit, 2024).

## **7. Technological and Organizational Innovations**

Technological and organizational innovations in healthcare represent the adoption and implementation of new processes, technologies, and ideas that significantly enhance service delivery and patient care (Greenhalgh et al., 2004). These innovations encompass not only technological advancements but also organizational and service-oriented improvements, including new ways of working, the introduction of new service lines, or enhanced operational efficiencies (Thakur et al., 2012). The primary aim of such innovations is to optimize the effectiveness of healthcare professionals, emphasizing the improvement of patient outcomes and overall organizational performance.

### ***7.1. The Role of Information Technology in Healthcare***

Information technology (IT) is essential in healthcare, facilitating the adoption of electronic medical records (EMRs) and other advanced software systems (Miriovsky et al., 2012). EMRs, which digitize traditional paper charts, are central to managing billing, patient records, and critical decision-making processes within healthcare settings (Hollis et al., 2015). The effective use of IT allows for better data storage and management, reduced errors and more efficient healthcare delivery.

Successfully implementing healthcare innovations requires understanding both internal and external organizational environments, meticulous planning, robust management support, and comprehensive training for staff to foster acceptance and minimize resistance.

### ***7.2. Overcoming Challenges in Innovation Rollout***

Introducing innovations can be met with inherent resistance to change within organizations. Overcoming these challenges involves early engagement of stakeholders, clear and effective communication, and comprehensive training and support for staff. Ensuring that new innovations are compatible with existing systems and offer clear advantages over current processes can significantly ease the adoption process and lead to successful outcomes (Thakur et al., 2012).

### ***7.3. Impact of Innovations on Job Retention***

Technological and organizational innovations significantly impact job retention among healthcare workers (De Vries et al., 2023; Källander et al., 2013). Innovations like the use of robots to assist nurses with non-professional tasks or digital tools for communication and stress management enhance job satisfaction, reduce turnover intentions, and improve overall job

performance. Such advancements are crucial for fostering a supportive and efficient work environment, which in turn contributes to higher retention rates (De Vries et al., 2023).

#### ***7.4. Expanding Access and Improving Service Delivery in Mental Healthcare***

Technological innovations such as mobile apps, online therapy, and remote consultations have revolutionized mental healthcare by enhancing accessibility and enabling tailored treatments for conditions like depression and bipolar disorder (Hollis et al., 2015). Despite the significant advantages, integrating these technologies presents challenges. The AI Divide emphasizes the importance of trust; patients unfamiliar with digital and AI technologies may struggle to trust an AI system, necessitating clear communication from doctors about the benefits (Lee & Yoon, 2021). Additionally, cybersecurity concerns are paramount as the increase in digital health technologies demands stringent data privacy and security measures (Coventry & Branley, 2018). Addressing these challenges is crucial to ensure that digital solutions effectively integrate into mental healthcare without compromising patient trust or data security.

#### ***7.5. AI and the Ethical Implications of Technological Advancements in Healthcare***

The integration of artificial intelligence (AI) in healthcare is transforming diagnostic and treatment processes, enhancing operational efficiency, and improving clinical decision-making accuracy (Dilsizian & Siegel, 2014). However, this integration raises substantial ethical issues and data privacy concerns. AI technologies could potentially compromise patient safety and privacy through risks associated with data integrity, cybersecurity, and improper data-sharing across organizational boundaries. Additionally, the responsibility for medical errors and system failures remains a critical concern. These challenges necessitate robust policy frameworks, ethical guidelines, and training programs to ensure AI tools are deployed responsibly and effectively. Addressing these concerns is crucial to maintain trust in healthcare services and to



ensure that AI advancements enhance patient outcomes without compromising ethical standards or patient preferences (Lee & Yoon, 2021).

## **8. Recruitment and Staffing Strategies**

In healthcare, having a strong recruitment and staffing strategy is important not just for retaining healthcare workers, but also for ensuring quality of care as outlined below. These strategies go beyond just hiring practices to encompass the establishment and sustainment of a strategic positioning and approach in line with a healthcare facility's mission, vision, and values, while addressing the complexities of healthcare settings.

### ***8.1. Strategic Recruitment Approaches***

A strategic recruitment approach is essential for attracting and retaining skilled healthcare professionals (Phillips & Gully, 2015). For this reason, recruitment messaging should align with the organization's values and mission, and should target specific demographic groups that are fundamental for the healthcare workforce (Oluwaseyi Rita Owolabi et al., 2024). For instance, younger healthcare workers may be motivated by internships with potential conversion to permanent employment, higher salaries, clear career pathways, flexible hours of work, and an innovative work environment that aligns with modern job expectations (Campbell et al., 2012; Fernandes et al., 2022; Holst, 2020). Additionally, leveraging advanced technologies such as AI for candidate screening, digital platforms for job postings and virtual reality tours of the workplace can enhance the recruitment process by making it more efficient and engaging for potential hires (Black & Van Esch, 2020). However, the implementation of such AI-driven tools needs to be managed carefully to prevent biases. AI-based decision support systems, for instance, can lead to automation bias where decision-makers might uncritically accept the system's

recommendations (Kupfer et al., 2023). This risk necessitates that decision-makers are informed about potential system errors and the critical importance of human oversight in the decision-making process (Cummings, 2016). Implementing strategies to mitigate these biases is essential to uphold ethical and legal standards and ensure fair and effective use of AI in recruitment (Kupfer et al., 2023).

## ***8.2. Onboarding and Transition Programs***

The importance of structured onboarding programs cannot be overstated. These programs are designed to help new employees integrate effectively into the healthcare setting, which is critical for reducing turnover rates (Hernandez et al., 2020). Effective onboarding entails initial explicit training that immerses new staff into organizational culture, operations and unit-specific practice demands (Ross et al., 2014). Additionally, specialised transition programmes that help staff move to different units or roles within the organization and therefore ease the stress associated with such transitions, and strengthen commitment towards the organization (De Vries et al., 2023).

## ***8.3. Professional Development and Continuous Learning***

Ongoing professional development is a key factor in staff retention. Providing continuous education and training opportunities not only helps in building a competent workforce, but also signals the organization's commitment to its employees' professional growth (Burke et al., 2024; Sonnino, 2016). Clear career development opportunities within the organization give employees a roadmap to follow and keep them motivated, thereby reducing turnover and fostering a more experienced and skilled workforce (World Health Organization, 2016).

#### ***8.4. Mentoring and Support Systems***

Mentoring programs (for trainees and new graduates, or for people new to the profession) has a positive effect on retention by providing on-going support and guidance that helps new healthcare professionals develop an understanding of their roles and of how to balance their personal goals with the goals of the organization (Fleig-Palmer & Rathert, 2015). Supportive mentoring relationships contribute to higher job satisfaction and a deeper commitment to the organization (Kakyo et al., 2022).

#### ***8.5. Cultural Fit and Employee Wellbeing***

Promoting a good cultural fit and employee wellbeing can be central to an organization's recruitment and staffing strategies. Hiring processes that measure how well a candidate fits into the organization's values and the adequacy or helpfulness of the work environment will lead to greater retention (Tholen, 2023). An organization that cares for its employees' wellbeing, and creates a supportive and inclusive environment, is more likely to retain its staff and attract new, top talent (Buga, 2024).

### **Part One: Conclusion**

Overall, Canadian healthcare is a complex system, and evidence from the literature suggests that the high rates of turnover among healthcare workers requires a multi-pronged approach that responds to the immediate and future needs of workers and organizations. Consistence with evidenced-based practice, my review of the literature highlighted how findings from scholarly literature can be used in practice to address the critical issue of retention of employees within the healthcare sector. This includes understanding and mitigating the factors leading to employee turnover, which include economic burdens, psychological impacts, and

workplace conditions. My review of the literature also reveals that effective retention initiatives require strong support structures, robust professional development, a consideration of many human resources practices, and a deep focus on leadership and workplace culture.

These strategies necessitate sustained organizational support and ongoing engagement to enable sustainable improvement and adaptation over time. Creating a supportive work environment that not only attracts but also keeps qualified healthcare workers requires engaging all stakeholders in a collaborative effort. By prioritizing staff well-being and incorporating fundamental organizational retention strategies into their daily operations, hospitals and health systems may cultivate a workforce that enhances patient care and strengthens organizational resilience against future crises.

## **Part 2: The Effectiveness of a Psychological Debriefing Session Intervention on Employee Retention**

Part one of the thesis focused on the important multifaceted issue of the retention of healthcare workers. A review of that part of my thesis makes evident challenges related to workload, burnout, and stress as factors that present challenges for retention. The literature review revealed that retention is influenced by both organizational and individual factors, including perceived organizational support, professional development opportunities, and workplace flexibility. Additionally, systemic challenges like high turnover rates, the financial burden of recruitment, and the impact of workplace culture were discussed as significant barriers to retention. The comprehensive retention plan developed in part one emphasized strategies such as improving leadership practices, fostering a supportive organizational culture, addressing mental health and wellness, and implementing structural changes like safe staffing frameworks and reduced administrative burdens. In particular, the three core strategies of leadership and empowerment, mental health and wellness supports, and fostering a safe and supportive work environment were seen as critical in part one. These three areas align with the intervention examined in part two of my thesis—namely, a psychological debriefing session designed to enhance perceived organizational support, reduce burnout and decrease the intention to leave.

The findings from part one highlighted the pressing need for interventions that directly address the root causes of burnout and workload-related stress. Specifically, the literature review revealed a lack of structured, evidence-based initiatives in healthcare settings to improve perceived organizational support and mitigate burnout. These gaps guided the choice of the psychological debriefing session as a focused intervention that aligns with the key priorities

outlined in part one. By addressing both individual and organizational factors, this intervention provides a targeted strategy to improve healthcare worker retention and well-being.

In part two, I build upon the insights gained in part one, which highlighted multiple factors impacting healthcare worker retention, including workload, burnout, and other organizational and personal challenges. This section focuses specifically on a psychological debriefing session intervention as one strategy to address key issues identified, particularly workload and burnout, which emerged as critical stressors in high-stress roles. The intervention is designed to provide emotional and psychological support while serving as an actionable step within the broader retention framework outlined in part one. This part of the thesis seeks to examine the effectiveness of the psychological debriefing session by assessing changes in perceived organizational support, burnout, and intention to leave. The choice of these variables is directly informed by the literature review in part one, which identified them as crucial determinants of retention (De Simone et al., 2018; Woodhead et al., 2016; Wu & Liu, 2022). While the thesis takes a broad approach to retention strategies across the healthcare sector, this specific intervention targets medical laboratory professionals—a group uniquely positioned within healthcare due to their critical roles and high exposure to stress. Building upon the strategic framework provided in part one, part two focuses on a specific intervention that is consistent with the key principles and strategies identified earlier, such as addressing workload-related stressors and fostering perceived organizational support. This intervention serves as a practical application of the broader retention strategies outlined in part one, demonstrating how these concepts can be implemented in a targeted and actionable manner. The integration of these two parts ensures that the thesis not only provides a scholarly-grounded basis for improving

retention but also designs and lays the foundation to test an intervention (namely the psychological debriefing session intervention) aimed at achieving that goal.

Healthcare providers play a vital role in delivering direct care within the medical system. They are the backbone of healthcare and face numerous challenges because of their essential roles; their work is marked by high stress levels and demanding requirements (Chen et al., 2022; Dugani et al., 2018). These professionals need specialized knowledge, must handle complex care, and manage emergency situations effectively (Laschinger et al., 2001). The COVID-19 pandemic has made these challenges more apparent, revealing that healthcare workers are at a significantly higher risk of stress than the general population and emphasizing the need for more supportive measures (Alnaeem et al., 2022). Additionally, factors like workload, staff conflict and turnover increase stress levels, impacting not just nurses but all caregivers within the healthcare system (Van Bogaert et al., 2013).

Previous research has shown that individuals have different abilities to cope with stress, which impacts how they respond to demanding work conditions as well as burnout (Dall'Ora et al., 2020). Individual factors, such as personality traits and sociodemographic variables, significantly influence burnout. The Big Five personality traits (extraversion, neuroticism, agreeableness, conscientiousness, and openness to experience) are closely associated with burnout (Kim et al., 2019; Pérez-Fuentes et al., 2019). Extraversion and agreeableness act as protective factors, reducing burnout risk, while neuroticism or emotional instability, increases susceptibility. Conscientiousness decreases burnout likelihood, and openness to experience enhances professional efficacy and reduces depersonalization, is described by Maslach et al., (2001, p. 399) as a "negative, callous, or excessively detached response to various aspects of the job", (Edú-Valsania et al., 2022).

Sociodemographic factors also modulate burnout (Adriaenssens et al., 2015). Age generally shows an inverse relationship with burnout, though older individuals might face higher depersonalization risk but also greater personal accomplishment (O'Connor et al., 2018). Women often experience more emotional exhaustion and low professional fulfillment; whereas, men are prone to depersonalization. Single workers, especially men, are more vulnerable to burnout compared to those with partners while working women face added risk due to balancing professional and household responsibilities (Edú-Valsania et al., 2022).

This previous research provides important insights into the relationship between burnout and both personality traits and sociodemographic factors, which are factors that individuals and their employers arguably have less ability to change. Although coping strategies such as problem-focused or emotion-focused coping can help manage stress (Lazarus & Folkman, 1984) this study emphasizes perceived organizational support as a central factor in mitigating burnout and turnover intentions.

It is critical to understand how ongoing stress and a heavy workload contribute to the problem of burnout, and ultimately turnover, among healthcare personnel, which affects both employees and patients. The issue is made worse by high turnover rates in healthcare facilities, which can compromise patient care by decreasing productivity (Hayward et al., 2016). When experienced staff leave, it becomes necessary to recruit and train new employees, which is an expensive and time-consuming procedure (Gaudenz et al., 2019). This transition places additional workload on the remaining staff, further increasing the risk of burnout, decreased productivity, and ultimately, a higher likelihood of staff turnover (Al Maqbali et al., 2021).

Given the number of challenges that healthcare professionals experience, it is important to examine the causes of turnover and implement strategies to promote retention, job satisfaction,



and overall well-being (Al Yahyaei et al., 2022; El-Jardali et al., 2009). One key factor here is perceived organizational support, which can be defined as how much workers believe their employer values their contributions and is concerned about their well-being (Eisenberger et al., 1986). Healthcare research on this subject has yielded complex findings. For example, while perceived organizational support generally enhances job satisfaction and reduces turnover intentions, its effectiveness can be moderated by individual differences such as proactive personality, with employees having higher proactive personality experiencing a weaker positive effect of perceived organizational support on job satisfaction (Maan et al., 2020).

Understanding these nuanced effects is essential because it highlights the necessity for tailored interventions. Measures to enhance perceived organizational support should be designed to address the diverse needs of healthcare professionals (Chami-Malaeb, 2022; Sheng et al., 2023). Adopting such strategies enables organizations to better manage detrimental impacts of stress, enhancing overall workplace atmosphere (Liu et al., 2018).

Furthermore, perceived organizational support plays a critical role in reducing burnout and mitigating the intention to leave by alleviating the pressures associated with job-related stress and emotional fatigue, both of which are prevalent in healthcare settings (Xu & Yang, 2021). When employees feel valued, supported within workplace, resilience is strengthened, reducing risk of burnout (Rhoades & Eisenberger, 2002).

Healthcare organizations must integrate perceived organizational support into broader strategies addressing organizational, individual needs (Fleming, 2024). This involves providing resources for stress management, fostering culture of appreciation, ensuring policies are flexible enough to accommodate varying needs of healthcare workers (Wakerman et al., 2019). Such

multifaceted approaches are essential for creating a sustainable and healthy work environment that promotes long-term job satisfaction and reduces turnover rates.

Given these considerations, in this research, I seek to examine the impact of an intervention, specifically psychological debriefing sessions, on perceived organizational support, burnout, and intention to leave among healthcare providers. By exploring these factors, my study aims to contribute to the literature, providing insights that can inform policies and interventions designed to support healthcare professionals, reducing burnout and improving both perceived organizational support and retention. In essence, a debriefing session aims to offer emotional and psychological support to healthcare workers, providing structured opportunities to discuss and process work experiences. These sessions are designed to reduce stress and emotional exhaustion, thus mitigating effects of burnout and lowering intention to leave (Zhang et al., 2020). On this basis, I propose that by implementing a psychological debriefing session intervention, healthcare organizations can create an environment that promotes psychological resilience and professional well-being.

It is important to consider the main stressors and support systems that affect burnout and turnover intentions to establish the groundwork for comprehending the wider effects of workplace interventions on healthcare professionals. One of the primary issues healthcare providers face is workload; workload is frequently identified as a significant cause of stress in healthcare environments (Tabur et al., 2022). Care providers who have a high workload may experience feelings of burnout, which is characterized by emotional exhaustion, cynicism, and a diminished sense of personal accomplishment among providers (Shirom et al., 2006). This state of burnout is a critical issue, as it directly influences healthcare providers' intention to leave, threatening the stability and continuity of care in healthcare institutions (Hämmig, 2018).

To mitigate these negative outcomes, perceived organizational support can play a crucial role in improving employee well-being and retention. Perceived organizational support refers to healthcare workers' perceptions of how much their organization values their contributions and cares for their well-being (Chen et al., 2022). By fostering a supportive work environment, organizations can alleviate some of the stress associated with excessive workloads and burnout, potentially reducing employees' intentions to quit. While perceived organizational support may not eliminate the impact of high workloads, it can enhance employees' resilience and ability to cope with workplace challenges.

Another important construct is self-efficacy, or one's belief in one's ability to carry out tasks and accomplish objectives (Bandura, 1997). Among caregivers, high levels of self-efficacy are associated with greater confidence in their ability to perform their roles effectively and positively impact those under their care. This belief not only enhances job satisfaction but also reduces the likelihood of turnover, as individuals with strong self-efficacy are more likely to view their work as meaningful and within their capacity to succeed (Liu & Aunguroch, 2019).

While burnout has been researched in various healthcare roles, medical laboratory professionals have received less attention (Gohar & Nowrouzi-Kia, 2022). This group, which includes pathologists, residents, and numerous laboratory technologists, plays an important role in patient care through activities such as diagnosing diseases, guiding treatment plans, and monitoring treatment responses. Additionally, they contribute to efficient test utilization and uphold laboratory quality and public health standards, which are essential for improving patient outcomes (Kelly et al., 2020). Therefore, understanding burnout's prevalence and impact on medical laboratory personnel is crucial for maintaining the quality and effectiveness of healthcare services. This study is designed to use pre- and post-surveys to assess the

effectiveness of a psychological debriefing session provided by a healthcare organization for medical laboratory professionals. By analyzing the data collected from these surveys, I seek to determine how a psychological debriefing session impacts perceived organizational support, burnout, self-efficacy and intention to leave among medical laboratory professionals.

## **Theoretical Background and Literature Review**

### **Theoretical background**

In the context of factors contributing to burnout among human-service workers, one theoretical model that has been proposed is the Job Demands-Resources (JD-R) model (Demerouti et al., 2001; Schaufeli & Bakker, 2004). The JD-R model, including the results of a previous study, is visually depicted in Figure 1. This model has gained widespread recognition for its applicability in examining the factors that influence employee engagement, well-being, and both individual and organizational outcomes (Kaiser et al., 2020; Li et al., 2022; Mijakoski et al., 2018). Indeed, the JD-R model has been used across various sectors, including education, finance, and healthcare (Bakker et al., 2004).

The JD-R model is built upon several key propositions (Bakker & Demerouti, 2007). Firstly, job characteristics can be categorized into job demands, which typically result in job strain and require coping efforts, and job resources, which aid in achieving goals and promote personal growth (Demerouti et al., 2001). Job demands can be further divided into physical, emotional, and mental demands (Bakker & Demerouti, 2007). Indeed, workload has been included as an example of job characteristics (Xanthopoulou et al., 2007). For that reason, I have included a measure of workload [see measures section]. Secondly, the model suggests that job demands are linked to a health-impairment process (exhaustion), while job resources are

associated with a motivational process (engagement). Previous research has used a measure of burnout to assess exhaustion (Xanthopoulou et al., 2007). Consistent with that research, as I discuss in more details later in this paper, I included a measure of exhaustion. Measures of engagement have included dedication and previous research has shown a negative relationship between engagement and turnover (Harter et al., 2002). While I recognize the various reasons people leave an organization (see Hom et al. 2017), generally engaged and dedicated employees do not have intention to leave their employer. Given the ongoing challenges related to retention in the healthcare field, I therefore choose to examine intention to leave over engagement in this study. Thirdly, workplace resources can mitigate the detrimental impact of job demands on burnout. They are especially important in high-demand situations since they improve employee engagement (Bakker, 2015). Moreover, job strain has a negative relationship with job performance, while motivation and performance are positively correlated (Bakker & Demerouti, 2007). Professional development represents a job resource that can mitigate the relationship between job demands and exhaustion, resulting in positive work engagement. As presented later in this thesis, I expected that a training intervention based on a psychological debriefing session, as a form of professional development (Cantrell, 2008), would have similarly positive effects.

As the healthcare sector faces challenges such as staff shortages, increasing patient demands, and budget constraints (Aiken et al., 2012), the application of the JD-R model becomes particularly relevant. Furthermore, as noted by Bakker and Demerouti (2017), the model takes into account the dynamic nature of employment demands and resources, which can alter over time and in response to circumstances. This adaptability enables the evaluation of numerous elements, including team dynamics, organizational policies, and management techniques, that affect the work experiences of healthcare professionals (Vander Elst et al., 2016). Maintaining

low job demands and providing adequate resources to workers benefits organizations, employees, and service users alike.

In healthcare, creating a supportive environment is essential. Organizational support serves as a critical resource, enabling healthcare workers to meet their goals and provide high-quality care (Schaufeli & Bakker, 2004). The JD-R model highlights the importance of job resources which include organizational and social aspects such as job control, opportunities for qualification, participation in decision-making, task variety, and support from colleagues and peers, play a crucial role in this model (Demerouti et al., 2001). When the external environment lacks these resources, healthcare workers may struggle to cope with high workloads and other demands, leading to decreased motivation and potential withdrawal from their roles (Demerouti et al., 2001; Ramaci et al., 2024).

While the model traditionally emphasizes social and peer support, perceived organizational support can be viewed as an extension of these resources (Koroglu & Ozmen, 2022). Perceived organizational support provides a broader sense of support from the organization as a whole, reinforcing the availability of job resources. Applying the JD-R model to this study allows for a deeper understanding of how perceived organizational support, as a job resource, interacts with job demands, ultimately influencing burnout and intention to leave among healthcare providers.

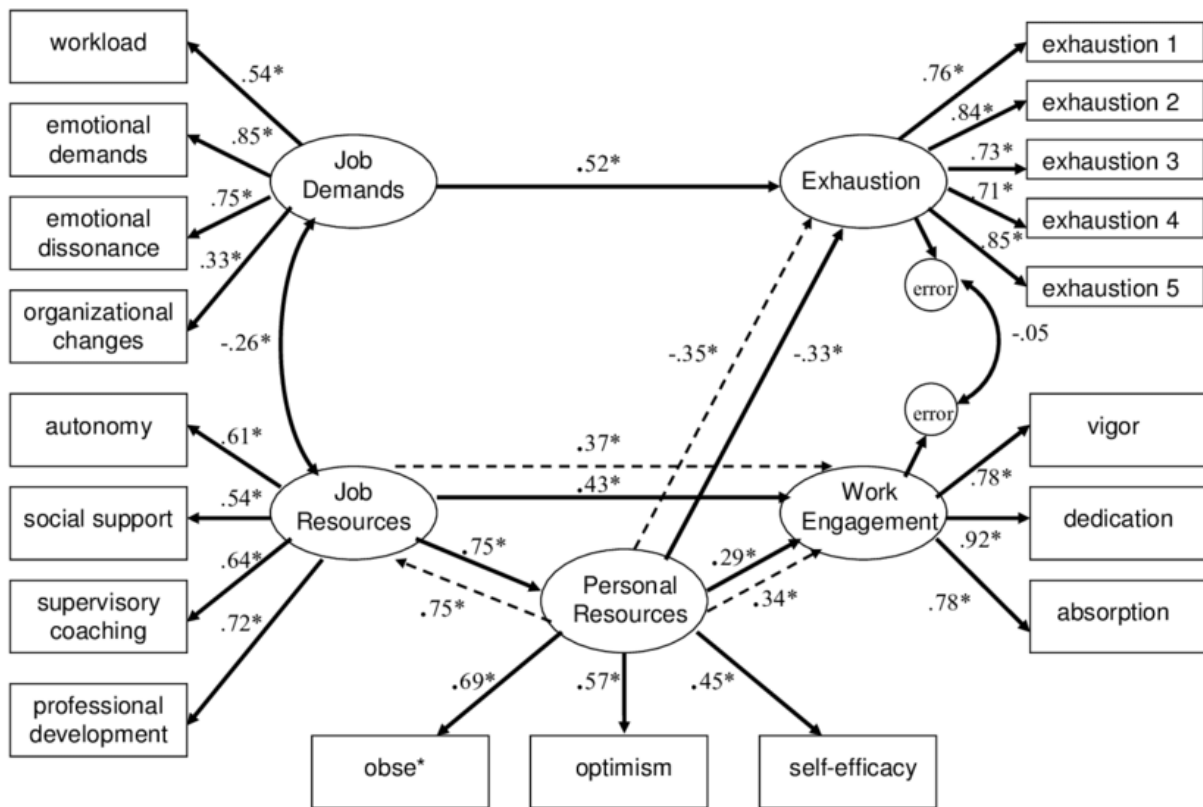


Figure 1: Job Demands-Resources (JD-R) Model adapted from Xanthopoulou et al. (2007, p. 135)

## Workload

Research exploring turnover across different generations of healthcare workers revealed that almost half of the employees from three generational cohorts cited excessive workloads and interpersonal relationship issues as reasons for contemplating leaving their positions (Takase et al., 2009). Given the ongoing challenges related to recruitment and retention of healthcare workers, such findings are troubling indeed (Koebisch et al., 2020).

Various definitions of workload have been proposed in the literature. For instance, Allard, Haas, and Hwang (2011) define workload as the psychological and physiological

resources employees expend on task performance in order to meet job requirements. Ippolito et al. (2010) argue that workload refers to an excessive burden placed on workers when their job demands exceed their human capabilities, resulting in the need to perform substantial work within limited timeframes and over extended periods, ultimately impacting their physical and mental well-being.

In the context of healthcare, workload includes "the time required to perform both 'direct' and 'indirect' care tasks, as well as other activities encompassing ward and organizational management" (Myny et al., 2011, p. 2110). As Prescott et al., (1991) explain, direct care involves all activities conducted in the presence of the patient and/or their family members; whereas, indirect care covers tasks performed away from, but for the benefit of, a specific patient. Combined, direct and indirect care constitute patient assignable time (Sovie et al., 1985; Swiger et al., 2016), which is separate from time allocated to unit management, nursing student education, staff meeting attendance, and other similar duties. Mustaffa et al., (2022) support this perspective, underlining the necessity of distinguishing between 'care-related' and 'non-care-related' tasks when assessing workload, and then associating this differentiation with an optimal skill mix.

The COVID-19 pandemic had a significant impact on medical staff workloads, particularly in Intensive Care Units, where patient admissions surged, and staff shortages became more pronounced (Lucchini et al., 2020). This unprecedented situation has intensified the strain on healthcare workers, exacerbating burnout rates and further highlighting the importance of addressing workload concerns in the healthcare profession (Alharbi et al., 2020).

Efforts to better understand and manage workloads may prove beneficial in mitigating burnout, enhancing job satisfaction, and ultimately improving patient outcomes (Aiken et al.,



2012). As such, it is critical to consider not only the patient-provider ratio but also the broader context of workload factors and the supportive environment provided by healthcare organizations (A. Li et al., 2014).

## **Burnout**

Freudenberger (1974) first introduced 'burnout' when noting declining motivation and commitment among volunteers at a mental health clinic. Burnout can appear across various job settings, though it tends to be more common in roles that require extensive, direct client interaction (Phillips, 2020). Healthcare is one such field, where workers regularly encounter high stress and emotional demands (De Hert, 2020). This issue is particularly relevant for medical laboratory professionals, critical to patient care as they manage essential diagnostic tests while dealing with heavy workloads and strict time constraints (Narainsamy & Van Der Westhuizen, 2013). Burnout manifests in complex symptoms such as emotional exhaustion, depersonalization, and a diminished sense of accomplishment (Maslach, 2003). Emotional exhaustion, the most studied of these symptoms, refers to feelings of being overwhelmed and emotionally depleted (Maslach & Jackson, 1981). In a study conducted among Canadian emergency physicians, 59% of respondents reported high levels of emotional exhaustion, illustrating the prevalence of this issue in high-stress medical environments (De Wit et al., 2024). Emotional exhaustion scores also saw a notable increase between 2020 and 2022, reflecting the prolonged effects of the COVID-19 pandemic on healthcare professionals (De Wit et al., 2024).

A study focused on medical laboratory professionals in Ontario, Canada, revealed that these workers, who are the focus of part two of my thesis, face high levels of burnout, with significant factors including understaffing, high workloads, and disruptive behaviors in the workplace (Nowrouzi-Kia et al., 2022). An American cross-sectional survey also indicated that

85.3% of laboratory professionals experience burnout, and 96.1% experience job stress (Garcia et al., 2020). Among Canadian laboratory medicine trainees during the COVID-19 pandemic, burnout affected 63%, while 47% showed signs of depression (Han et al., 2023). This burnout rate is considerably higher than other medical specialties, underscoring the intense pressures on laboratory medicine professionals. For instance, pathology residents in the U.S. reported a 34% burnout rate (Kelly et al., 2020), while a Canadian survey of multiple specialties found 69% burnout among residents, with laboratory medicine professionals ranking lower on personal achievement measures, indicating higher burnout (Ferguson et al., 2020).

Canadian Medical Association's 2018 Physician Health Survey further confirms this trend, showing that laboratory medicine professionals exhibit some of the most concerning psychological profiles among medical specialties in Canada. The highest rates of depression and suicidal ideation were reported, with 10% of laboratory medicine physicians experiencing suicidal thoughts in the past year (Keith, 2022).

The second aspect of burnout, depersonalization, is defined as an indifferent, cold, and often even dehumanizing attitude toward clients (Maslach & Jackson, 1981). Depersonalized healthcare practitioners may mistreat patients, ignore their needs, or provide poor medical care (Mijakoski et al., 2018; Salyers et al., 2017). While some distance might be helpful in stressful or highly arousing situations, too much detachment can result in unfavorable views toward clients (Estryn-Béhar et al., 2007). Besides depersonalization and emotional tiredness, burnout causes a decrease in one's sense of competence and performance at work, which leads to emotions of diminishing accomplishment (Maslach, 2003).

Given the high-stress nature of their work and its effects on patients as well as providers, burnout among healthcare professionals has become a topic of growing concern (Aiken et al.,

2012). Numerous studies link elevated burnout levels with higher turnover rates, reduced job satisfaction, and poorer patient care (Al Sabei et al., 2020; Cimiotti et al., 2012; Halbesleben & Rathert, 2008; Jun et al., 2021; Liao et al., 2022). As a result, the healthcare sector is placing growing emphasis on identifying burnout's causes and developing interventions to mitigate its effects, aiming to improve patient outcomes and staff well-being (A. Li et al., 2014).

***Hypothesis 1:*** Workload is positively associated with higher levels of burnout among healthcare workers.

### **Intention to Leave**

There are significant financial and patient care quality consequences associated with high turnover rates among healthcare providers. Studies have found that facilities with high nurse turnover rates often see poorer patient outcomes, including more deaths, longer hospital stays, and a drop in care quality (Abelsen et al., 2020; Marufu et al., 2021). Physician turnover also harms care continuity, resulting in patient dissatisfaction and additional financial losses from disrupted services (Pappas et al., 2022).

However, the broader issue is the intention to leave, which is the precursor to actual turnover. The intention to leave refers to an employee's consideration of departing from their current organization, representing a conscious and deliberate desire to leave in the near future (Mobley et al., 1978; Mowday et al., 1982; Tett & Meyer, 1993). Many studies have shown that high levels of burnout significantly contribute to this intention to leave (Al Zamel et al., 2020; Chan et al., 2013; Estryn-Béhar et al., 2007; Maslach et al., 2001). El-Jardali et al., (2009) noted that increased workloads due to staff shortages lead to stress, burnout, and low job satisfaction, all of which heighten the intention to leave.

High employee turnover has psychological effects that go beyond the individual workers themselves, impacting the remaining staff members' morale and job satisfaction. According to Mueller and Price, (1990), a culture of instability brought about by frequent turnover lowers work satisfaction and may even lead to more turnover. The departure of experienced personnel further leads to a decline in institutional knowledge, crucial for effective patient care and the efficiency of the organization (Poon et al., 2022).

While research on the intention to leave has predominantly focused on roles such as nursing and physician positions, there is a growing need to understand this phenomenon among medical laboratory professionals (Dellie et al., 2019). The detection, diagnosis, and treatment of diseases depend heavily on laboratory personnel, whose turnover has an important influence on the provision of healthcare. These specialists frequently operate in harsh environments, such as poorly equipped facilities that do not adhere to safety and infection control regulations. This dissatisfaction and loss of faith in their profession contribute to high staff turnover, ultimately affecting the quality of clinical care (Dellie et al., 2019; Novis et al., 2020).

Although there is limited data specifically on laboratory professionals in the North American context, the issues leading to their intent to leave are critical to explore. Understanding and addressing these factors is essential, as their work impacts almost all aspects of patient care.

Healthcare providers' intention to leave has been made worse by their perception of an unsafe work environment, especially during the COVID-19 pandemic. Due to the high risk of disease transmission to themselves and their families, a large number of healthcare personnel experienced severe physical and psychological pressures, which impacted their decision to leave from their jobs (Alnaeem et al., 2022). According to a study, healthcare professionals who were more likely to be exposed to COVID-19 and had heavier workloads were also more likely to

think about quitting their employment during the pandemic (Alnaeem et al., 2022). In light of these factors, it is crucial to address the intention to leave because employee turnover, whether it be voluntary or involuntary, can have serious repercussions for an organization.

***Hypothesis 2:*** Burnout is positively associated with higher levels of intention to leave among healthcare workers.

### **Perceived Organizational Support**

Perceived organizational support is a crucial factor in understanding employee retention and satisfaction. Perceived organizational support refers to employees' perceptions of how much the organization values their contributions and cares about their well-being (Eisenberger et al., 1986). When employees feel supported and appreciated by their organization, they develop a sense of commitment, which leads to enhanced performance, good attitudes and behaviours (Rhoades & Eisenberger, 2002; Yadav & Rangnekar, 2015). While coping strategies are not the focus of this study, perceived organizational support may indirectly enhance their effectiveness by fostering an environment of trust and security where employees feel encouraged to seek help or reframe stressors.

Research has shown that favorable organizational outcomes like job satisfaction, performance and a decreased intention to leave an organization are positively correlated with high levels of perceived organizational support (Chen et al., 2005; Shore & Wayne, 1993). Eisenberger et al., (2002), for example, discovered that workers were more devoted to the company and less likely to quit if they felt their managers cared about their work-life balance and provided them with high levels of support.

A meta-analysis by Kurtessis et al., (2017) highlighted the impact of perceived organizational support in lowering turnover intentions while confirming the favourable effect of this support on the employee-organization connection. Their findings suggest that when employees feel adequately supported by their organization, the emotional connection to the company deepens, thereby reducing the desire to leave. Lynch et al., (1999) similarly found that strong perceived support can help counteract negative attitudes and subpar performance, as employees who feel valued generally exhibit higher levels of motivation. This notion becomes particularly relevant during periods of organizational upheaval or crisis. Strong organizational support during such times can ease resistance to change, helping to lower turnover rates. For example, during the COVID-19 pandemic, healthcare workers who felt supported by their organizations were far less likely to consider leaving their roles despite the overwhelming stress and increased workloads they faced (Zhu et al., 2023).

In healthcare settings, heavy administrative duties and extensive managerial responsibilities can limit leaders' availability to staff, leading healthcare workers to perceive organizational support as inadequate and fostering feelings of stress and undervaluation (Gadolin et al., 2022). Additionally, excessive workloads can overwhelm employees, reducing their capacity to engage with organizational support initiatives and diminishing their sense of being valued by the organization (Brotheridge, 2001). This heightened demand not only restricts managerial support but also impairs employees' ability to utilize available resources effectively, thereby strengthening the negative relationship between workload and perceived organizational support (Brotheridge, 2001).

Research in emergency healthcare settings highlights that intense workloads, often driven by prolonged shifts and inadequate resources, elevate stress levels, leaving healthcare workers

feeling unsupported by their organizations (Doğan et al., 2024). Excessive workloads can also create perceptions of psychological contract breaches, where employees feel that their organizations fail to address their needs, further eroding trust and perceived organizational support (Tayfur Ekmekci et al., 2021). These factors reinforce the association between high workloads and reduced perceptions of organizational support, as employees increasingly perceive themselves as undervalued (Doğan et al., 2024). Consequently, higher workloads are consistently associated with lower levels of perceived organizational support among healthcare workers, underscoring the need for targeted interventions to alleviate the negative impacts of workload on staff well-being and organizational dynamics.

The principles of social exchange theory are based on the premise that human relationships are formed by the use of a subjective cost-benefit analysis and the comparison of alternatives (Cropanzano & Mitchell, 2005). In the workplace context, this theory suggests that employees engage in a reciprocal relationship with their organization, where the perceived benefits and resources provided by the organization lead to greater employee commitment and productivity. Thus, it can be argued that the impact of resources and support provided by an organization is more significant when employees perceive these offerings as voluntary gestures rather than as obligations imposed by outside forces (Rhoades & Eisenberger, 2002). Accordingly, healthcare workers are more likely to feel appreciated and respected when they think that their employer actively and voluntarily offers support, such as competitive pay, chances for advancement, professional development, and participation in decision-making processes (Cotterell et al., 1992; Dawson et al., 2014; Gardner et al., 2004; Peluso et al., 2017). The experience of burnout and intention to leave among healthcare professionals is significantly impacted by this notion of genuine organizational support. Healthcare professionals are more

likely to feel a sense of loyalty and belonging when they believe their employer genuinely cares about their professional development and well-being; this can lessen the effects of burnout and decrease the likelihood that they will decide to leave the company (Eisenberger et al., 1997). On the contrary, when organizational support is perceived as being driven by external forces, such as labor union negotiations or government regulations, the positive impact of such support may be lessened, as it is not seen as a genuine expression of care and respect for the healthcare workers (Rhoades & Eisenberger, 2002). To address the concerns of burnout and turnover intentions, it is therefore important to foster a work environment where healthcare professionals see the support they receive as a true representation of the organization's commitment to their well-being.

***Hypothesis 3:*** Workload is negatively associated with higher levels of perceived organizational support among healthcare workers.

***Hypothesis 4:*** Intention to leave is negatively associated with higher levels of perceived organizational support among healthcare workers.

### **Self-Efficacy**

Perceived self-efficacy, a core element in social cognitive theory, is described by Bandura (1982, p. 122) as "judgments of how well one can execute courses of action required to deal with prospective situations." Luszczynska et al. (2005) suggest that individuals with a stronger sense of self-efficacy are more capable of managing stress and facing various challenges with greater resilience. According to Chang et al. (2018), burnout significantly impacts nurses' self-efficacy, leading to a reduction in their confidence to perform well, which in turn affects their intention to remain in their roles. This finding underscores the vital role that self-efficacy plays in not only maintaining job performance but also supporting long-term employee retention.



Additionally, Alidosti et al. (2016) found that nurses who reported higher levels of self-efficacy experienced reduced burnout, indicating that self-efficacy acts as a protective factor against the overwhelming emotional and physical toll of their job demands. Salanova et al. (2002) further emphasized that individuals who possess greater self-efficacy are less vulnerable to emotional exhaustion and burnout, reinforcing its significant influence on preserving mental well-being, job satisfaction, and overall career sustainability. Moreover, perceived organizational support has also been identified as a critical factor in enhancing self-efficacy by providing essential resources, mentorship, and emotional backing. Musenze et al. (2021) revealed that employees who perceive strong support from their organization develop higher confidence in their own abilities, leading to an increase in self-efficacy. This heightened belief in their capabilities allows employees to engage more deeply in their work, while also equipping them with the necessary resilience to confront workplace challenges effectively. As a result, the more support employees feel from their organization, the more capable they become in handling work-related difficulties. This, in turn, leads to lower levels of burnout and enhanced performance in their roles (Caesens & Stinglhamber, 2014). The relationship between organizational support and self-efficacy proves crucial for fostering not only resilience but also employee well-being and long-term productivity, making it an integral element in workplace dynamics.

***Hypothesis 5:*** Self-efficacy is positively associated with higher levels of perceived organizational support among healthcare workers

***Hypothesis 6:*** Self-efficacy is negatively associated with intention to leave among healthcare workers, with higher levels of self-efficacy linked to lower intention to leave.

**Hypothesis 7:** Self-efficacy is negatively associated with higher levels of burnout among healthcare workers

## **Intervention**

Part one of this thesis revealed that factors related to a supportive environment, interventions designed to reduce stress and burnout (Barrientos-Trigo et al., 2018; Buruck et al., 2019), mental health and wellness supports (Brand et al., 2017; Søvold et al., 2021) and supportive workplace relationships (De Kock et al., 2022; Haas, 2020; Kakyo et al., 2022) could play a role in enhancing retention and/or reducing turnover. In this study, the organization in question implemented psychological debriefing sessions. In these sessions participants shared their current struggles related to the workplace and through the guidance received from peer participants as well as peer facilitators who performed similar roles in the organization as the participants. They explored ways to overcome these challenges as well as any recourses available within the organization that could be used to address challenges shared. In part two, I seek to examine the impact of an intervention grounded in a psychological debriefing session on the relationship between perceived organizational support, burnout, workload, and intention to leave among healthcare providers. The JD-R model informed this study by providing a framework to understand how job demands (e.g., workload, emotional strain) and job resources (e.g., organizational support) interact to influence burnout and turnover intentions. By using the JD-R model, I seek to investigate how a psychological debriefing session can serve as a job resource that mitigates the negative impact of high job demands on burnout. A debriefing session provide emotional and psychological support, which can enhance perceived organizational support among healthcare workers (Evans et al., 2023). This, in turn, is expected to reduce burnout and lower the intention to leave.

**Hypothesis 8:** A psychological debriefing session increases perceived organizational support among healthcare workers.

**Hypothesis 9:** A psychological debriefing session reduces burnout.

**Hypothesis 10:** A psychological debriefing session increase lowers intention to leave.

The debriefing session intervention can be considered a form of training. A key component of training effectiveness is self-efficacy (Baldwin & Ford ,1988). Self-efficacy is necessary for post-training performance (see review in Saks and Haccoun, (2019)) and training has been demonstrated to raise post-training self-efficacy (Brown et al., 2016).

**Hypothesis 11:** A psychological debriefing session increases self-efficacy.

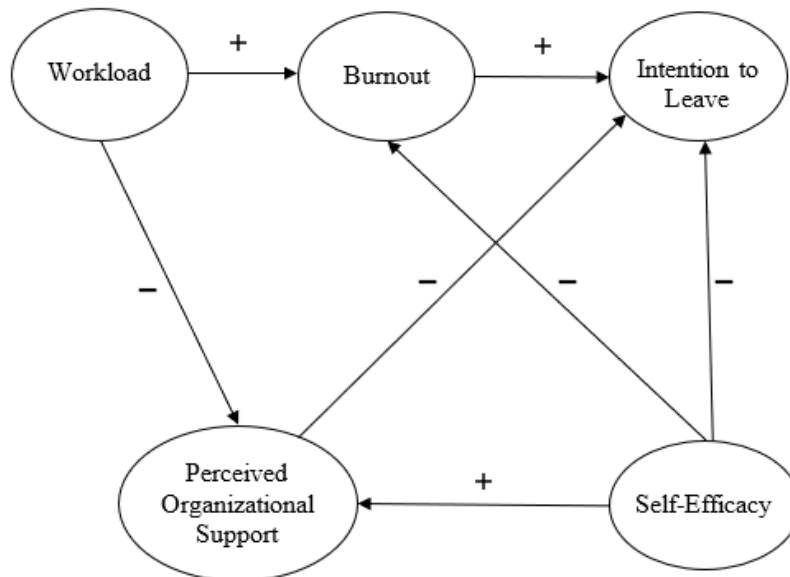


Figure 2: Conceptual Model of Study Hypotheses

## Research Gap

Even though the JD-R model has been widely used to study many facets of employee engagement and well-being, there is still much to learn about the precise function that perceived organizational support plays within this framework—especially when it comes to the healthcare industry. The extant body of literature emphasizes the advantages of perceived organizational support in improving job satisfaction and decreasing intentions to leave (Rhoades & Eisenberger, 2002; Yadav & Rangnekar, 2015). Yet, little is known about how healthcare professionals' perceptions of organizational support influence the association between burnout and intention to leave (Bobbio & Manganelli, 2015; Chami-Malaeb, 2022).

Burnout and turnover among healthcare personnel have been exacerbated by their exceptional workload and stress, particularly during the COVID-19 pandemic. The pandemic has brought attention to how important it is to have encouraging work settings in order to lessen these stresses (Alnaeem et al., 2022). There is a lack of research on the relationship between job demands, burnout, and intention to leave in the healthcare industry, despite studies demonstrating the critical role that perceived organizational support can play in improving resilience and lowering burnout (Sheng et al., 2023).

The JD-R model has been instrumental in exploring the impact of job demands and resources on burnout (Bakker & Demerouti, 2007). However, there is a scarcity of research focusing on perceived organizational support as a unique job resource within this model (Kurtessis et al., 2017). Understanding this relationship is crucial, given that healthcare professionals often cite lack of support and excessive workloads as primary reasons for leaving their positions (Takase et al., 2009). The buffering role of perceived organizational support

against these stressors, thereby reducing burnout and turnover intentions, requires deeper investigation (Sheng et al., 2023). Additionally, research focusing on laboratory staff is notably scarce compared to other healthcare roles such as nurses and physicians, despite their critical contributions to patient care, from diagnosing diseases to informing treatment plans and monitoring responses (Nowrouzi-Kia et al., 2022). Addressing this gap is not only academically significant but also crucial for developing practical interventions to support healthcare workers, ultimately contributing to better patient care and organizational outcomes (Alnaeem et al., 2022; A. Li et al., 2014).

## **Methodology**

### **Research Design**

In order to assess the effect of a psychological debriefing session, as a training intervention, I used a one- group pretest–posttest design. As noted by Saks and Haccoun (2018, p. 544) this design can be used:

when the goal of the training evaluation is to assess trainee improvement in knowledge, skills, and/or performance. With this design, trainee attitudes, knowledge, skills, and/or job performance are measured twice, once before (pre) and once after (post) the program is completed. Training effectiveness is inferred when the post-training scores are significantly higher than the pre-training ones.

This design was chosen to assess the effectiveness of the training intervention (a psychological debriefing session) on perceived organization support, burnout, intention to leave, and self-efficacy without manipulating any independent variables or assigning participants to different conditions. While this design allows the researcher to see if scores on key variables

improve post-intervention compared to pre-intervention, it does not rule out alternative explanations for any differences found. These alternative explanations can include the following (see Cook & Campbell, 1979; Saks & Haccoun, 2018): (1) history and/or time, for example organizational events that are not related to the training intervention may have caused any differences in pre- and post scores; (2) testing, such that post-test performance improvements may be influenced simply from participants taking part in the pre-test assessment; and (3) maturation, meaning that individuals mature and grow over time and this may result in improved post-test performance scores.

Thus, I acknowledge that a true experimental design where participants were randomly assigned to one of two conditions (namely one condition comprised of those who received the intervention and a second, control, condition where participants did not receive the intervention) would have been a stronger design to test the effectiveness of the intervention (Gubbins & Rousseau, 2015; Saks & Haccoun, 2018). However, as noted by Saks and Haccoun (2018), it is often difficult to implement true experimental designs in workplaces. Indeed, a non-experimental design is considered effective in real-world settings where random assignment to different conditions is not feasible, making it highly applicable in the healthcare context (Creswell, 2014). More specifically in this case, we could not do so because the organization planned to roll out the intervention to all participants at one time such that a control group was not practical.

The specific training intervention consisted of a debriefing session designed to provide emotional and psychological support to healthcare providers. The choice on intervention was made by the organizational in question and these sessions offered a structured opportunity for participants to discuss and process their work experiences. The psychological debriefing sessions

were conducted virtually over a one-month period, with each session lasting one hour and delivered during lunchtime. While participants took part in one session each, there were a total of four sessions. The frequency and duration were chosen by the organization as it fit their context and participants' schedules, namely being conducted over lunchtime, ensuring that the sessions were accessible for all participants.

The sessions were facilitated by two professionals with extensive experience in mental health and healthcare. The facilitators used a structured approach, incorporating group guidelines to ensure confidentiality, respectful interactions, and open discussion. While the sessions were not designed as therapy, participants were encouraged to share their experiences, normalize their emotions, and receive peer support. The focus was on creating a supportive environment to foster group cohesion, validate individual feelings, and encourage participants to seek individual assistance when necessary.

In this design, self-administered, online, surveys were used to gather data at two different points in time:-when participants signed up for the psychological debriefing sessions (pre-test) and immediately after the intervention period (post-test). A challenge with self-report data is that it can suffer from common method variance (CMV), which can bias the findings (Podsakoff & Todor, 1985). CMV occurs when the same source is used to measure both independent and dependent variables, potentially inflating the observed relationships (Jakobsen & Jensen, 2015). However, research by Conway and Lance, (2010) and Brannick et al., (2010) suggests that the impact of CMV is not as pervasive as commonly believed. They argue that self-report measures are often necessary and justifiable, particularly when studying self-referential constructs such as perceived organizational support, where the individual's subjective perception is central to the concept being measured. Furthermore, Conway and Lance (2010) note that the criticism of CMV

is often overstated, as empirical evidence indicates that its effects on study outcomes are typically small and context-dependent, rather than universally distorting relationships between variables. This perspective supports the use of self-report measures in this study, given its focus on participants' perceptions and attitudes.

In this study, I did take measures to minimize potential biases associated with self-report data. This included using clear, concise questions, guaranteeing participant anonymity, and encouraging honest responses (Minto et al., 2017; Tehseen et al., 2017). Administering online surveys is not only cost-effective and efficient but also ensures that participants respond to standardized questions, reducing variability in the data (Creswell & Creswell, 2018). The anonymity provided by online surveys may also encourage participants to provide more honest responses, especially when addressing potentially sensitive topics like intentions to leave one's job.

### **Data collection procedure**

Prior to the psychological debriefing sessions, participants received an invitation email containing a link to the pre-survey. This email included a detailed explanation of the study's purpose, the expected duration for completing the survey, and an assurance regarding the confidentiality of their data (Groves, 2004). Only upon providing consent would participants proceed to the survey questions.

The first part of the pre-test survey (time 1) included a consent form, which informed participants that ethical approval had been obtained from both Memorial University's Interdisciplinary Committee on Ethics in Human Research (ICEHR; see Appendix A) and the organization's internal ethics board before data collection commenced. After obtaining consent,



participants were directed to the actual survey. To maintain anonymity, participants were asked to create a unique ID so that their initial and follow-up responses (pre and post surveys) could be matched without using any identifying information. Demographic information was also collected, including age, gender, years of experience, educational attainment (highest certificate, diploma, or degree), current job position/role, type of healthcare facility, and membership in a professional regulatory body.

The sessions were designed to last for one hour. Immediately after each psychological debriefing session, participants were sent a follow-up email with a link to the post-survey.

Both the pretest and posttest questionnaires were delivered through Alchemer (2024), an online platform that the organization uses for data collection. The surveys incorporated reverse-coded and an attention check question to assess the attentiveness and genuineness of participants (Groves, 2004). The attention check question instructed participants to select "Often" as their answer to ensure they were reading the questions carefully. All participants successfully "passed" the attention check questions. Guidelines were also provided throughout the surveys to minimize ambiguity and ensure clarity (Czaja & Blair, 2005). The surveys included a countdown built in to discourage hurried completion. This timer tracked how long each question took to complete and also highlighted replies that were finished unusually quickly, suggesting that the respondent may have been disengaged or gave a hurried response. Responses were examined for instances of speeding, with time-stamps monitoring the duration taken to complete each question. No evidence was found for speeding or disengagement. The data was also carefully examined for instances of straight-lining, in which respondents may have repeatedly chosen the same response option without giving the questions enough thought. My review of the data did

not find any evidence of straight-lining. Controls were also in place to prevent multiple submissions by a single respondent.

## **Participants**

The participants in this study were medical laboratory professionals from high-stress departments within a healthcare organization. These individuals were selected due to their frequent exposure to challenging and traumatic situations in their line of work. A total of 169 participants were initially invited to take part in the psychological debriefing sessions and the accompanying research study. The inclusion criteria required participants to be active employees within the selected departments, willing to engage in the psychological debriefing sessions as well as complete the pre- and post-surveys. Non-clinical staff and individuals not involved in the selected programs were excluded from the study to maintain focus on those most impacted by workplace stress. A total of 169 people were invited to attend the training, of which 10 participated. Out of those 10, eight participants submitted surveys: three submitted partially-completed surveys, and five completed both the pre-training and post-training surveys.

## **Measures**

A copy of all measure can be found in Appendix B. The primary measure used in this study was the Professional Quality of Life (ProQOL) Scale, which was chosen by the organization as it is specifically tailored for health workers and can also be found in Appendix B. This scale, developed by Stamm (2010), was assessed in both the pretest and post-test surveys and includes three subscales: Compassion Satisfaction, Burnout, and Secondary Traumatic Stress. Compassion Satisfaction assesses the pleasure derived from performing one's job well, reflecting positive feelings about contributing to the well-being of others and the work

environment. Higher scores indicate greater satisfaction in being an effective caregiver. Burnout evaluates feelings of hopelessness and difficulties in dealing with work or performing one's job effectively, with higher scores indicating a higher risk of burnout. Secondary Traumatic Stress assesses work-related, secondary exposure to extremely or traumatically stressful events, with higher scores suggesting higher levels of secondary traumatic stress. Stamm (2010) reports that the reliability of the three subscales was acceptable, with alpha reliabilities as follows:

Compassion Satisfaction  $\alpha = .88$ , Burnout  $\alpha = .75$ , and Secondary Traumatic Stress  $\alpha = .81$ .

While the broader ProQOL survey was an interest to the organization where this study took place, it included measures that, while valuable to the organization, were not germane to my study. In the section that follows, I discuss how the key variables of interest in this study were assessed using ProQOL.

### ***Workload. Burnout and POS***

Given the comprehensive nature of the ProQOL scale and its ability to measure various aspects of professional quality of life, it was selected to capture key constructs related to workload, burnout, and perceived organizational support. Although there is no specific subscale within the ProQOL explicitly labeled for measuring workload, two items (#19 and #23)<sup>1</sup> are relevant to this construct. These items are "Because of my work, I have very little time for a personal life" and "My workload seems endless" and both gauge workload-related stressors. Each item is scored on a five-point scale of 1 (never) to 5 (very often).

---

<sup>1</sup> The specific item numbers for each subscale are detailed in Appendix B.

Similarly, while the ProQOL does not have a specific subscale explicitly labeled for measuring perceived organizational support (POS), certain items within the scale are relevant to this construct. The five items that are relevant to POS are items 5, 13, 18, 24, and 26. These items are measured on the same five-point Likert scale, with higher scores suggesting a strong sense of support. Sample items include "I feel supported by my colleagues" and "My manager cares about my personal well-being."

The ProQOL includes a specific burnout subscale that assesses feelings of hopelessness and difficulties in dealing with work or performing job tasks effectively. The six items related to burnout are items 3, 8, 12, 15, 20, and 30. These items are also scored on the same five-point Likert scale, with higher scores indicating a higher level of burnout. Sample items include "I feel unhappy at work" and "My work exhausts me".

It is important to acknowledge that the limited sample size in this study precluded an analysis of the reliability of these subscales based on item selection. Without sufficient sample size, it was not feasible to evaluate the internal consistency of these subscales, which is an important step in determining their reliability. Therefore, while these items are conceptually aligned with the constructs under investigation, the results should be interpreted with caution.

### **Intention to Leave**

In line with the approach taken by Robson and Robson, (2016), I evaluated healthcare worker' intentions to leave their current employment using a three-item scale originally developed by Meyer et al., (1993). The utilization of these items allows for the assessment of intention to leave in a way that is both concise and specific to the nursing context A sample item is "How often do you think about leaving your current employer?" and each item was assessed

on a 7-point Likert-type scale (1= Very unlikely and 7 = Very Likely). The reliability of this scale has been consistently reported with a Cronbach's alpha ( $\alpha$ ) near 0.83, demonstrating good internal consistency (Meyer et al., 1993; Robson & Robson, 2016). This scale was assessed in both the pre-test and post-test surveys to evaluate changes over time.

### ***Self-efficacy***

Self-efficacy was assessed using the Generalized Self-Efficacy Scale developed by (Schwarzer & Matthias, 1995). This scale assesses an individual's belief in their ability to handle various situations and challenges effectively. It consists of 10 items, each rated on a 4-point Likert-type scale ranging from 1 (not at all true) to 4 (exactly true). A sample item from the scale is, "I can always manage to solve difficult problems if I try hard enough."

The Generalized Self-Efficacy Scale has been widely validated and demonstrates high reliability across different studies and cultural contexts. According to Schwarzer and Matthias (1995), the scale has an internal consistency reliability ranging from 0.76 to 0.90, indicating strong reliability. This measure was assessed in both the pre-test and post-test surveys to evaluate changes in self-efficacy over time.

### ***Other Variables***

To better understand burnout and mitigate its impact on provider retention and quality, research emphasizes the need for comprehensive investigations into the burden of provider burnout across various healthcare levels. This includes examining demographic, socioeconomic, institutional, and geopolitical factors that influence or alleviate provider burnout (Dugani et al., 2018). Prior studies have shown that demographic and work-related characteristics such as age, educational background, and years of experience significantly affect the prevalence of compassion satisfaction, compassion fatigue, and burnout among healthcare providers (Hunsaker

et al., 2015; Stodolska et al., 2023). Based on this rationale, the study incorporated the variables of: age, gender, educational attainment, years of experience in healthcare, and current job position/role.

## **Results**

The final sample consisted of five participants with diverse educational backgrounds and varying years of experience in healthcare. Given the small sample, only high-level demographic information will be presented to preserve anonymity. Most participants held a college diploma or trades certificate and years of experience ranged from under five years to over 25 years. Regarding current job positions, the majority participants held positions listed as "Other," encompassing various roles related to medical laboratory assistance.

### **Descriptive Statistics**

Descriptive statistics for the pre- and post-intervention measures of workload, burnout, perceived organizational support, intention to leave and self-efficacy are presented in Table 2.

Normally, there would be an examination of the reliability of the scales using Cronbach's alpha, a review of two-tailed Pearson correlations between key variables, as well as statistical testing of the hypotheses. However, given the very small sample size of five participants, any such analyses would violate underlying statistical assumptions and would not be recommended. For example, the minimum sample size recommended for the Cronbach's alpha test is 24 (Bujang et al., 2024). Similarly, while paired t-tests are often used to analyze or to compare pretest and post-test measures within a single sample (such as the pretest and posttest intention to leave, burnout, self-efficacy and perceived organizational support measures of this study), such t-tests should not be used if the sample is less than 15 (Skaik, 2015). Moreover, Lumley et al.

(2002) note that the t-test is generally robust to violations of normality in larger samples due to the Central Limit Theorem; however, in smaller samples, this robustness diminishes significantly, making the results unreliable when the normality assumption is violated. Additionally, while a non-parametric statistic test such as the Wilcoxon signed-rank test could be used as an alternative to paired t-tests, there should be at least six observations (Webb, 2021). For these reasons, no further statistical analysis or testing of hypotheses was undertaken.

I did, however, review the descriptive statistics presented on Table 2. My review suggests that post-test intention to leave scores are lower than pretest scores suggesting the potential for improved retention. Given the importance of retention in healthcare, this is a glimmer of hope regarding this intervention. Though I must stress that it would be premature, and indeed inappropriate, to make any sound conclusions given the very small sample at hand.

**Table 2** Statistics

	N	Mean	Median	Mode	Std. Deviation	Min	Max
Workload_Pre	5	7.60	8.00	9.00	1.67	5.00	9.00
Workload_Post	5	7.80	8.00	7.00 <sup>a</sup>	.836	7.00	9.00
Burnout_Pre	5	21.20	21.00	21.00	3.19	17.00	26.00
Burnout_Post	5	20.80	23.00	23.00	4.02	16.00	25.00
POS_Pre	5	15.20	15.00	15.00	1.48	13.00	17.00
POS_Post	5	16.00	15.00	15.00	3.08	12.00	20.00
Intention to Leave_Pre	5	14.20	15.00	10.00 <sup>a</sup>	3.70	10.00	19.00
Intention to Leave_Post	5	12.80	13.00	8.00	4.86	8.00	19.00
Self-Efficacy_Pre	5	28.80	28.00	26.00 <sup>a</sup>	2.58	26.00	32.00
Self-Efficacy_Post	5	28.80	29.00	26.00 <sup>a</sup>	1.92	26.00	31.00

a. Multiple modes exist. The smallest value is shown

## Discussion

### Scholarly Implications

Part two of this thesis sought to address a significant gap in the literature by investigating the effects of a psychological debriefing session on burnout, intention to leave, self-efficacy, and perceived organizational support among medical laboratory professionals—a group that has received comparatively little attention in the research literature. While many of these constructs have been thoroughly studied in nursing and physician roles, there is a noticeable lack of data on laboratory professionals in the North American context (Nowrouzi-Kia et al., 2022). Given that their work influences nearly every aspect of patient care, from disease diagnosis to treatment planning and response monitoring, it is critical to recognize and address the factors leading to their intention to leave. Additionally, burnout and turnover among healthcare personnel have been exacerbated by their exceptional workload and stress, particularly during the COVID-19 pandemic, further emphasizing the importance of supportive work environments in alleviating these stressors (Alnaeem et al., 2022).

This study also makes a unique contribution to the literature by applying the Job Demands-Resources model to a population of medical laboratory professionals, a group that has not been extensively studied within the context of this model. The JD-R model has been instrumental in exploring the impact of job demands and resources on burnout (Bakker & Demerouti, 2007). However, research focusing on perceived organizational support as a unique job resource within this model is scarce, despite its potential to improve resilience and reduce burnout (Sheng et al., 2023). Given that many medical professionals claim lack of support and excessive workloads as main reasons for leaving their jobs, understanding this relationship is highly important (Takase et al., 2009). Moreover, by incorporating perceived organizational



support as a critical job resource within the JD-R model, this study suggest it may have the potential to mitigate the adverse effects of high job demands, thereby reducing burnout and turnover intentions. However, a more in-depth investigation, with a larger sample, would be needed prior to making any conclusions in that regard.

The examination of a psychological debriefing session could provide insightful information about the real-world effectiveness of organized psychological and emotional support interventions in healthcare settings. While the small sample size includes statements concerning the efficacy of the intervention, the hypotheses, measures, and design presented can be used by others in future research in this area.

### **Practical Implications**

From a practical standpoint, this study can lay a valuable foundation for healthcare administrators and policymakers in addressing the ongoing challenges of employee retention. Understanding the complex interplay between workload, burnout, and organizational support can inform targeted interventions to bolster retention of healthcare workers. By understanding these dynamics, healthcare organizations can develop more effective strategies to support their workforce, ultimately leading to improved patient outcomes and organizational performance (Alnaeem et al., 2022; A. Li et al., 2014). Healthcare organizations can take advantage of the design and measures included in part two of this thesis as a foundation for assessing psychological debriefing sessions and similar interventions within their workplaces. These practical applications aim to provide structured emotional and psychological support to healthcare professionals, particularly those in high-stress roles, to mitigate burnout and reduce turnover. By doing so, organizations can perhaps foster a more resilient workforce, thereby

ensuring that critical roles such as those held by laboratory professionals are adequately supported and retained.

This study offers practical insights for healthcare organizations considering the implementation of psychological debriefing sessions to support healthcare professionals. One key consideration is the timing of these sessions. In this study, the psychological debriefing sessions were conducted over a one-month period, summertime, with each session lasting one hour during lunchtime. While this scheduling may seem convenient, it could have inadvertently limited participation, as some employees might prefer to use their lunch break for rest or personal tasks rather than attending a work-related session or been on vacation. Future implementations could explore alternative timing, such as scheduling sessions outside of peak work hours or summertime and/or offering multiple time slots to accommodate different schedules, ensuring higher participation and more effective outcomes.

### **Limitation and future research**

Every research endeavor has its limitations, and part two of this thesis is no exception. One of the main limitations is the use of a one-group pretest-posttest design. As noted earlier, the one-group pretest-posttest design is a practical choice for real-world settings where random assignment to different conditions is not feasible (such as the context of this study); however, it does have inherent limitations. This design is susceptible to threats to internal validity, including history-related effects (e.g., organizational events during the intervention), maturation (e.g., personal changes over time), and testing biases (e.g., participants' post-test responses being influenced by familiarity with the pre-test). These factors make it challenging to definitively attribute observed changes solely to the intervention (Cook & Campbell, 1979; Saks & Haccoun,

2018). Additionally, the lack of a control group further limits the ability to draw causal conclusions, even if a larger sample size were available. Without a control group, it is impossible to rule out the influence of external factors or confounding variables that may have contributed to changes between pre- and post-intervention scores. Thus, true experimental designs should be considered in any future investigations of this intervention.

Additionally, the timing of the psychological debriefing sessions—conducted during lunchtime and during vacation season—may have limited trainee participation in the intervention. Future research should explore alternative scheduling options, such as offering sessions during different times of the day or year as well as providing multiple session options, to increase participation and potentially improve the effectiveness of the intervention.

Additionally, this study relies solely on self-reported measures, which may introduce response biases such as social desirability and recall errors. Although steps were taken to ensure anonymity and encourage honest responses, the inherent limitations of self-report data cannot be completely eliminated. Despite efforts to protect respondents' privacy and promote truthfulness, self-report data still has inherent limitations that cannot be fully overcome.

Building on the above, although efforts were made to minimize common method variance, the single source of data (online surveys) could still present challenges in this regard. Future studies should consider using multiple data sources and methods to further mitigate common method variance and enhance the validity of findings.

The generalizability of the findings is another issue. Because the study was carried out in one particular organizational context and geographic area, even if statistically significant differences were found with a larger sample, it is possible that the findings would not apply to

other situations or areas. Future research should aim to replicate this study in diverse healthcare environments to enhance the generalizability of findings.

Finally, perhaps the most significant limitation relates to sample size. The limited number of participants, both in terms of only 10 people attending the psychological debriefing sessions and only five fully participating in the research is a significant constraint. Arguably recruiting healthcare workers for the study was challenging due to their high workload and the demanding nature of their jobs. The healthcare staff's intense workload made it challenging for them to find time to complete the questionnaires, which may have an effect on the data's comprehensiveness and representativeness.

## **Conclusion**

In conclusion, this two-part thesis offers a comprehensive approach designed to address the critical issue of healthcare employee retention. Part one of the thesis underscored the complexity of retention in healthcare settings, emphasizing the need for evidence-based strategies that address factors such as workload, burnout, and work environment/perceived organizational support. Development of a retention plan, informed by the literature, provides healthcare organizations with a structured framework to improve job satisfaction, reduce turnover and promote a supportive work environment.

Part two of the thesis sought to investigate the effectiveness of a psychological debriefing session intervention designed to address some of the challenges identified in part one. The study was designed to examine the relationship between perceived organizational support, self-efficacy, burnout, workload and intention to leave among healthcare providers, with a specific focus on medical laboratory professionals. Although the small sample size limits the ability to

draw definitive conclusions, the intervention offers preliminary insights into the potential benefits of psychological debriefing sessions in enhancing healthcare employee retention.

Together, these two studies show the potential value of examining evidence-based practices from the literature to inform practical interventions to improve retention in healthcare. Taken as a whole, this thesis provides a foundation that scholars and practitioners can now build upon in an effort to address the critical issue of employee retention in healthcare contexts.

## References

- Aarons, G. A., Ehrhart, M. G., Farahnak, L. R., & Sklar, M. (2014). Aligning Leadership Across Systems and Organizations to Develop a Strategic Climate for Evidence-Based Practice Implementation. *Annual Review of Public Health, 35*(1), 255–274.  
<https://doi.org/10.1146/annurev-publhealth-032013-182447>
- Abelsen, B., Strasser, R., Heaney, D., Berggren, P., Sigurðsson, S., Brandstorp, H., Wakegijig, J., Forsling, N., Moody-Corbett, P., Akearok, G. H., Mason, A., Savage, C., & Nicoll, P. (2020). Plan, Recruit, Retain: A Framework for Local Healthcare Organizations to Achieve a Stable Remote Rural Workforce. *Human Resources for Health, 18*(1), 63.  
<https://doi.org/10.1186/s12960-020-00502-x>
- Abou-Abbas, L., Nasrallah, R., Yaacoub, S., Yohana Ramirez Mendoza, J., & Al Wais, M. (2023). Healthcare Workers' Experiences of Workplace Violence: A Qualitative Study In Lebanon. *Conflict and Health, 17*(1), 45. <https://doi.org/10.1186/s13031-023-00540-x>
- Adams, A., Hollingsworth, A., & Osman, A. (2019). The Implementation of a Cultural Change Toolkit to Reduce Nursing Burnout and Mitigate Nurse Turnover in the Emergency Department. *Journal of Emergency Nursing, 45*(4), 452–456.  
<https://doi.org/10.1016/j.jen.2019.03.004>
- Adriaenssens, J., De Gucht, V., & Maes, S. (2015). Determinants and Prevalence of Burnout in Emergency Nurses: A Systematic Review Of 25 Years Of Research. *International Journal of Nursing Studies, 52*(2), 649–661. <https://doi.org/10.1016/j.ijnurstu.2014.11.004>
- Aguinis, H., & Kraiger, K. (2009). Benefits of Training and Development for Individuals and Teams, Organizations, and Society. *Annual Review of Psychology, 60*(1), 451–474.  
<https://doi.org/10.1146/annurev-psych.60.110707.163505>
- Aiken, L. H., Sermeus, W., Van den Heede, K., Sloane, D. M., Busse, R., McKee, M., Bruyneel, L., Rafferty, A. M., Griffiths, P., Moreno-Casbas, M. T., Tishelman, C., Scott, A., Brzostek, T., Kinnunen, J., Schwendimann, R., Heinen, M., Zikos, D., Sjetne, I. S., Smith, H. L., & Kutney-Lee, A. (2012). Patient Safety, Satisfaction, and Quality of Hospital Care: Cross Sectional Surveys of Nurses and Patients in 12 Countries in Europe and the United States. *BMJ, 344*(mar20 2), e1717–e1717.  
<https://doi.org/10.1136/bmj.e1717>

- Al Maqbali, M., Al Sinani, M., & Al-Lenjawi, B. (2021). Prevalence of Stress, Depression, Anxiety and Sleep Disturbance Among Nurses During the COVID-19 Pandemic: A Systematic Review and Meta-Analysis. *Journal of Psychosomatic Research, 141*, 110343. <https://doi.org/10.1016/j.jpsychores.2020.110343>
- Al Sabei, S. D., Labrague, L. J., Miner Ross, A., Karkada, S., Albashayreh, A., Al Masroori, F., & Al Hashmi, N. (2020). Nursing Work Environment, Turnover Intention, Job Burnout, and Quality of Care: The Moderating Role of Job Satisfaction. *Journal of Nursing Scholarship, 52*(1), 95–104. <https://doi.org/10.1111/jnu.12528>
- Al Yahyaei, A., Hewison, A., Efstathiou, N., & Carrick-Sen, D. (2022). Nurses' Intention to Stay in the Work Environment in Acute Healthcare: A Systematic Review. *Journal of Research in Nursing, 27*(4), 374–397. <https://doi.org/10.1177/17449871221080731>
- Al Zamel, L. G., Lim Abdullah, K., Chan, C. M., & Piaw, C. Y. (2020). Factors Influencing Nurses' Intention to Leave and Intention to Stay: An Integrative Review. *Home Health Care Management & Practice, 32*(4), 218–228. <https://doi.org/10.1177/1084822320931363>
- Alchemer*. (2024). Alchemer. <https://www.alchemer.com/>
- Alharbi, J., Jackson, D., & Usher, K. (2020). The Potential for COVID-19 to Contribute to Compassion Fatigue in Critical Care Nurses. *Journal of Clinical Nursing, 29*(15–16), 2762–2764. <https://doi.org/10.1111/jocn.15314>
- Alidosti, M., Delaram, M., Dehgani, L., & Maleki Moghadam, M. (2016). Relationship Between Self-Efficacy and Burnout Among Nurses in Behbahan City, Iran. *Women's Health Bulletin, 3*(4). <https://doi.org/10.17795/whb-30445>
- Allard, K., Haas, L., & Hwang, C. P. (2011). Family-Supportive Organizational Culture and Fathers' Experiences of Work-family Conflict in Sweden: Fathers' Experiences of Work-Family Conflict in Sweden. *Gender, Work & Organization, 18*(2), 141–157. <https://doi.org/10.1111/j.1468-0432.2010.00540.x>
- Allen, D. G., Bryant, P. C., & Vardaman, J. M. (2010). Retaining Talent: Replacing Misconceptions With Evidence-Based Strategies. *Academy of Management Perspectives, 24*(2), 48–64. <https://doi.org/10.5465/AMP.2010.51827775>
- Alnaeem, M. M., Hamdan-Mansour, A. M., Nashwan, A. J., Abuatallah, A., & Al-Hussami, M. (2022). Healthcare Providers' Intention to Leave Their Jobs During COVID-19 Pandemic: A Cross-Sectional Study. *Health Science Reports, 5*(6). <https://doi.org/10.1002/hsr2.859>

- Arnold, K. A., & Dupré, K. E. (2012). Perceived Organizational Support, Employee Health and Emotions. *International Journal of Workplace Health Management*, 5(2), 139–152. <https://doi.org/10.1108/17538351211239171>
- Ayer, M. (2023). Relieving Administrative Burden on Clinical Staff with Streamlined Workflows And Speech-Recognition Software. *British Journal of Nursing*, 32(Sup16b), S1–S9. <https://doi.org/10.12968/bjon.2023.32.Sup16b.S4>
- Bakker, A. B. (2015). A Job Demands-Resources Approach to Public Service Motivation. *Public Administration Review*, 75(5), 723–732. <https://doi.org/10.1111/puar.12388>
- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- Bakker, A. B., & Demerouti, E. (2017). Job Demands–Resources Theory: Taking Stock and Looking Forward. *Journal of Occupational Health Psychology*, 22(3), 273–285. <https://doi.org/10.1037/ocp0000056>
- Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the Job Demands-Resources Model to Predict Burnout and Performance. *Human Resource Management*, 43(1), 83–104. <https://doi.org/10.1002/hrm.20004>
- Baldwin, T. T., & Ford, J. K. (1988). Transfer of Training: A Review and Directions for Future Research. *Personnel Psychology*, 41(1), 63–105. <https://doi.org/10.1111/j.1744-6570.1988.tb00632.x>
- Bandura, A. (1982). Self-Efficacy Mechanism in Human Agency. *American Psychologist*, 37(2), 122–147. <https://doi.org/10.1037/0003-066X.37.2.122>
- Bandura, A. (1997). *Self-Efficacy: The Exercise of Control*. W H Freeman/Times Books/ Henry Holt & Co.
- Barrientos-Trigo, S., Vega-Vázquez, L., De Diego-Cordero, R., Badanta-Romero, B., & Porcel-Gálvez, A. M. (2018). Interventions to Improve Working Conditions of Nursing Staff in Acute Care Hospitals: Scoping Review. *Journal of Nursing Management*, 26(2), 94–107. <https://doi.org/10.1111/jonm.12538>
- Barringer, M. W., & Milkovich, G. T. (1998). A Theoretical Exploration of the Adoption and Design of Flexible Benefit Plans: A Case of Human Resource Innovation. *The Academy of Management Review*, 23(2), 305. <https://doi.org/10.2307/259376>



- Baumann, A., & Crea-Arsenio, M. (2023). The Crisis in The Nursing Labour Market: Canadian Policy Perspectives. *Healthcare, 11*(13), 1954. <https://doi.org/10.3390/healthcare11131954>
- Berry, L., & Curry, P. (2012). *Nursing Workload and Patient Care: Understanding the Value of Nurses, the Effects of Excessive Workload, and How Nurse-Patient Ratios and Dynamic Staffing Models Can Help* (1st ed). Canadian Federation of Nurses Unions.
- Black, J. S., & Van Esch, P. (2020). AI-Enabled Recruiting: What Is It and How Should a Manager Use It? *Business Horizons, 63*(2), 215–226. <https://doi.org/10.1016/j.bushor.2019.12.001>
- Blanchard, J., Li, Y., Bentley, S. K., Lall, M. D., Messman, A. M., Liu, Y. T., Diercks, D. B., Merritt-Recchia, R., Sorge, R., Warchol, J. M., Greene, C., Griffith, J., Manfredi, R. A., & McCarthy, M. (2022). The Perceived Work Environment and Well-Being: A Survey of Emergency Health Care Workers During the COVID -19 Pandemic. *Academic Emergency Medicine, 29*(7), 851–861. <https://doi.org/10.1111/acem.14519>
- Blegen, M. A., Spector, N., Ulrich, B. T., Lynn, M. R., Barnsteiner, J., & Silvestre, J. (2015). Preceptor Support in Hospital Transition to Practice Programs. *JONA: The Journal of Nursing Administration, 45*(12), 642–649. <https://doi.org/10.1097/NNA.0000000000000278>
- Bobbio, A., & Manganelli, A. M. (2015). Antecedents of Hospital Nurses' Intention to Leave the Organization: A Cross Sectional Survey. *International Journal of Nursing Studies, 52*(7), 1180–1192. <https://doi.org/10.1016/j.ijnurstu.2015.03.009>
- Boselie, P. (2014). *Strategic Human Resource Management: A Balanced Approach* (Second edition). McGraw-Hill Education.
- Bowers, K. W., Robertson, M., & Parchman, M. L. (2012). How Inclusive Leadership Can Help Your Practice Adapt to Change. *Family Practice Management, 19*(1), 8–11.
- Brand, S. L., Thompson Coon, J., Fleming, L. E., Carroll, L., Bethel, A., & Wyatt, K. (2017). Whole-System Approaches to Improving the Health and Wellbeing of Healthcare Workers: A Systematic Review. *PLOS ONE, 12*(12), e0188418. <https://doi.org/10.1371/journal.pone.0188418>
- Brannick, M. T., Chan, D., Conway, J. M., Lance, C. E., & Spector, P. E. (2010). What Is Method Variance and How Can We Cope With It? A Panel Discussion. *Organizational Research Methods, 13*(3), 407–420. <https://doi.org/10.1177/1094428109360993>

- Brook, J., Aitken, L., Webb, R., MacLaren, J., & Salmon, D. (2019). Characteristics of Successful Interventions to Reduce Turnover and Increase Retention of Early Career Nurses: A Systematic Review. *International Journal of Nursing Studies*, *91*, 47–59. <https://doi.org/10.1016/j.ijnurstu.2018.11.003>
- Brotheridge, C. M. (2001). A Comparison of Alternative Models of Coping: Identifying Relationships Among Coworker Support, Workload, and Emotional Exhaustion in the Workplace. *International Journal of Stress Management*, *8*(1), 1–14. <https://doi.org/10.1023/A:1009551028558>
- Brown, T. C., O’Kane, P., Mazumdar, B., & McCracken, M. (2019). Performance Management: A Scoping Review of the Literature and an Agenda for Future Research. *Human Resource Development Review*, *18*(1), 47–82. <https://doi.org/10.1177/1534484318798533>
- Brown, T. C., Warren, A. M., & Khattar, V. (2016). The Effects of Different Behavioral Goals on Transfer from a Management Development Program. *Human Resource Development Quarterly*, *27*(3), 349–372. <https://doi.org/10.1002/hrdq.21257>
- Bruyneel, A., Bouckaert, N., Maertens de Noordhout, C., Detollenaere, J., Kohn, L., Pirson, M., Sermeus, W., & Van den Heede, K. (2023). Association of Burnout and Intention-to-Leave the Profession with Work Environment: A Nationwide Cross-Sectional Study Among Belgian Intensive Care Nurses After Two Years of Pandemic. *International Journal of Nursing Studies*, *137*, 104385. <https://doi.org/10.1016/j.ijnurstu.2022.104385>
- Buga, L. (2024). High Retention HR Systems: Bridging Employee Wellbeing And Organizational Commitment for Sustainable Success. *Review of Economic Studies and Research Virgil Madgearu*, *17*(1), 23–47. <https://doi.org/10.24193/RVM.2024.17.107>
- Bujang, M. A., Omar, E. D., Foo, D. H. P., & Hon, Y. K. (2024). Sample Size Determination for Conducting a Pilot Study to Assess Reliability of a Questionnaire. *Restorative Dentistry & Endodontics*, *49*(1), e3. <https://doi.org/10.5395/rde.2024.49.e3>
- Bullock, J. B., Stritch, J. M., & Rainey, H. G. (2015). International Comparison of Public and Private Employees’ Work Motives, Attitudes, and Perceived Rewards. *Public Administration Review*, *75*(3), 479–489. <https://doi.org/10.1111/puar.12356>
- Bulut, C., & Culha, O. (2010). The Effects of Organizational Training on Organizational Commitment. *International Journal of Training and Development*, *14*(4), 309–322. <https://doi.org/10.1111/j.1468-2419.2010.00360.x>

- Burke, A. E., Sklansky, D. J., Haftel, H. M., Mitchell, A., & Mann, K. J. (2024). Competency-Based Medical Education and the Education Continuum: Establishing a Framework for Lifelong Learning. *Current Problems in Pediatric and Adolescent Health Care*, 101642. <https://doi.org/10.1016/j.cppeds.2024.101642>
- Buruck, G., Tomaschek, A., & Lütke-Lanfer, S. S. (2019). Burnout Prevention Team-Process Evaluation of an Organizational Health Intervention. *Journal of Public Health*, 27(6), 743–754. <https://doi.org/10.1007/s10389-018-0999-0>
- Caddy, A., Bahaa Shaaban, & Stormer, D. (2018). *Healthcare Employees' Retention Plan*. <https://doi.org/10.13140/RG.2.2.34545.76642>
- Caesens, G., & Stinglhamber, F. (2014). The Relationship Between Perceived Organizational Support and Work Engagement: The Role of Self-Efficacy and its Outcomes. *European Review of Applied Psychology*, 64(5), 259–267. <https://doi.org/10.1016/j.erap.2014.08.002>
- Campbell, K. A., Van Borek, N., Marcellus, L., Landy, C. K., Jack, S. M., & on behalf of the British Columbia Healthy Connections Project Process Evaluation Research Team. (2020). “The Hardest Job You Will Ever Love”: Nurse Recruitment, Retention, and Turnover in the Nurse-Family Partnership Program in British Columbia, Canada. *PLOS ONE*, 15(9), e0237028. <https://doi.org/10.1371/journal.pone.0237028>
- Campbell, N., McAllister, L., & Eley, D. S. (2012). The Influence of Motivation in Recruitment and Retention of Rural and Remote Allied Health Professionals: A Literature Review. *Rural and Remote Health*. <https://doi.org/10.22605/RRH1900>
- Cantrell, M. A. (2008). The Importance of Debriefing in Clinical Simulations. *Clinical Simulation in Nursing*, 4(2), e19–e23. <https://doi.org/10.1016/j.ecns.2008.06.006>
- Chami-Malaeb, R. (2022). Relationship of Perceived Supervisor Support, Self-Efficacy and Turnover Intention, The Mediating Role of Burnout. *Personnel Review*, 51(3), 1003–1019. <https://doi.org/10.1108/PR-11-2019-0642>
- Chan, Z. C. Y., Tam, W. S., Lung, M. K. Y., Wong, W. Y., & Chau, C. W. (2013). A Systematic Literature Review of Nurse Shortage and the Intention to Leave: Literature Review of Nurse Shortage and Intention to Leave. *Journal of Nursing Management*, 21(4), 605–613. <https://doi.org/10.1111/j.1365-2834.2012.01437.x>
- Chang, H., Friesner, D., Chu, T., Huang, T., Liao, Y., & Teng, C. (2018). The Impact of Burnout On Self-Efficacy, Outcome Expectations, Career Interest and Nurse Turnover. *Journal of Advanced Nursing*, 74(11), 2555–2565. <https://doi.org/10.1111/jan.13776>

- Chen, Y., Wu, H., Kuo, F., Koh, D., Guo, Y. L., & Shiao, J. S. (2022). Hospital Factors That Predict Intention of Health Care Workers to Leave Their Job During the COVID -19 Pandemic. *Journal of Nursing Scholarship*, 54(5), 607–612.  
<https://doi.org/10.1111/jnu.12771>
- Chen, Z. X., Aryee, S., & Lee, C. (2005). Test of a Mediation Model of Perceived Organizational Support. *Journal of Vocational Behavior*, 66(3), 457–470.  
<https://doi.org/10.1016/j.jvb.2004.01.001>
- Cimiotti, J. P., Aiken, L. H., Sloane, D. M., & Wu, E. S. (2012). Nurse Staffing, Burnout, and Health Care–Associated Infection. *American Journal of Infection Control*, 40(6), 486–490. <https://doi.org/10.1016/j.ajic.2012.02.029>
- Collini, S. A., Guidroz, A. M., & Perez, L. M. (2015). Turnover in Health Care: The Mediating Effects of Employee Engagement. *Journal of Nursing Management*, 23(2), 169–178.  
<https://doi.org/10.1111/jonm.12109>
- Conway, J. M., & Lance, C. E. (2010). What Reviewers Should Expect from Authors Regarding Common Method Bias in Organizational Research. *Journal of Business and Psychology*, 25(3), 325–334. <https://doi.org/10.1007/s10869-010-9181-6>
- Cook, T. D., & Campbell, D. T. (1979). *Quasi-Experimentation: Design & Analysis Issues for Field Settings*. Rand McNally College Pub. Co.
- Cotterell, N., Eisenberger, R., & Speicher, H. (1992). Inhibiting Effects of Reciprocation Wariness on Interpersonal Relationships. *Journal of Personality and Social Psychology*, 62(4), 658–668. <https://doi.org/10.1037/0022-3514.62.4.658>
- Cotton, J. L., & Tuttle, J. M. (1986). Employee Turnover: A Meta-Analysis and Review with Implications for Research. *The Academy of Management Review*, 11(1), 55.  
<https://doi.org/10.2307/258331>
- Coventry, L., & Branley, D. (2018). Cybersecurity in Healthcare: A Narrative Review of Trends, Threats and Ways Forward. *Maturitas*, 113, 48–52.  
<https://doi.org/10.1016/j.maturitas.2018.04.008>
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed). SAGE Publications.
- Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (Fifth edition). SAGE.

- Cropanzano, R., & Mitchell, M. S. (2005). Social Exchange Theory: An Interdisciplinary Review. *Journal of Management*, 31(6), 874–900.  
<https://doi.org/10.1177/0149206305279602>
- Cummings, M. L. (2016). Automation Bias in Intelligent Time Critical Decision Support Systems. In D. Harris & W.-C. Li (Eds.), *Decision Making in Aviation* (First edition, pp. 289–294). Routledge.
- Currivan, D. B. (1999). The Causal Order of Job Satisfaction and Organizational Commitment in Models of Employee Turnover. *Human Resource Management Review*, 9(4), 495–524.  
[https://doi.org/10.1016/S1053-4822\(99\)00031-5](https://doi.org/10.1016/S1053-4822(99)00031-5)
- Czaja, R., & Blair, J. (2005). *Designing Surveys*. Pine Forge Press.  
<https://doi.org/10.4135/9781412983877>
- Dall’Ora, C., Ball, J., Reinius, M., & Griffiths, P. (2020). Burnout in Nursing: A Theoretical Review. *Human Resources for Health*, 18(1), 41. <https://doi.org/10.1186/s12960-020-00469-9>
- Damian, A. J., Gallo, J., Leaf, P., & Mendelson, T. (2017). Organizational and Provider Level Factors in Implementation of Trauma-Informed Care After a City-Wide Training: An Explanatory Mixed Methods Assessment. *BMC Health Services Research*, 17(1), 750.  
<https://doi.org/10.1186/s12913-017-2695-0>
- Davis, A. L., & Rothstein, H. R. (2006). The Effects of the Perceived Behavioral Integrity of Managers on Employee Attitudes: A Meta-analysis. *Journal of Business Ethics*, 67(4), 407–419. <https://doi.org/10.1007/s10551-006-9034-4>
- Dawley, D. D., Andrews, M. C., & Bucklew, N. S. (2008). Mentoring, Supervisor Support, and Perceived Organizational Support: What Matters Most? *Leadership & Organization Development Journal*, 29(3), 235–247. <https://doi.org/10.1108/01437730810861290>
- Dawson, A. J., Stasa, H., Roche, M. A., Homer, C. S. E., & Duffield, C. (2014). Nursing Churn and Turnover in Australian Hospitals: Nurses Perceptions and Suggestions for Supportive Strategies. *BMC Nursing*, 13(1), 11. <https://doi.org/10.1186/1472-6955-13-11>
- De Bloom, J., Geurts, S. A. E., Taris, T. W., Sonnentag, S., De Weerth, C., & Kompier, M. A. J. (2010). Effects of Vacation from Work on Health and Well-Being: Lots Of Fun, Quickly Gone. *Work & Stress*, 24(2), 196–216. <https://doi.org/10.1080/02678373.2010.493385>

- De Hert, S. (2020). Burnout in Healthcare Workers: Prevalence, Impact and Preventative Strategies. *Local and Regional Anesthesia, Volume 13*, 171–183.  
<https://doi.org/10.2147/LRA.S240564>
- De Kock, J. H., Latham, H. A., Cowden, R. G., Cullen, B., Narzisi, K., Jerdan, S., Munoz, S.-A., Leslie, S. J., Stamatis, A., & Eze, J. (2022). Brief Digital Interventions to Support the Psychological Well-being of NHS Staff During the COVID-19 Pandemic: 3-Arm Pilot Randomized Controlled Trial. *JMIR Mental Health, 9*(4), e34002.  
<https://doi.org/10.2196/34002>
- De Simone, S., Planta, A., & Cicotto, G. (2018). The Role of Job Satisfaction, Work Engagement, Self-Efficacy and Agentic Capacities on Nurses' Turnover Intention and Patient Satisfaction. *Applied Nursing Research, 39*, 130–140.  
<https://doi.org/10.1016/j.apnr.2017.11.004>
- De Vries, N., Lavreysen, O., Boone, A., Bouman, J., Szemik, S., Baranski, K., Godderis, L., & De Winter, P. (2023). Retaining Healthcare Workers: A Systematic Review of Strategies for Sustaining Power in the Workplace. *Healthcare, 11*(13), 1887.  
<https://doi.org/10.3390/healthcare11131887>
- De Wit, K., Tran, A., Clayton, N., Seeburruth, D., Lim, R. K., Archambault, P. M., Chan, T. M., Rang, L. C. F., Gray, S., Ritchie, K., Gérin-Lajoie, C., & Mercuri, M. (2024). A Longitudinal Survey on Canadian Emergency Physician Burnout. *Annals of Emergency Medicine, 83*(6), 576–584. <https://doi.org/10.1016/j.annemergmed.2024.01.009>
- Deckop, J. R., Konrad, A. M., Perlmutter, F. D., & Freely, J. L. (2006). The Effect of Human Resource Management Practices on the Job Retention of Former Welfare Clients. *Human Resource Management, 45*(4), 539–559. <https://doi.org/10.1002/hrm.20131>
- Deliberato, R. O., Rocha, L. L., Lima, A. H., Santiago, C. R. M., Terra, J. C. C., Dagan, A., & Celi, L. A. (2017). Physician Satisfaction with a Multi-Platform Digital Scheduling System. *PLOS ONE, 12*(3), e0174127. <https://doi.org/10.1371/journal.pone.0174127>
- Dellie, E., Andargie Biks, G., Asrade, G., & Gebremedhin, T. (2019). Intentions to Leave and Associated Factors Among Laboratory Professionals Working at Amhara National Regional State Public Hospitals, Ethiopia: An Institution-Based Cross-Sectional Study. *BMC Research Notes, 12*(1), 656. <https://doi.org/10.1186/s13104-019-4688-z>
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The Job Demands-Resources Model of Burnout. *Journal of Applied Psychology, 86*(3), 499–512.  
<https://doi.org/10.1037/0021-9010.86.3.499>

- Diener, E., & Seligman, M. E. P. (2004). Beyond Money: Toward an Economy of Well-Being. *Psychological Science in the Public Interest*, 5(1), 1–31. <https://doi.org/10.1111/j.0963-7214.2004.00501001.x>
- Dilsizian, S. E., & Siegel, E. L. (2014). Artificial Intelligence in Medicine and Cardiac Imaging: Harnessing Big Data and Advanced Computing to Provide Personalized Medical Diagnosis and Treatment. *Current Cardiology Reports*, 16(1), 441. <https://doi.org/10.1007/s11886-013-0441-8>
- Doğan, A., Ertuğrul, B., & Akin, K. (2024). Examination of Workload Perception, Burnout, and Perceived Organizational Support in Emergency Healthcare Professionals: A Structural Equation Model. *Nursing & Health Sciences*, 26(1), e13092. <https://doi.org/10.1111/nhs.13092>
- Dugani, S., Afari, H., Hirschhorn, L. R., Ratcliffe, H., Veillard, J., Martin, G., Lagomarsino, G., Basu, L., & Bitton, A. (2018). Prevalence and Factors Associated with Burnout Among Frontline Primary Health Care Providers in Low- And Middle-Income Countries: A Systematic Review. *Gates Open Research*, 2, 4. <https://doi.org/10.12688/gatesopenres.12779.3>
- Dzurainin, A., & Stuart, N. (2012). The Effect of Tangible and Intangible Noncash Rewards on Performance and Satisfaction in a Production Setting. *Management Accounting Quarterly*, 13(4), 1–9.
- Edú-Valsania, S., Laguía, A., & Moriano, J. A. (2022). Burnout: A Review of Theory and Measurement. *International Journal of Environmental Research and Public Health*, 19(3), 1780. <https://doi.org/10.3390/ijerph19031780>
- Eisenberger, R., Cummings, J., Armeli, S., & Lynch, P. (1997). Perceived Organizational Support, Discretionary Treatment, and Job Satisfaction. *Journal of Applied Psychology*, 82(5), 812–820. <https://doi.org/10.1037/0021-9010.82.5.812>
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived Organizational Support. *Journal of Applied Psychology*, 71(3), 500–507. <https://doi.org/10.1037/0021-9010.71.3.500>
- Eisenberger, R., Stinglhamber, F., Vandenberghe, C., Sucharski, I. L., & Rhoades, L. (2002). Perceived Supervisor Support: Contributions to Perceived Organizational Support and Employee Retention. *Journal of Applied Psychology*, 87(3), 565–573. <https://doi.org/10.1037/0021-9010.87.3.565>

- El-Jardali, F., Dimassi, H., Dumit, N., Jamal, D., & Mouro, G. (2009). A National Cross-Sectional Study on Nurses' Intent to Leave and Job Satisfaction in Lebanon: Implications for Policy and Practice. *BMC Nursing*, 8(1), 3. <https://doi.org/10.1186/1472-6955-8-3>
- Estryn-Béhar, M., Van der Heijden, B. I. J. M., Ogińska, H., Camerino, D., Le Nézet, O., Conway, P. M., Fry, C., & Hasselhorn, H.-M. (2007). The Impact of Social Work Environment, Teamwork Characteristics, Burnout, and Personal Factors Upon Intent to Leave Among European Nurses. *Medical Care*, 45(10), 939–950. <https://doi.org/10.1097/MLR.0b013e31806728d8>
- Eva, G., Amo-Setién, F., César, L., Concepción, S., Roberto, M., Jesús, M., & Carmen, O. (2023). Effectiveness of Intervention Programs Aimed at Improving The Nursing Work Environment: A Systematic Review. *International Nursing Review*, inr.12826. <https://doi.org/10.1111/inr.12826>
- Evans, T. R., Burns, C., Essex, R., Finnerty, G., Hatton, E., Clements, A. J., Breau, G., Quinn, F., Elliott, H., Smith, L. D., Matthews, B., Jennings, K., Crossman, J., Williams, G., Miller, D., Harold, B., Gurnett, P., Jagodzinski, L., Smith, J., ... Weldon, S. (2023). A Systematic Scoping Review on the Evidence Behind Debriefing Practices for the Wellbeing/Emotional Outcomes of Healthcare Workers. *Frontiers in Psychiatry*, 14, 1078797. <https://doi.org/10.3389/fpsy.2023.1078797>
- Ferguson, C., Low, G., & Shiau, G. (2020). Resident Physician Burnout: Insights From a Canadian Multispecialty Survey. *Postgraduate Medical Journal*, 96(1136), 331–338. <https://doi.org/10.1136/postgradmedj-2019-137314>
- Fernandes, A., Santinha, G., & Forte, T. (2022). Public Service Motivation and Determining Factors to Attract and Retain Health Professionals in the Public Sector: A Systematic Review. *Behavioral Sciences*, 12(4), 95. <https://doi.org/10.3390/bs12040095>
- Finn, C. P. (2001). Autonomy: An important Component for Nurses' Job Satisfaction. *International Journal of Nursing Studies*, 38(3), 349–357. [https://doi.org/10.1016/S0020-7489\(00\)00065-1](https://doi.org/10.1016/S0020-7489(00)00065-1)
- Fleig-Palmer, M. M., & Rathert, C. (2015). Interpersonal Mentoring and its Influence on Retention of Valued Health Care Workers: The Moderating Role of Affective Commitment. *Health Care Management Review*, 40(1), 56–64. <https://doi.org/10.1097/HMR.0000000000000011>



- Fleming, W. J. (2024). Employee Well-Being Outcomes from Individual-Level Mental Health Interventions: Cross-Sectional Evidence from the United Kingdom. *Industrial Relations Journal*, 55(2), 162–182. <https://doi.org/10.1111/irj.12418>
- Flood, C. M., Thomas, B., & McGibbon, E. (2023). Canada's Primary Care Crisis: Federal Government Response. *Healthcare Management Forum*, 36(5), 327–332. <https://doi.org/10.1177/08404704231183863>
- Freudenberger, H. J. (1974). Staff Burn-Out. *Journal of Social Issues*, 30(1), 159–165. <https://doi.org/10.1111/j.1540-4560.1974.tb00706.x>
- Gadolin, C., Larsman, P., Skyvell Nilsson, M., Pousette, A., & Törner, M. (2022). How Do Healthcare Unit Managers Promote Nurses' Perceived Organizational Support, and Which Working Conditions Enable them To Do So? A Mixed Methods Approach. *Scandinavian Journal of Psychology*, 63(6), 648–657. <https://doi.org/10.1111/sjop.12851>
- Garcia, E., Kundu, I., Kelly, M., Soles, R., Mulder, L., & Talmon, G. A. (2020). The American Society for Clinical Pathology's Job Satisfaction, Well-Being, and Burnout Survey of Laboratory Professionals. *American Journal of Clinical Pathology*, 153(4), 470–486. <https://doi.org/10.1093/ajcp/aqaa008>
- Gardner, D. G., Van Dyne, L., & Pierce, J. L. (2004). The Effects of Pay Level on Organization-based Self-esteem and Performance: A Field Study. *Journal of Occupational and Organizational Psychology*, 77(3), 307–322. <https://doi.org/10.1348/0963179041752646>
- Gaudenz, C., De Geest, S., Schwendimann, R., & Zúñiga, F. (2019). Factors Associated With Care Workers' Intention to Leave Employment in Nursing Homes: A Secondary Data Analysis of the Swiss Nursing Homes Human Resources Project. *Journal of Applied Gerontology*, 38(11), 1537–1563. <https://doi.org/10.1177/0733464817721111>
- Gerhart, B., & Rynes, S. (2003). *Compensation: Theory, Evidence, and Strategic Implications*. SAGE Publications, Inc. <https://doi.org/10.4135/9781452229256>
- Gohar, B., & Nowrouzi-Kia, B. (2022). The Forgotten (Invisible) Healthcare Heroes: Experiences of Canadian Medical Laboratory Employees Working During the Pandemic. *Frontiers in Psychiatry*, 13, 854507. <https://doi.org/10.3389/fpsy.2022.854507>
- Goldstein, I. L., & Ford, J. K. (2002). *Training in Organizations: Need Assessment, Development, and Evaluation* (4th ed.). Wadsworth.
- Greenberg, J., & Baron, R. A. (2003). *Behavior in Organizations: Understanding and Managing the Human Side of Work* (8th ed). Prentice Hall.

- Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations. *The Milbank Quarterly*, 82(4), 581–629. <https://doi.org/10.1111/j.0887-378X.2004.00325.x>
- Groves, R. M. (Ed.). (2004). *Survey Methodology*. J. Wiley.
- Gubbins, C., & Rousseau, D. M. (2015). Embracing Translational HRD Research for Evidence-Based Management: Let's Talk About How to Bridge the Research-Practice Gap. *Human Resource Development Quarterly*, 26(2), 109–125. <https://doi.org/10.1002/hrdq.21214>
- Gullifor, D. P., Petrenko, O. V., Chandler, J. A., Quade, M. J., & Rouba, Y. (2023). Employee Reactions to Perceived CSR: The Influence of the Ethical Environment on OCB Engagement and Individual Performance. *Journal of Business Research*, 161, 113835. <https://doi.org/10.1016/j.jbusres.2023.113835>
- Haas, E. J. (2020). The Role of Supervisory Support on Workers' Health and Safety Performance. *Health Communication*, 35(3), 364–374. <https://doi.org/10.1080/10410236.2018.1563033>
- Halbesleben, J. R. B., & Rathert, C. (2008). The Role of Continuous Quality Improvement and Psychological Safety in Predicting Work-arounds. *Health Care Management Review*, 33(2), 134–144. <https://doi.org/10.1097/01.HMR.0000304505.04932.62>
- Hämmig, O. (2018). Explaining Burnout and the Intention to Leave the Profession Among Health Professionals – a Cross-sectional Study in a Hospital Setting in Switzerland. *BMC Health Services Research*, 18(1), 785. <https://doi.org/10.1186/s12913-018-3556-1>
- Han, R., Hahn, E., Done, S. J., Pun, C., Shivji, S., & Lu, F.-I. (2023). Resident Depression and Burnout During the COVID-19 Pandemic: A Survey of Canadian Laboratory Medicine Trainees. *Archives of Pathology & Laboratory Medicine*, 147(3), 368–375. <https://doi.org/10.5858/arpa.2021-0501-EP>
- Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-Unit-Level Relationship Between Employee Satisfaction, Employee Engagement, and Business Outcomes: A Meta-analysis. *Journal of Applied Psychology*, 87(2), 268–279. <https://doi.org/10.1037/0021-9010.87.2.268>
- Hayes, L. J., O'Brien-Pallas, L., Duffield, C., Shamian, J., Buchan, J., Hughes, F., Laschinger, H. K. S., & North, N. (2012). Nurse Turnover: A Literature Review – An Update. *International Journal of Nursing Studies*, 49(7), 887–905. <https://doi.org/10.1016/j.ijnurstu.2011.10.001>

- Hayward, D., Bungay, V., Wolff, A. C., & MacDonald, V. (2016). A Qualitative Study of Experienced Nurses' Voluntary Turnover: Learning from Their Perspectives. *Journal of Clinical Nursing*, 25(9–10), 1336–1345. <https://doi.org/10.1111/jocn.13210>
- Heath, C., Sommerfield, A., & Von Ungern-Sternberg, B. S. (2020). Resilience Strategies to Manage Psychological Distress Among Healthcare Workers During the COVID-19 Pandemic: A Narrative Review. *Anaesthesia*, 75(10), 1364–1371. <https://doi.org/10.1111/anae.15180>
- Heavey, A. L., Holwerda, J. A., & Hausknecht, J. P. (2013). Causes and Consequences of Collective Turnover: A Meta-analytic Review. *Journal of Applied Psychology*, 98(3), 412–453. <https://doi.org/10.1037/a0032380>
- Hernandez, S. H. A., Francis, M. A., & Winn, D. (2020). Employment and Retention of Nurses Who Completed an Internship and Residency Program. *The Journal of Continuing Education in Nursing*, 51(11), 504–508. <https://doi.org/10.3928/00220124-20201014-06>
- Hollis, C., Morriss, R., Martin, J., Amani, S., Cotton, R., Denis, M., & Lewis, S. (2015). Technological Innovations in Mental Healthcare: Harnessing the Digital Revolution. *British Journal of Psychiatry*, 206(4), 263–265. <https://doi.org/10.1192/bjp.bp.113.142612>
- Holst, J. (2020). Increasing Rural Recruitment and Retention through Rural Exposure during Undergraduate Training: An Integrative Review. *International Journal of Environmental Research and Public Health*, 17(17), 6423. <https://doi.org/10.3390/ijerph17176423>
- Hom, P. W., Lee, T. W., Shaw, J. D., & Hausknecht, J. P. (2017). One Hundred Years of Employee Turnover Theory and Research. *Journal of Applied Psychology*, 102(3), 530–545. <https://doi.org/10.1037/apl0000103>
- Hossain, F., & Clatty, A. (2021). Self-care Strategies in Response to Nurses' Moral Injury During COVID-19 Pandemic. *Nursing Ethics*, 28(1), 23–32. <https://doi.org/10.1177/0969733020961825>
- Hunsaker, S., Chen, H., Maughan, D., & Heaston, S. (2015). Factors that Influence the Development of Compassion Fatigue, Burnout, and Compassion Satisfaction in Emergency Department Nurses. *Journal of Nursing Scholarship*, 47(2), 186–194. <https://doi.org/10.1111/jnu.12122>
- Jakobsen, M., & Jensen, R. (2015). Common Method Bias in Public Management Studies. *International Public Management Journal*, 18(1), 3–30. <https://doi.org/10.1080/10967494.2014.997906>

- Janakiraman, R., Parish, J. T., & Berry, L. L. (2011). The Effect of the Work and Physical Environment on Hospital Nurses' Perceptions and Attitudes: Service Quality and Commitment. *Quality Management Journal*, 18(4), 36–49. <https://doi.org/10.1080/10686967.2011.11918334>
- Jones, C., & Gates, M. (2007). The Costs and Benefits of Nurse Turnover: A Business Case for Nurse Retention. *OJIN: The Online Journal of Issues in Nursing*, 12(3). <https://doi.org/10.3912/OJIN.Vol12No03Man04>
- Jugessur, T., & Iles, I. K. (2009). Advocacy in Mental Health Nursing: An Integrative Review of the Literature. *Journal of Psychiatric and Mental Health Nursing*, 16(2), 187–195. <https://doi.org/10.1111/j.1365-2850.2008.01315.x>
- Jun, J., Ojemeni, M. M., Kalamani, R., Tong, J., & Crecelius, M. L. (2021). Relationship Between Nurse Burnout, Patient and Organizational Outcomes: Systematic Review. *International Journal of Nursing Studies*, 119, 103933. <https://doi.org/10.1016/j.ijnurstu.2021.103933>
- Jurgensen, C. E. (1978). Job Preferences (What Makes a Job Good or Bad?). *Journal of Applied Psychology*, 63(3), 267–276. <https://doi.org/10.1037/0021-9010.63.3.267>
- Kaiser, S., Patras, J., Adolfsen, F., Richardsen, A. M., & Martinussen, M. (2020). Using the Job Demands–Resources Model to Evaluate Work-Related Outcomes Among Norwegian Health Care Workers. *SAGE Open*, 10(3), 215824402094743. <https://doi.org/10.1177/2158244020947436>
- Kakyo, T. A., Xiao, L. D., & Chamberlain, D. (2022). Benefits and Challenges for Hospital Nurses Engaged in Formal Mentoring Programs: A Systematic Integrated Review. *International Nursing Review*, 69(2), 229–238. <https://doi.org/10.1111/inr.12730>
- Källander, K., Tibenderana, J. K., Akpogheneta, O. J., Strachan, D. L., Hill, Z., Ten Asbroek, A. H. A., Conteh, L., Kirkwood, B. R., & Meek, S. R. (2013). Mobile Health (mHealth) Approaches and Lessons for Increased Performance and Retention of Community Health Workers in Low- and Middle-Income Countries: A Review. *Journal of Medical Internet Research*, 15(1), e17. <https://doi.org/10.2196/jmir.2130>
- Kearney, A., Grainger, P., Chubbs, K., & Downey, J. (2016). Survey of Managers Regarding Nurses' Performance of Nonnursing Duties. *JONA: The Journal of Nursing Administration*, 46(7/8), 379–384. <https://doi.org/10.1097/NNA.0000000000000362>
- Keith, J. (2022). The Burnout in Canadian Pathology Initiative. *Archives of Pathology & Laboratory Medicine*, 147(5), 568–576. <https://doi.org/10.5858/arpa.2021-0200-OA>

- Kelliher, C., & Anderson, D. (2008). For Better or for Worse? An Analysis of How Flexible Working Practices Influence Employees' Perceptions of Job Quality. *The International Journal of Human Resource Management*, 19(3), 419–431. <https://doi.org/10.1080/09585190801895502>
- Kelly, M., Soles, R., Garcia, E., & Kundu, I. (2020). Job Stress, Burnout, Work-Life Balance, Well-Being, and Job Satisfaction Among Pathology Residents and Fellows. *American Journal of Clinical Pathology*, 153(4), 449–469. <https://doi.org/10.1093/ajcp/aqaa013>
- Kiel, J. M. (2020). An Analysis of Restructuring Orientation to Enhance Nurse Retention. *The Health Care Manager*, 39(4), 162–167. <https://doi.org/10.1097/HCM.0000000000000303>
- Kim, L. E., Jörg, V., & Klassen, R. M. (2019). A Meta-Analysis of the Effects of Teacher Personality on Teacher Effectiveness and Burnout. *Educational Psychology Review*, 31(1), 163–195. <https://doi.org/10.1007/s10648-018-9458-2>
- Koebisch, S., Rix, J., & Holmes, M. (2020). Recruitment and Retention of Healthcare Professionals in Rural Canada: A Systematic Review. *Canadian Journal of Rural Medicine*, 25(2), 67. [https://doi.org/10.4103/CJRM.CJRM\\_43\\_19](https://doi.org/10.4103/CJRM.CJRM_43_19)
- Kondo, K. K., Damberg, C. L., Mendelson, A., Motu'apuaka, M., Freeman, M., O'Neil, M., Relevo, R., Low, A., & Kansagara, D. (2016). Implementation Processes and Pay for Performance in Healthcare: A Systematic Review. *Journal of General Internal Medicine*, 31(S1), 61–69. <https://doi.org/10.1007/s11606-015-3567-0>
- Konovsky, M. A., & Pugh, S. D. (1994). Citizenship Behavior and Social Exchange. *Academy of Management Journal*, 37(3), 656–669. <https://doi.org/10.2307/256704>
- Koroglu, Ş., & Ozmen, O. (2022). The Mediating Effect of Work Engagement on Innovative Work Behavior and the Role of Psychological Well-being in the Job Demands–resources (JD-R) Model. *Asia-Pacific Journal of Business Administration*, 14(1), 124–144. <https://doi.org/10.1108/APJBA-09-2020-0326>
- Kossivi, B., Xu, M., & Kalgora, B. (2016). Study on Determining Factors of Employee Retention. *Open Journal of Social Sciences*, 04(05), 261–268. <https://doi.org/10.4236/jss.2016.45029>
- Kupfer, C., Prassl, R., Fleiß, J., Malin, C., Thalmann, S., & Kubicek, B. (2023). Check the Box! How to Deal with Automation Bias in AI-based Personnel Selection. *Frontiers in Psychology*, 14, 1118723. <https://doi.org/10.3389/fpsyg.2023.1118723>

- Kurtessis, J. N., Eisenberger, R., Ford, M. T., Buffardi, L. C., Stewart, K. A., & Adis, C. S. (2017). Perceived Organizational Support: A Meta-Analytic Evaluation of Organizational Support Theory. *Journal of Management*, 43(6), 1854–1884. <https://doi.org/10.1177/0149206315575554>
- Laeque, S. H., Bilal, A., Babar, S., Khan, Z., & Ul Rahman, S. (2018). How Patient-Perpetrated Workplace Violence Leads to Turnover Intention Among Nurses: The Mediating Mechanism of Occupational Stress and Burnout. *Journal of Aggression, Maltreatment & Trauma*, 27(1), 96–118. <https://doi.org/10.1080/10926771.2017.1410751>
- Laschinger, H. K., Finegan, J., Shamian, J., & Wilk, P. (2001). Impact of Structural and Psychological Empowerment on Job Strain in Nursing Work Settings: Expanding Kanter's Model. *JONA: The Journal of Nursing Administration*, 260–272. <https://doi.org/10.1097/00005110-200105000-00006>
- Lazarus, R. S., & Folkman, S. (1984). *Stress, Appraisal, and Coping*. Springer.
- Lee, D., & Yoon, S. N. (2021). Application of Artificial Intelligence-Based Technologies in the Healthcare Industry: Opportunities and Challenges. *International Journal of Environmental Research and Public Health*, 18(1), 271. <https://doi.org/10.3390/ijerph18010271>
- Lee, T. W., Hom, P. W., Eberly, M. B., Junchao (Jason) Li, & Mitchell, T. R. (2017). On the Next Decade of Research in Voluntary Employee Turnover. *Academy of Management Perspectives*, 31(3), 201–221. <https://doi.org/10.5465/amp.2016.0123>
- Leete, L. (2000). Wage Equity and Employee Motivation in Nonprofit and For-profit Organizations. *Journal of Economic Behavior & Organization*, 43(4), 423–446. [https://doi.org/10.1016/S0167-2681\(00\)00129-3](https://doi.org/10.1016/S0167-2681(00)00129-3)
- Li, A., Early, S. F., Mahrer, N. E., Klaristenfeld, J. L., & Gold, J. I. (2014). Group Cohesion and Organizational Commitment: Protective Factors for Nurse Residents' Job Satisfaction, Compassion Fatigue, Compassion Satisfaction, and Burnout. *Journal of Professional Nursing*, 30(1), 89–99. <https://doi.org/10.1016/j.profnurs.2013.04.004>
- Li, Q., Mohamed, R., Mahomed, A., & Khan, H. (2022). The Effect of Perceived Organizational Support and Employee Care on Turnover Intention and Work Engagement: A Mediated Moderation Model Using Age in the Post Pandemic Period. *Sustainability*, 14(15), 9125. <https://doi.org/10.3390/su14159125>

- Liao, H., Liang, R., He, H., Huang, Y., & Liu, M. (2022). Work Stress, Burnout, Occupational Commitment, and Social Support Among Chinese Pediatric Nurses: A Moderated Mediation Model. *Journal of Pediatric Nursing*, *67*, e16–e23. <https://doi.org/10.1016/j.pedn.2022.10.009>
- Liu, J., Gan, Y., Jiang, H., Li, L., Dwyer, R., Lu, K., Yan, S., Sampson, O., Xu, H., Wang, C., Zhu, Y., Chang, Y., Yang, Y., Yang, T., Chen, Y., Song, F., & Lu, Z. (2019). Prevalence of Workplace Violence Against Healthcare Workers: A Systematic Review and Meta-analysis. *Occupational and Environmental Medicine*, *76*(12), 927–937. <https://doi.org/10.1136/oemed-2019-105849>
- Liu, J., & Liu, Y. (2016). Perceived Organizational Support and Intention to Remain: The Mediating Roles of Career Success and Self-esteem. *International Journal of Nursing Practice*, *22*(2), 205–214. <https://doi.org/10.1111/ijn.12416>
- Liu, W., Zhao, S., Shi, L., Zhang, Z., Liu, X., Li, L., Duan, X., Li, G., Lou, F., Jia, X., Fan, L., Sun, T., & Ni, X. (2018). Workplace Violence, Job Satisfaction, Burnout, Perceived Organisational Support and Their Effects on Turnover Intention Among Chinese Nurses in Tertiary Hospitals: A Cross-sectional Study. *BMJ Open*, *8*(6), e019525. <https://doi.org/10.1136/bmjopen-2017-019525>
- Liu, Y., & Aunguroch, Y. (2019). Work Stress, Perceived Social Support, Self-efficacy and Burnout Among Chinese Registered Nurses. *Journal of Nursing Management*, *27*(7), 1445–1453. <https://doi.org/10.1111/jonm.12828>
- Lucchini, A., Iozzo, P., & Bambi, S. (2020). Nursing Workload in the COVID-19 Era. *Intensive and Critical Care Nursing*, *61*, 102929. <https://doi.org/10.1016/j.iccn.2020.102929>
- Lumley, T., Diehr, P., Emerson, S., & Chen, L. (2002). The Importance of the Normality Assumption in Large Public Health Data Sets. *Annual Review of Public Health*, *23*(1), 151–169. <https://doi.org/10.1146/annurev.publhealth.23.100901.140546>
- Luszczynska, A., Gutiérrez-Doña, B., & Schwarzer, R. (2005). General Self-efficacy in Various Domains of Human Functioning: Evidence from Five Countries. *International Journal of Psychology*, *40*(2), 80–89. <https://doi.org/10.1080/00207590444000041>
- Lynch, P. D., Eisenberger, R., & Armeli, S. (1999). Perceived Organizational Support: Inferior Versus Superior Performance by Wary Employees. *Journal of Applied Psychology*, *84*(4), 467–483. <https://doi.org/10.1037/0021-9010.84.4.467>

- Maan, A. T., Abid, G., Butt, T. H., Ashfaq, F., & Ahmed, S. (2020). Perceived Organizational Support and Job Satisfaction: A Moderated Mediation Model of Proactive Personality and Psychological Empowerment. *Future Business Journal*, 6(1), 21. <https://doi.org/10.1186/s43093-020-00027-8>
- Marufu, T. C., Collins, A., Vargas, L., Gillespie, L., & Almghairbi, D. (2021). Factors Influencing Retention Among Hospital Nurses: Systematic Review. *British Journal of Nursing*, 30(5), 302–308. <https://doi.org/10.12968/bjon.2021.30.5.302>
- Maslach, C. (2003). Job Burnout: New Directions in Research and Intervention. *Current Directions in Psychological Science*, 12(5), 189–192. <https://doi.org/10.1111/1467-8721.01258>
- Maslach, C., & Jackson, S. E. (1981). The Measurement of Experienced Burnout. *Journal of Organizational Behavior*, 2(2), 99–113. <https://doi.org/10.1002/job.4030020205>
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job Burnout. *Annual Review of Psychology*, 52(1), 397–422. <https://doi.org/10.1146/annurev.psych.52.1.397>
- Matthews, M., Carsten, M. K., Ayers, D. J., & Menachemi, N. (2018). Determinants of Turnover Among Low Wage Earners in Long Term Care: The Role of Manager-employee Relationships. *Geriatric Nursing*, 39(4), 407–413. <https://doi.org/10.1016/j.gerinurse.2017.12.004>
- Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to Organizations and Occupations: Extension and Test of a Three-component Conceptualization. *Journal of Applied Psychology*, 78(4), 538–551. <https://doi.org/10.1037/0021-9010.78.4.538>
- Mijakoski, D., Karadzinska-Bislimovska, J., Stoleski, S., Minov, J., Atanasovska, A., & Bihorac, E. (2018). Job Demands, Burnout, and Teamwork in Healthcare Professionals Working in a General Hospital that Was Analysed At Two Points in Time. *Open Access Macedonian Journal of Medical Sciences*, 6(4), 723–729. <https://doi.org/10.3889/oamjms.2018.159>
- Minto, C., Vriz, G. B., Martinato, M., & Gregori, D. (2017). Electronic Questionnaires Design and Implementation. *The Open Nursing Journal*, 11(1), 157–202. <https://doi.org/10.2174/1874434601711010157>
- Miriovsky, B. J., Shulman, L. N., & Abernethy, A. P. (2012). Importance of Health Information Technology, Electronic Health Records, and Continuously Aggregating Data to Comparative Effectiveness Research and Learning Health Care. *Journal of Clinical Oncology*, 30(34), 4243–4248. <https://doi.org/10.1200/JCO.2012.42.8011>



- Mobley, W. H. (1977). Intermediate Linkages in the Relationship Between Job Satisfaction and Employee Turnover. *Journal of Applied Psychology*, 62(2), 237–240.  
<https://doi.org/10.1037/0021-9010.62.2.237>
- Mobley, W. H., Horner, S. O., & Hollingsworth, A. T. (1978). An Evaluation of Precursors of Hospital Employee Turnover. *Journal of Applied Psychology*, 63(4), 408–414.  
<https://doi.org/10.1037/0021-9010.63.4.408>
- Morphet, J., Kent, B., Plummer, V., & Considine, J. (2015). The Effect of Transition to Specialty Practice Programs on Australian Emergency Nurses' Professional Development, Recruitment and Retention. *Australasian Emergency Nursing Journal*, 18(4), 204–211.  
<https://doi.org/10.1016/j.aenj.2015.08.001>
- Mowday, R. T., Porter, L. W., & Steers, R. M. (1982). *Employee-organization Linkages: The Psychology of Commitment, Absenteeism, and Turnover*. Academic Press.
- Mueller, C. W., & Price, J. L. (1990). Economic, Psychological, and Sociological Determinants of Voluntary Turnover. *Journal of Behavioral Economics*, 19(3), 321–335.  
[https://doi.org/10.1016/0090-5720\(90\)90034-5](https://doi.org/10.1016/0090-5720(90)90034-5)
- Musenze, I. A., Mayende, T. S., Wampande, A. J., Kasango, J., & Emojong, O. R. (2021). Mechanism Between Perceived Organizational Support and Work Engagement: Explanatory Role of Self-efficacy. *Journal of Economic and Administrative Sciences*, 37(4), 471–495. <https://doi.org/10.1108/JEAS-02-2020-0016>
- Mustaffa, K. H., Shafie, A. A., & Ngu, L.-H. (2022). A Comparison of Self-evaluated Survey and Work Sampling Approach for Estimating Patient-care Unit Cost Multiplier in Genetic Nursing Activities. *Asian Nursing Research*, 16(3), 170–179.  
<https://doi.org/10.1016/j.anr.2022.06.001>
- Myny, D., Van Goubergen, D., Gobert, M., Vanderwee, K., Van Hecke, A., & Defloor, T. (2011). Non-direct Patient Care Factors Influencing Nursing Workload: A Review of the Literature: Non-direct Patient Care Factors Influencing Nursing Workload. *Journal of Advanced Nursing*, 67(10), 2109–2129. <https://doi.org/10.1111/j.1365-2648.2011.05689.x>
- Narainsamy, K., & Van Der Westhuizen, S. (2013). Work Related Well-Being: Burnout, Work Engagement, Occupational Stress and Job Satisfaction Within a Medical Laboratory Setting. *Journal of Psychology in Africa*, 23(3), 467–474.  
<https://doi.org/10.1080/14330237.2013.10820653>

- Nembhard, I. M., & Edmondson, A. C. (2006). Making It Safe: The Effects of Leader Inclusiveness and Professional Status on Psychological Safety and Improvement Efforts in Health Care Teams. *Journal of Organizational Behavior*, 27(7), 941–966. <https://doi.org/10.1002/job.413>
- Neves, P., & Eisenberger, R. (2012). Management Communication and Employee Performance: The Contribution of Perceived Organizational Support. *Human Performance*, 25(5), 452–464. <https://doi.org/10.1080/08959285.2012.721834>
- Novis, D. A., Nelson, S., Blond, B. J., Guidi, A. J., Talbert, M. L., Mix, P., & Perrotta, P. L. (2020). Laboratory Staff Turnover: A College of American Pathologists Q-Probes Study of 23 Clinical Laboratories. *Archives of Pathology & Laboratory Medicine*, 144(3), 350–355. <https://doi.org/10.5858/arpa.2019-0140-CP>
- Nowrouzi-Kia, B., Dong, J., Gohar, B., & Hoad, M. (2022). Factors Associated with Burnout Among Medical Laboratory Professionals in Ontario, Canada: An Exploratory Study During the Second Wave of the COVID-19 Pandemic. *The International Journal of Health Planning and Management*, 37(4), 2183–2197. <https://doi.org/10.1002/hpm.3460>
- Nursing Retention Toolkit: Improving the Working Lives of Nurses in Canada* ([Cat. No.: H22-4/38-2024E-PDF]). (2024). Health Canada = Santé Canada.
- O'Brien-Pallas, L., Murphy, G. T., Shamian, J., Li, X., & Hayes, L. J. (2010). Impact and Determinants of Nurse Turnover: A Pan-Canadian Study: Impact and Determinants of Nurse Turnover. *Journal of Nursing Management*, 18(8), 1073–1086. <https://doi.org/10.1111/j.1365-2834.2010.01167.x>
- O'Connor, K., Muller Neff, D., & Pitman, S. (2018). Burnout in Mental Health Professionals: A Systematic Review and Meta-analysis of Prevalence and Determinants. *European Psychiatry*, 53, 74–99. <https://doi.org/10.1016/j.eurpsy.2018.06.003>
- O'Driscoll, M. P., & Randall, D. M. (1999). Perceived Organisational Support, Satisfaction with Rewards, and Employee Job Involvement and Organisational Commitment. *Applied Psychology*, 48(2), 197–209. <https://doi.org/10.1111/j.1464-0597.1999.tb00058.x>
- Oliver, C., & Care, F. C. (2019). Global Shortage of Nurses. *Canada, McGill University Health Centre*.
- Oluwaseyi Rita Owolabi, Funmilola Olatundun Olatoye, Oluwafunmi Adijat Elufioye, & Beatrice Okunade. (2024). Human Resources Management in Healthcare: Recruitment, Retention, and Workforce Development: A Review. *World Journal of Advanced Research and Reviews*, 21(2), 950–957. <https://doi.org/10.30574/wjarr.2024.21.2.0522>

- Pappas, M. A., Stoller, J. K., Shaker, V., Houser, J., Misra-Hebert, A. D., & Rothberg, M. B. (2022). Estimating the Costs of Physician Turnover in Hospital Medicine. *Journal of Hospital Medicine, 17*(10), 803–808. <https://doi.org/10.1002/jhm.12942>
- Peluso, A. M., Innocenti, L., & Pilati, M. (2017). Pay Is not Everything: Differential Effects of Monetary and Non-monetary Rewards on Employees' Attitudes and Behaviours. *Evidence-Based HRM: A Global Forum for Empirical Scholarship, 5*(3), 311–327. <https://doi.org/10.1108/EBHRM-07-2015-0031>
- Pérez-Fuentes, M. D. C., Molero Jurado, M. D. M., Martos Martínez, Á., & Gázquez Linares, J. J. (2019). Burnout and Engagement: Personality Profiles in Nursing Professionals. *Journal of Clinical Medicine, 8*(3), 286. <https://doi.org/10.3390/jcm8030286>
- Phillips, C. (2020). Relationships Between Workload Perception, Burnout, and Intent to Leave Among Medical–surgical Nurses. *International Journal of Evidence-Based Healthcare, 18*(2), 265–273. <https://doi.org/10.1097/XEB.0000000000000220>
- Phillips, J. M., & Gully, S. M. (2015). Multilevel and Strategic Recruiting: Where Have We Been, Where Can We Go From Here? *Journal of Management, 41*(5), 1416–1445. <https://doi.org/10.1177/0149206315582248>
- Pierce, L. L., Hazel, C. M., & Mion, L. C. (1996). Effect of a Professional Practice Model on Autonomy, Job Satisfaction and Turnover: *Nursing Management (Springhouse), 27*(2), 48M??48T. <https://doi.org/10.1097/00006247-199602000-00013>
- Platis, Ch., Reklitis, P., & Zimeras, S. (2015). Relation Between Job Satisfaction and Job Performance in Healthcare Services. *Procedia - Social and Behavioral Sciences, 175*, 480–487. <https://doi.org/10.1016/j.sbspro.2015.01.1226>
- Podsakoff, P. M., & Todor, W. D. (1985). Relationships Between Leader Reward and Punishment Behavior and Group Processes and Productivity. *Journal of Management, 11*(1), 55–73. <https://doi.org/10.1177/014920638501100106>
- Poon, Y.-S. R., Lin, Y. P., Griffiths, P., Yong, K. K., Seah, B., & Liaw, S. Y. (2022). A Global Overview of Healthcare Workers' Turnover Intention Amid COVID-19 Pandemic: A Systematic Review with Future Directions. *Human Resources for Health, 20*(1), 70. <https://doi.org/10.1186/s12960-022-00764-7>
- Prescott, P. A., Ryan, J. W., Soeken, K. L., Castorr, A. H., Thompson, K. O., & Phillips, C. Y. (1991). The Patient Intensity for Nursing Index: A Validity Assessment. *Research in Nursing & Health, 14*(3), 213–221. <https://doi.org/10.1002/nur.4770140308>

- Ramaci, T., Santisi, G., Curatolo, K., & Barattucci, M. (2024). Perceived Organizational Support Moderates the Effect of Job Demands on Outcomes: Testing the JD-R Model in Italian Oncology Nurses. *Palliative and Supportive Care*, 1–9. <https://doi.org/10.1017/S1478951524000890>
- Rangachari, P., & L. Woods, J. (2020). Preserving Organizational Resilience, Patient Safety, and Staff Retention during COVID-19 Requires a Holistic Consideration of the Psychological Safety of Healthcare Workers. *International Journal of Environmental Research and Public Health*, 17(12), 4267. <https://doi.org/10.3390/ijerph17124267>
- Rao, S. K., Kimball, A. B., Lehrhoff, S. R., Hidrue, M. K., Colton, D. G., Ferris, T. G., & Torchiana, D. F. (2017). The Impact of Administrative Burden on Academic Physicians: Results of a Hospital-Wide Physician Survey. *Academic Medicine*, 92(2), 237–243. <https://doi.org/10.1097/ACM.0000000000001461>
- Rhoades, L., & Eisenberger, R. (2002). Perceived Organizational Support: A Review of the Literature. *Journal of Applied Psychology*, 87(4), 698–714. <https://doi.org/10.1037/0021-9010.87.4.698>
- Riedel, P.-L., Kreh, A., Kulcar, V., Lieber, A., & Juen, B. (2022). A Scoping Review of Moral Stressors, Moral Distress and Moral Injury in Healthcare Workers during COVID-19. *International Journal of Environmental Research and Public Health*, 19(3), 1666. <https://doi.org/10.3390/ijerph19031666>
- RNAO. (2022). *Nursing Through Crisis: A Comparative Perspective, Registered Nurses' Association of Ontario, Canada*. <https://policycommons.net/artifacts/2434806/nursing-through-crisis/3456398/> on 21 Jul 2024. CID: 20.500.12592/89z4tg.
- Robson, A., & Robson, F. (2016). Investigation of Nurses' Intention to Leave: A Study of a Sample of UK Nurses. *Journal of Health Organization and Management*, 30(1), 154–173. <https://doi.org/10.1108/JHOM-05-2013-0100>
- Ross, W. E., Huang, K. H. C., & Jones, G. H. (2014). Executive Onboarding: Ensuring the Success of the Newly Hired Department Chair. *Academic Medicine*, 89(5), 728–733. <https://doi.org/10.1097/ACM.0000000000000214>
- Rousseau, D. M., & Gunia, B. C. (2016). Evidence-Based Practice: The Psychology of EBP Implementation. *Annual Review of Psychology*, 67(1), 667–692. <https://doi.org/10.1146/annurev-psych-122414-033336>

- Russell, D., Mathew, S., Fitts, M., Liddle, Z., Murakami-Gold, L., Campbell, N., Ramjan, M., Zhao, Y., Hines, S., Humphreys, J. S., & Wakerman, J. (2021). Interventions for Health Workforce Retention in Rural and Remote Areas: A Systematic Review. *Human Resources for Health, 19*(1), 103. <https://doi.org/10.1186/s12960-021-00643-7>
- Saks, A. M., & Haccoun, R. R. (2018). *Managing Performance Through Training and Development* (Eighth edition). Nelson.
- Salanova, M., Peiró, J. M., & Schaufeli, W. B. (2002). Self-efficacy specificity and burnout among information technology workers: An extension of the job demand-control model. *European Journal of Work and Organizational Psychology, 11*(1), 1–25. <https://doi.org/10.1080/13594320143000735>
- Salminen, H., & Miettinen, M. (2019). The Role of Perceived Development Opportunities on Affective Organizational Commitment of Older and Younger Nurses. *International Studies of Management & Organization, 49*(1), 63–78. <https://doi.org/10.1080/00208825.2019.1565094>
- Salyers, M. P., Bonfils, K. A., Luther, L., Firmin, R. L., White, D. A., Adams, E. L., & Rollins, A. L. (2017). The Relationship Between Professional Burnout and Quality and Safety in Healthcare: A Meta-Analysis. *Journal of General Internal Medicine, 32*(4), 475–482. <https://doi.org/10.1007/s11606-016-3886-9>
- Schaufeli, W. B., & Bakker, A. B. (2004). Job Demands, Job Resources, and Their Relationship with Burnout and Engagement: A Multi-sample Study. *Journal of Organizational Behavior, 25*(3), 293–315. <https://doi.org/10.1002/job.248>
- Schaufeli, W. B., Maslach, C., & Marek, T. (1993). *Professional Burnout: Recent Developments in Theory and Research*. Taylor & Francis.
- Scheffler, R. M., & Arnold, D. R. (2019). Projecting Shortages and Surpluses of Doctors and Nurses in the OECD: What Looms Ahead. *Health Economics, Policy and Law, 14*(2), 274–290. <https://doi.org/10.1017/S174413311700055X>
- Scholl, R. W., Cooper, E. A., & McKENNA, J. F. (1987). Referent Selection in Determining Equity Perceptions: Differential Effects on Behavioral and Attitudinal Outcomes. *Personnel Psychology, 40*(1), 113–124. <https://doi.org/10.1111/j.1744-6570.1987.tb02380.x>
- Schwarzer, R., & Matthias, J. (1995). Generalized Self-efficacy Scale. *J. Weinman, S. Wright, & M. Johnston, Measures in Health Psychology: A User's Portfolio. Causal and Control Beliefs, 35*(37). 82-003

- Schwepker, C. H., Ferrell, O. C., & Ingram, T. N. (1997). The Influence of Ethical Climate and Ethical Conflict on Role Stress in the Sales Force. *Journal of the Academy of Marketing Science*, 25(2), 99–108. <https://doi.org/10.1007/BF02894345>
- Shanafelt, T. D., Sloan, J. A., & Habermann, T. M. (2003). The Well-being of Physicians. *The American Journal of Medicine*, 114(6), 513–519. [https://doi.org/10.1016/S0002-9343\(03\)00117-7](https://doi.org/10.1016/S0002-9343(03)00117-7)
- Shanafelt, T., Goh, J., & Sinsky, C. (2017). The Business Case for Investing in Physician Well-being. *JAMA Internal Medicine*, 177(12), 1826. <https://doi.org/10.1001/jamainternmed.2017.4340>
- Shaw, J. D., Delery, J. E., Jenkins, G. D., & Gupta, N. (1998). An Organization-Level Analysis of Voluntary And Involuntary Turnover. *Academy of Management Journal*, 41(5), 511–525. <https://doi.org/10.2307/256939>
- Sheng, H., Tian, D., Sun, L., Hou, Y., & Liu, X. (2023). Nurse Practice Environment, Perceived Organizational Support, General Well-being, Occupational Burnout and Turnover Intention: A Moderated Multi-mediation Model. *Nursing Open*, 10(6), 3828–3839. <https://doi.org/10.1002/nop2.1641>
- Shirom, A., Nirel, N., & Vinokur, A. D. (2006). Overload, Autonomy, and Burnout as Predictors of Physicians' Quality of Care. *Journal of Occupational Health Psychology*, 11(4), 328–342. <https://doi.org/10.1037/1076-8998.11.4.328>
- Shore, L. M., & Wayne, S. J. (1993). Commitment and Employee Behavior: Comparison of Affective Commitment and Continuance Commitment with Perceived Organizational Support. *Journal of Applied Psychology*, 78(5), 774–780. <https://doi.org/10.1037/0021-9010.78.5.774>
- SHRM. (2024). *How to Conduct a Training Needs Assessment*. Society of Human Resources Management. <https://www.shrm.org/topics-tools/tools/how-to-guides/how-to-conduct-training-needs-assessment>
- Sir, M. Y., Dundar, B., Barker Steege, L. M., & Pasupathy, K. S. (2015). Nurse–patient Assignment Models Considering Patient Acuity Metrics and Nurses' Perceived Workload. *Journal of Biomedical Informatics*, 55, 237–248. <https://doi.org/10.1016/j.jbi.2015.04.005>
- Skaik, Y. A. (2015). The Bread and Butter of Statistical Analysis “t-test”: Uses and Misuses. *Pakistan Journal of Medical Sciences*, 31(6). <https://doi.org/10.12669/pjms.316.8984>

- Skiba, R. J., & Knesting, K. (2001). Zero Tolerance, Zero Evidence: An Analysis of School Disciplinary Practice. *New Directions for Youth Development*, 2001(92), 17–43. <https://doi.org/10.1002/yd.23320019204>
- Smart, A. (2021). Protecting UK Healthcare Workers from Patient Racism. *Sociology of Health & Illness*, 43(8), 1826–1830. <https://doi.org/10.1111/1467-9566.13279>
- Sonnino, R. (2016). Health Care Leadership Development and Training: Progress and Pitfalls. *Journal of Healthcare Leadership*, 19. <https://doi.org/10.2147/JHL.S68068>
- Sovie, M. D., Tarcinale, M. A., Vanputee, A. W., & Stunden, A. E. (1985). Amalgam of Nursing Acuity, DRGs and Costs: *Nursing Management (Springhouse)*, 16(3), 42A. <https://doi.org/10.1097/00006247-198503000-00005>
- Søvold, L. E., Naslund, J. A., Kousoulis, A. A., Saxena, S., Qoronfleh, M. W., Grobler, C., & Münter, L. (2021). Prioritizing the Mental Health and Well-Being of Healthcare Workers: An Urgent Global Public Health Priority. *Frontiers in Public Health*, 9, 679397. <https://doi.org/10.3389/fpubh.2021.679397>
- Stamm, B. H. (2010). *The Concise ProQOL Manual, 2nd Edition*. Pocatello, ID: ProQOL.org
- Stodolska, A., Wójcik, G., Barańska, I., Kijowska, V., & Szczerbińska, K. (2023). Prevalence of Burnout Among Healthcare Professionals During the COVID-19 Pandemic and Associated Factors – a Scoping Review. *International Journal of Occupational Medicine and Environmental Health*, 36(1), 21–58. <https://doi.org/10.13075/ijomeh.1896.02007>
- Swiger, P. A., Vance, D. E., & Patrician, P. A. (2016). Nursing Workload in the Acute-care Setting: A Concept Analysis of Nursing Workload. *Nursing Outlook*, 64(3), 244–254. <https://doi.org/10.1016/j.outlook.2016.01.003>
- Tabur, A., Choudhury, A., Emhan, A., Mengenci, C., & Asan, O. (2022). Clinicians’ Social Support, Job Stress, and Intent to Leave Healthcare during COVID-19. *Healthcare*, 10(2), 229. <https://doi.org/10.3390/healthcare10020229>
- Takase, M., Oba, K., & Yamashita, N. (2009). Generational Differences in Factors Influencing Job Turnover Among Japanese Nurses: An Exploratory Comparative Design. *International Journal of Nursing Studies*, 46(7), 957–967. <https://doi.org/10.1016/j.ijnurstu.2007.10.013>
- Tang, J. H.-C., & Hudson, P. (2019). Evidence-Based Practice Guideline: Nurse Retention for Nurse Managers. *Journal of Gerontological Nursing*, 45(11), 11–19. <https://doi.org/10.3928/00989134-20191011-03>

- Tayfur Ekmekci, O., Xhako, D., & Metin Camgoz, S. (2021). The Buffering Effect of Perceived Organizational Support on the Relationships Among Workload, Work–Family Interference, and Affective Commitment: A Study on Nurses. *Journal of Nursing Research, 29*(2), e140. <https://doi.org/10.1097/JNR.0000000000000419>
- Tehseen, S., Ramayah, T., & Sajilan, S. (2017). Testing and Controlling for Common Method Variance: A Review of Available Methods. *Journal of Management Sciences, 4*(2), 142–168. <https://doi.org/10.20547/jms.2014.1704202>
- Tett, R. P., & Meyer, J. P. (1993). Job Satisfaction, Organizational Commitment, Turnover Intention, and Turnover: Path Analyses Based on Meta-analytic Findings. *Personnel Psychology, 46*(2), 259–293. <https://doi.org/10.1111/j.1744-6570.1993.tb00874.x>
- Thakur, R., Hsu, S. H. Y., & Fontenot, G. (2012). Innovation in Healthcare: Issues and Future Trends. *Journal of Business Research, 65*(4), 562–569. <https://doi.org/10.1016/j.jbusres.2011.02.022>
- Thibault Landry, A., Schweyer, A., & Whillans, A. (2017). Winning the War for Talent: Modern Motivational Methods for Attracting and Retaining Employees. *Compensation & Benefits Review, 49*(4), 230–246. <https://doi.org/10.1177/0886368718808152>
- Tholen, G. (2023). Matching Candidates to Culture: How Assessments of Organisational Fit Shape the Hiring Process. *Work, Employment and Society, 095001702311552*. <https://doi.org/10.1177/09500170231155294>
- Trivellas, P., Gerogiannis, V., & Svarna, S. (2013). Exploring Workplace Implications of Emotional Intelligence (WLEIS) in Hospitals: Job Satisfaction and Turnover Intentions. *Procedia - Social and Behavioral Sciences, 73*, 701–709. <https://doi.org/10.1016/j.sbspro.2013.02.108>
- Trivellas, P., Reklitis, P., & Platis, C. (2013). The Effect of Job Related Stress on Employees' Satisfaction: A Survey in Health Care. *Procedia - Social and Behavioral Sciences, 73*, 718–726. <https://doi.org/10.1016/j.sbspro.2013.02.110>
- Twigg, D., & McCullough, K. (2014). Nurse Retention: A Review of Strategies to Create and Enhance Positive Practice Environments in Clinical Settings. *International Journal of Nursing Studies, 51*(1), 85–92. <https://doi.org/10.1016/j.ijnurstu.2013.05.015>
- Valentine, S., Godkin, L., Fleischman, G. M., & Kidwell, R. (2011). Corporate Ethical Values, Group Creativity, Job Satisfaction and Turnover Intention: The Impact of Work Context on Work Response. *Journal of Business Ethics, 98*(3), 353–372. <https://doi.org/10.1007/s10551-010-0554-6>



- Van Bogaert, P., Clarke, S., Wouters, K., Franck, E., Willems, R., & Mondelaers, M. (2013). Impacts of Unit-level Nurse Practice Environment, Workload and Burnout on Nurse-reported Outcomes in Psychiatric Hospitals: A Multilevel Modelling Approach. *International Journal of Nursing Studies*, 50(3), 357–365. <https://doi.org/10.1016/j.ijnurstu.2012.05.006>
- Vander Elst, T., Cavents, C., Daneels, K., Johannik, K., Baillien, E., Van den Broeck, A., & Godderis, L. (2016). Job Demands–resources Predicting Burnout and Work Engagement Among Belgian Home Health Care Nurses: A Cross-sectional Study. *Nursing Outlook*, 64(6), 542–556. <https://doi.org/10.1016/j.outlook.2016.06.004>
- Wakerman, J., Humphreys, J., Russell, D., Guthridge, S., Bourke, L., Dunbar, T., Zhao, Y., Ramjan, M., Murakami-Gold, L., & Jones, M. P. (2019). Remote Health Workforce Turnover and Retention: What Are the Policy and Practice Priorities? *Human Resources for Health*, 17(1), 99. <https://doi.org/10.1186/s12960-019-0432-y>
- Wand, T. C., & Coulson, K. (2006). Zero Tolerance: A Policy in Conflict with Current Opinion on Aggression and Violence Management in Health Care. *Australasian Emergency Nursing Journal*, 9(4), 163–170. <https://doi.org/10.1016/j.aenj.2006.07.002>
- Wang, Y., Xu, S., & Wang, Y. (2020). The Consequences of Employees' Perceived Corporate Social Responsibility: A Meta-analysis. *Business Ethics: A European Review*, 29(3), 471–496. <https://doi.org/10.1111/beer.12273>
- Watkin, S. L. (2005). Managing Safe Staffing. *Seminars in Fetal and Neonatal Medicine*, 10(1), 91–98. <https://doi.org/10.1016/j.siny.2004.09.008>
- Webb, R. L. (2021). *Mostly Harmless Statistics*. Lulu Com.
- Williamson, V., Stevelink, S. A. M., & Greenberg, N. (2018). Occupational Moral Injury and Mental Health: Systematic Review and Meta-analysis. *The British Journal of Psychiatry*, 212(6), 339–346. <https://doi.org/10.1192/bjp.2018.55>
- Woodhead, E. L., Northrop, L., & Edelstein, B. (2016). Stress, Social Support, and Burnout Among Long-Term Care Nursing Staff. *Journal of Applied Gerontology*, 35(1), 84–105. <https://doi.org/10.1177/0733464814542465>
- Woolhandler, S., & Himmelstein, D. U. (2014). Administrative Work Consumes One-Sixth of U.S. Physicians' Working Hours and Lowers their Career Satisfaction. *International Journal of Health Services*, 44(4), 635–642. <https://doi.org/10.2190/HS.44.4.a>

- World Health Organization. (n.d.). *Nursing and Midwifery*. World Health Organization (WHO). <https://www.who.int/news-room/fact-sheets/detail/nursing-and-midwifery>
- World Health Organization. (2016). *Global Strategy on Human Resources for Health: Workforce 2030*. World Health Organization. <https://iris.who.int/handle/10665/250368>
- Wu, H., & Liu, Y. (2022). The Relationship Between Organisational Support for Career Development, Organisational Commitment, and Turnover Intentions Among Healthcare Workers in Township Hospitals of Henan, China. *BMC Primary Care*, 23(1), 136. <https://doi.org/10.1186/s12875-022-01753-4>
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The Role of Personal Resources in the Job Demands-resources Model. *International Journal of Stress Management*, 14(2), 121–141. <https://doi.org/10.1037/1072-5245.14.2.121>
- Xavier, B. (2014). Shaping the Future Research Agenda for Compensation and Benefits Management: Some Thoughts Based on a Stakeholder Inquiry. *Human Resource Management Review*, 24(1), 31–40. <https://doi.org/10.1016/j.hrmr.2013.08.011>
- Xiaoming, Y. (2014). Effects of Workload on Burnout and Turnover Intention of Medical Staff: A Study. *STUDIES ON ETHNO-MEDICINE*, 08(03). <https://doi.org/10.31901/24566772.2014/08.03.04>
- Xu, Z., & Yang, F. (2021). The Impact of Perceived Organizational Support on the Relationship Between Job Stress and Burnout: A Mediating or Moderating Role? *Current Psychology*, 40(1), 402–413. <https://doi.org/10.1007/s12144-018-9941-4>
- Yadav, M., & Rangnekar, S. (2015). Supervisory Support and Organizational Citizenship Behavior: Mediating Role of Participation in Decision Making and Job Satisfaction. *Evidence-Based HRM: A Global Forum for Empirical Scholarship*, 3(3), 258–278. <https://doi.org/10.1108/EBHRM-04-2014-0014>
- Yatchmenoff, D. K., Sundborg, S. A., & Davis, M. A. (2017). Implementing Trauma-Informed Care: Recommendations on the Process. *Advances in Social Work*, 18(1), 167–185. <https://doi.org/10.18060/21311>
- Zaheer, S., Ginsburg, L., Wong, H. J., Thomson, K., Bain, L., & Wulffhart, Z. (2019). Turnover Intention of Hospital Staff in Ontario, Canada: Exploring the Role of Frontline Supervisors, Teamwork, and Mindful Organizing. *Human Resources for Health*, 17(1), 66. <https://doi.org/10.1186/s12960-019-0404-2>

Zhang, X., Song, Y., Jiang, T., Ding, N., & Shi, T. (2020). Interventions to Reduce Burnout of Physicians and Nurses: An Overview of Systematic Reviews and Meta-analyses. *Medicine*, 99(26), e20992. <https://doi.org/10.1097/MD.00000000000020992>

Zhu, L.-L., Wang, H.-J., Xu, Y.-F., Ma, S.-T., & Luo, Y.-Y. (2023). The Effect of Work Engagement and Perceived Organizational Support on Turnover Intention among Nurses: A Meta-Analysis Based on the Price–Mueller Model. *Journal of Nursing Management*, 2023, 1–14. <https://doi.org/10.1155/2023/3356620>

## Appendix A: Ethical Amendment Approval



Interdisciplinary Committee on  
Ethics in Human Research (ICEHR)

St. John's, NL, Canada A1C 5S7  
Tel: 709 864-2561 icehr@mun.ca  
www.mun.ca/research/ethics/humans/icehr

ICEHR Number:	20241628-BA
Approval Period:	April 3, 2024 – April 30, 2025
Funding Source:	Mitacs [RIS# 20240781]
Responsible Faculty:	Dr. Travor Brown Faculty of Business Administration
Title of Project:	<i>Evaluating the Impact of Regular Psychological Debriefing Sessions on Frontline Healthcare Providers</i>

April 3, 2024

Mr. Amir Ali Aghili Dehkordi  
Faculty of Business Administration  
Memorial University

Dear Mr. Aghili Dehkordi:

Thank you for your correspondence addressing the issues raised by the Interdisciplinary Committee on Ethics in Human Research (ICEHR) for the above-named research project. ICEHR has re-examined the proposal with the clarifications and revisions submitted, and is satisfied that the concerns raised by the Committee have been adequately addressed. In accordance with the *Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans (TCPS2)*, the project has been granted *full ethics clearance* for **one year**. ICEHR approval applies to the ethical acceptability of the research, as per Article 6.3 of the *TCPS2*. Researchers are responsible for adherence to any other relevant University policies and/or funded or non-funded agreements that may be associated with the project. If funding is obtained subsequent to ethics approval, you must submit a Funding and/or Partner Change Request to ICEHR so that this ethics clearance can be linked to your award.

The *TCPS2* **requires** that you **strictly adhere to the protocol and documents as last reviewed** by ICEHR. If you need to make additions and/or modifications, you must submit an Amendment Request with a description of these changes, for the Committee's review of potential ethical concerns, before they may be implemented. Submit a Personnel Change Form to add or remove project team members and/or research staff. Also, to inform ICEHR of any unanticipated occurrences, an Adverse Event Report must be submitted with an indication of how the unexpected event may affect the continuation of the project.

The *TCPS2* **requires** that you submit an Annual Update to ICEHR before **April 30, 2025**. If you plan to continue the project, you need to request renewal of your ethics clearance and include a brief summary on the progress of your research. When the project no longer involves contact with human participants, is completed and/or terminated, you are required to provide an annual update with a brief final summary and your file will be closed. All post-approval ICEHR event forms noted above must be submitted by selecting the Applications: Post-Review link on your Researcher Portal homepage. We wish you success with your research.

Yours sincerely,

Alyson Byrne, Ph.D.  
Vice-Chair, Interdisciplinary Committee on  
Ethics in Human Research

AB/bc

cc: Supervisor – Dr. Travor Brown, Faculty of Business Administration  
Director, Research Initiatives and Services

## Appendix B: Research Materials

### Invitation to Participate in Research Study: Impact of Psychological Debriefing Sessions on Healthcare Providers

My name is Amir Ali Aghili Dehkordi, and I am a student in the Faculty of Business Administration\Department of Business Administration, at Memorial University of Newfoundland. I am conducting a research project called “Evaluating the Impact of Regular Psychological Debriefing Sessions on Frontline Healthcare Providers” for my master’s degree under the supervision of Dr. Trevor Brown. This study is conducted in partnership with the healthcare authority where the study took place and aims to examine the effects of regular psychological debriefing sessions on well-being, burnout, and the intention to remain in one's position among frontline healthcare providers within the Laboratory Medicine Program.

We are specifically inviting employees who participate in regular psychological debriefing sessions to share their experiences through pre- and post-debriefing online surveys. These surveys will inquire about the sessions' impact on your professional well-being, experiences of burnout, and any shifts in your intention to leave your job. The first survey will also collect demographic data to better understand the context of your responses. Each survey is designed to be concise and will require approximately 10 to 15 minutes of your time to complete. You can fill out the survey online at your convenience using any device with internet access.

Participation is open exclusively to those involved in the Laboratory Medicine Program's clinical lab staff who attend these debriefing sessions. Non-clinical staff and individuals not participating in the Laboratory Medicine Program are not eligible.

Participation in this study is voluntary and not a requirement of your employment with healthcare authority. Your insights are invaluable to us, and we thank you in advance for considering contributing to this research.

If you have any questions about me or my project, please contact me by email at [aaaghilidehk@mun.ca](mailto:aaaghilidehk@mun.ca), or by phone at (709) 685 6552.

Thank you in advance for considering my request,

Amir

This research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research (ICEHR). If you have ethical concerns about the research, such as the way you have been treated or your rights as a participant, you may contact the ICEHR at [icehr@mun.ca](mailto:icehr@mun.ca) or by telephone at 709-864-2861.

## Letter of Informed Consent

Title: Evaluating the Impact of Regular Psychological Debriefing Sessions on Frontline Healthcare Providers

Researcher(s): Amir Ali Aghili Dehkordi, Faculty of Business Administration\Department of Business Administration, Memorial University of Newfoundland, [aaaghilidehk@mun.ca](mailto:aaaghilidehk@mun.ca), (709) 685 6552

Supervisor(s): Dr. Trevor C. Brown, Faculty of Business Administration\Department of Business Administration, Memorial University of Newfoundland, [travorb@mun.ca](mailto:travorb@mun.ca), (709) 864 8851

You are invited to take part in a research project. This document explains what the research is about and what your participation will involve. It is entirely up to you to decide whether or not to take part in this research. Please contact the researcher if you have any questions about the study or would like more information before you consent.

### **Purpose of Study:**

This study is designed to assess the impact of regular psychological debriefing sessions on the mental health and professional well-being of frontline healthcare providers specifically targeting those within the Laboratory Medicine Program. The primary aim is to examine the effectiveness of such psychological debriefing sessions, on well-being burnout, and intentions to remain in their current positions. By analyzing pre- and post-debriefing session survey data, this research seeks to offer evidence-based insights into the effectiveness of psychological debriefing as a support mechanism for healthcare workers.

This study collaborates with the Human Resources department at the healthcare authority to enhance staff support and retention strategies. An aggregated report, excluding personal details to ensure confidentiality, will be shared with the healthcare authority leadership to guide HR interventions based on our findings. This partnership aims to improve the support system for healthcare workers within the healthcare authority.

### **What You are being invited to do in this Study:**

As a participant in this study, you are invited to complete two surveys designed to evaluate the effectiveness of psychological debriefing sessions.

### **Survey Participation:**

***Pre-Debriefing Survey:*** Before the commencement of the debriefing sessions, you will be asked to complete an initial survey. This survey aims to gather baseline data. This survey will also collect demographic data to better understand the context of your responses.

***ID Creation for Survey Participation:*** For confidentiality and to ensure your responses are anonymously processed, you're invited to create a personal identifier. This can be done by combining your mother's birth date in the format MM/DD/YY with the first letters of the street name of your first childhood home. This unique ID will be utilized for both the initial and the follow-up surveys to maintain the anonymity of your responses.

***Post-Debriefing Survey:*** After the debriefing sessions have concluded, you will be asked to complete a follow-up survey.

**Data Capture Method:**

Surveys will be conducted online via Alchemer, ensuring a secure and confidential collection of your responses. Participation requires an internet-connected device, with each survey taking approximately 10 to 15 minutes to complete.

**Documentation of Data:**

Your survey data will be hosted and stored electronically on Alchemer, with all data for this study exclusively stored in Canada, in alignment with Alchemer's data protection policies. This ensures compliance with Canadian privacy laws and provides a secure environment for data collection and storage. For more information on Alchemer's data protection and privacy practices, please refer to their privacy policy at <https://www.alchemer.com/privacy/>

**Anonymity and Confidentiality:**

Participants completing the online surveys via the Alchemer platform will do so anonymously. The surveys are designed not to collect any personal identifying information (such as names, email addresses, or IP addresses), ensuring that both your participation and the data you provide remain anonymous.

**Data Confidentiality:** While participation through our online surveys is anonymous, we are committed to maintaining the confidentiality of the data collected. This means that any information gathered during the study will be stored securely and accessed only by the Provincial Evaluation Program and the research team. Data will be reported in aggregate form, without any identifiers, to ensure that individual responses cannot be linked back to participants.

By participating in this study, you are assured of the anonymity of your survey responses and the confidentiality of the data collected. We are dedicated to protecting your privacy and handling all collected information with the utmost care and respect, following ethical guidelines and data protection regulations.

**Reporting of Data:**

In the reporting of data collected from this study, we prioritize the privacy and confidentiality of all participants. Here's how we ensure that your information is handled respectfully and securely:

***Anonymized and Summarized Reporting:*** The data from this study will be reported in an aggregated, anonymized, and summarized form. This means that the findings we share in academic publications, presentations, or reports to the healthcare organization will not include

any direct quotations or personally identifying information. Instead, we will present overall trends, averages, and general insights derived from the collective data. Only the research team will have access to raw data.

### **Withdrawal from the Study:**

Your participation in this research is entirely voluntary, and you have the right to withdraw at any time for any reason. Additionally, you have the option to skip any questions you do not wish to answer. Below are the details regarding withdrawal from the study and how your data will be handled:

***During Data Collection:*** If you decide to stop participating during the data collection phase, such as partway through completing the online survey, you can simply exit the survey. Any data collected up to that point will not be used or analyzed. Since the survey is conducted anonymously via the Alchemer platform, data submitted partway cannot be identified or linked back to you once you exit the survey, ensuring your complete withdrawal.

***After Data Collection Has Ended:*** If you wish to withdraw your data after completing the survey, please email the researcher, providing your participant code, and ask that your data be removed. As the data will be analyzed shortly after submission, this must be done within two weeks of submission.

### **Use, Access, Ownership, and Storage of Data:**

***Data Storage:*** All electronic data collected in this study will be stored securely on encrypted devices. Electronic files will be password-protected and stored on a password-protected and/or encrypted hard drive. Measures are in place to ensure that data is protected from unauthorized access, loss, or breach.

***Access to Data:*** Access to the collected data will be strictly limited to the Provincial Evaluation Program and the research team, which includes the principal investigator, and co-investigator involved in the study. No funders or partner organizations will have access to raw data.

***Archiving and Open Access:*** We will not deposit the data to an archive or open access platform for use by other researchers.

***Retention Period:*** In accordance with Memorial University's policy on Integrity in Scholarly Research, the data collected in this study will be retained for a minimum of five years. This period starts from the date of publication or the completion of the study, whichever comes later. This retention policy is in place to support the integrity of the research findings and allow for the verification of results if needed.

***Post-Retention:*** Following the mandatory retention period, the decision to continue to retain the data or to securely dispose of it will be at the discretion of the co-investigator and Provincial Evaluation Program. Any disposal of data will be conducted securely to ensure that confidentiality is maintained.



**Possible Risks:**

There is a minor risk that you may be uncomfortable and that you are being asked to disclose information of an intimate or sensitive nature. We remind you that answering any or the questions is voluntary. You may avail of resources such as those on <https://www.bridgethegapp.ca/>.

**Possible Benefits:**

Participating in this study may offer you insights into your professional well-being, resilience, and coping strategies. Reflecting on your experiences with psychological debriefing sessions could highlight the value of psychological support in healthcare.

Your contribution to this research helps advance understanding of psychological debriefing's impact on healthcare professionals in high-stress environments. This study aims to enhance support practices and influence policies to improve healthcare delivery and outcomes.

**Reporting and Sharing Results:**

Findings from this study may be published in a thesis and online journal articles, contributing to the academic and professional discourse on healthcare professional support. The thesis will be available at Memorial University's Queen Elizabeth II library and accessible online at <https://research.library.mun.ca/>, ensuring wide accessibility.

In addition to academic dissemination, a comprehensive report of the study's findings will be prepared and shared with the healthcare authority. to inform and enhance support strategies for healthcare professionals within the organization.

Note: Published data will exclude any personally identifying information, adhering to strict ethical standards in research reporting.

**Questions:**

You are welcome to ask questions before, during, or after your participation in this research. If you would like more information about this study, please contact: Amir Ali Aghili Dehkordi, [aaaghilidehk@mun.ca](mailto:aaaghilidehk@mun.ca), or my supervisor, Dr. Trevor C. Brown, [travorb@mun.ca](mailto:travorb@mun.ca).

This research has been approved by the Interdisciplinary Committee on Ethics in Human Research (ICEHR). If you have ethical concerns about the research, such as the way you have been treated or your rights as a participant, you may contact the ICEHR at [icehr@mun.ca](mailto:icehr@mun.ca) or by telephone at 709-864-2861.

**Consent:**

By completing this survey, you agree that:

- You have read the information about the research.
- You have been advised that you may ask questions about this study and receive answers prior to continuing.

- You are satisfied that any questions you had have been addressed.
- You understand what the study is about and what you will be doing.
- You understand that you are free to withdraw from the study at any time without giving a reason, either by closing your browser window or navigating away from this page during the survey. Additionally, if you wish to have your data removed after completing the survey, you can contact the researcher within two weeks and provide your participant code to request the removal of your data. Your decision to withdraw will not affect you now or in the future.

By consenting to this online survey, you do not give up your legal rights and do not release the researchers from their professional responsibilities.

Please retain a copy of this consent document for your records.

**Clicking 'Accept' below and submitting this survey constitutes your consent and implies agreement to the above statements.**

## Survey

In order to keep this survey anonymous, please create a unique ID so that your initial and follow-up responses (pre and post surveys) can be matched without using any identifying information.

To do this, please use your mother's birth date in a number format (MM/DD/YY) followed by the first letters of your first childhood home's street name. For example, if your mother's birth date was January 1, 1950, and your first childhood home was on West Street, your code would be: 01011950WS.

You will need to use this code again in the follow-up response (post survey). \*

---

Please verify your code: \*

---

Is this your initial response (pre survey) or follow-up response (post survey)? \*

- Initial survey (pre survey)
- Follow-up survey (post survey)

The following demographic questions are not designed to be identifying. Your responses will be used to help the organization ensure that we gather feedback that represents our employees, as well as to better understand the experience of various groups of employees. Please keep in mind that throughout the survey, you have the option to skip any questions you do not wish to answer.

### Age:

- Under 20
- 20-29
- 30-39
- 40-49
- 50-59
- 60 and above

### Gender:

- Female
- Male
- Non-binary
- A gender identity not listed here: \_\_\_\_\_
- Prefer not to say

### Educational Attainment (highest certificate, diploma, or degree):

- High school diploma or equivalency
- College diploma or trades certificate
- Bachelor's degree

- Master's degree
- Doctoral degree
- Other - Write In (Required) \_\_\_\_\_

**Years of Experience in Healthcare:**

- Less than 5 years
- 5-9 years
- 10-14 years
- 15-19 years
- 20-24 years
- 25 and above

**Current Job Position / Role:**

- Medical Laboratory Technician
- Clinical Laboratory Scientist
- Phlebologist
- Histotechnologist
- Cytotechnologist
- Laboratory Information System Analyst
- Other - Write In (Required) \_\_\_\_\_

**Type of Healthcare Facility:**

- Hospital / Health Centre
- Community-Based Clinic / Office
- Other - Write In (Required) \_\_\_\_\_

**Are you a member of a professional regulatory body?**

- Yes
- No

## PQOL Scale for Health Workers

Consider each statement about your current work situation. Select the response that most accurately reflects how frequently you have experienced these things in the last 30 days.

**1. I am happy that I choose to work in healthcare.**

Never Rarely Sometimes Often Very Often

**2. At times I have had to do things that go against my personal values.**

Never Rarely Sometimes Often Very Often

**3. Because of my work, I have unwanted, distressing thoughts.**

Never Rarely Sometimes Often Very Often

**4. I have seen things at work that I believe to be morally wrong.**

Never Rarely Sometimes Often Very Often

**5. I feel supported by my colleagues.**

Never Rarely Sometimes Often Very Often

**6. I feel energized by working with my patients.**

Never Rarely Sometimes Often Very Often

**7. I often find myself thinking about my patients when I am with my family.**

Never Rarely Sometimes Often Very Often

**8. Administrative procedures and rules make my job too hard.**

Never Rarely Sometimes Often Very Often

**9. At times, I have been unable to provide the care that I believe should have been provided**

Never Rarely Sometimes Often Very Often

**10. I think that I have been affected by the suffering I see at work.**

Never Rarely Sometimes Often Very Often

**11. My family supports me in my work in healthcare.**

Never Rarely Sometimes Often Very Often

**12. Because of my work, I feel anxious about many things.**

Never Rarely Sometimes Often Very Often

**13. The people who make the decisions that affect my job care about my wellbeing.**

Never Rarely Sometimes Often Very Often

**14. At times, I have felt ashamed of the choices I have made at work.**

Never Rarely Sometimes Often Very Often

**15. I am unhappy at work.**

Never Rarely Sometimes Often Very Often

**(Attention question) If you are reading this question, please select 'Often' as your answer.**

Never Rarely Sometimes Often Very Often

**16. I feel depressed because of the suffering I see at work.**

Never Rarely Sometimes Often Very Often

**17. I am unhappy because I have observed health workers doing things that I believe are unethical.**

Never Rarely Sometimes Often Very Often

**18. My manager cares about my personal wellbeing.**

Never Rarely Sometimes Often Very Often

**19. My workload seems endless.**

Never Rarely Sometimes Often Very Often

**20. My workplace is an extremely harsh place to work.**

Never Rarely Sometimes Often Very Often

**21. I feel satisfied by my work in healthcare.**

Never Rarely Sometimes Often Very Often

**22. Because of my work, I have very little time for a personal life.**

Never Rarely Sometimes Often Very Often

**23. I have people who I can talk to about my struggles at work.**

Never Rarely Sometimes Often Very Often

**24. I believe I can make a difference through my work in healthcare.**

Never Rarely Sometimes Often Very Often

**25. I have close friends who support me in my work.**

Never Rarely Sometimes Often Very Often

**26. I avoid activities or situations that remind me of patients' suffering.**

Never Rarely Sometimes Often Very Often

**27. I am proud of what I can do to help.**

Never Rarely Sometimes Often Very Often

**28. I feel responsible that I have not always been able to help people.**

Never Rarely Sometimes Often Very Often

**29. My work exhausts me.**

Never Rarely Sometimes Often Very Often

**30. I feel that my work in healthcare makes the world a better place.**

Never Rarely Sometimes Often Very Often

Listed below is a series of statements that represent feelings that individuals might have about the organization for which they work.

With respect to your own feelings about your organization, please indicate the degree of your agreement or disagreement with each statement.

**1. How often do you think about leaving your current employer?**

Very Unlikely – Unlikely - Somewhat Unlikely – Neutral - Somewhat Likely – Likely - Very Likely

**2. How likely is it that you will search for a job in another organization?**

Very Unlikely – Unlikely - Somewhat Unlikely – Neutral - Somewhat Likely – Likely - Very Likely

**3. How likely is it that you will actually leave the organization within the next year?**

Very Unlikely – Unlikely - Somewhat Unlikely – Neutral - Somewhat Likely – Likely - Very Likely



This section of the survey focuses on your beliefs in your ability to handle situations and challenges in your workplace. Please read each statement carefully and consider how it applies to you within the context of your current role at your organization. For each statement, select the option that best describes your level of agreement based on your experiences in the last 30 days.

**1. I can always manage to solve difficult problems if I try hard enough.**

Not at all true – Hardly true – Moderately true – Exactly true

**2. If someone opposes me, I can find the means and ways to get what I want.**

Not at all true – Hardly true – Moderately true – Exactly true

**3. It is easy for me to stick to my aims and accomplish my goals.**

Not at all true – Hardly true – Moderately true – Exactly true

**4. I am confident that I could deal efficiently with unexpected events.**

Not at all true – Hardly true – Moderately true – Exactly true

**5. Thanks to my resourcefulness, I know how to handle unforeseen situations.**

Not at all true – Hardly true – Moderately true – Exactly true

**6. I can solve most problems if I invest the necessary effort.**

Not at all true – Hardly true – Moderately true – Exactly true

**7. I can remain calm when facing difficulties because I can rely on my coping abilities.**

Not at all true – Hardly true – Moderately true – Exactly true

**8. When I am confronted with a problem, I can usually find several solutions.**

Not at all true – Hardly true – Moderately true – Exactly true

**9. If I am in trouble, I can usually think of a solution**

Not at all true – Hardly true – Moderately true – Exactly true

**10. I can usually handle whatever comes my way.**

Not at all true – Hardly true – Moderately true – Exactly true