

Transformational Leadership as a Catalyst for Change: Impact on Working Nursing Students' Intentions to Leave

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ABSTRACT

The global nursing shortage persists as a significant challenge, with the World Health Organization (WHO) estimating a deficit of six million nurses globally. In Malaysia, the nurse-to-patient ratio stands at only 3.4 per 1,000 people, far below the recommended 4.5, leading to workload increases and higher turnover rates. This study investigates the influence of transformational leadership on the intentions of working nursing students to leave the profession. Employing the Spiral Successful Outcomes (SSO) model, the research employs a mixed-methods design (70% quantitative, 30% qualitative). Surveys and interviews with 500 purposively selected nursing students from diverse healthcare settings provide insights into leadership's impact on job satisfaction and organizational commitment. The study reveals transformational leadership reduces turnover intentions by fostering professional growth and inclusivity while addressing resource constraints and dual-role challenges. Recommendations include mentorship programs, AI-driven workload management, and evidence-based policies for retention.

Keywords: Transformational Leadership, Nursing Shortage, Organizational Commitment, Spiral Successful Outcomes Model, Job Satisfaction

INTRODUCTION

Background

The nursing profession faces a critical shortage globally and in Malaysia. The Ministry of Health (MOH) projects a worsening nurse-to-patient ratio of 1:300 by 2024. High workloads and dissatisfaction are significant contributors to turnover intentions. This study posits transformational leadership as a potential solution, addressing psychological and occupational well-being to enhance job satisfaction and organizational commitment.

Problem Statement

Malaysia's declining nurse-to-patient ratio impacts healthcare sustainability. Working nursing students, balancing professional and academic responsibilities, face stress and burnout, increasing turnover intentions. Understanding the influence of transformational leadership can provide actionable strategies to mitigate these challenges. The MOH (2021) reports a decline in the nurse-to-patient ratio, which is expected to reach 1:300 by 2024, negatively impacting job satisfaction and increasing the likelihood of nurses leaving the profession. This scenario is particularly challenging for working nursing students who juggle their studies and professional commitments, often facing heightened levels of stress and burnout.

Objectives

General Objective: To explore how transformational leadership influences working nursing students' intentions to leave the profession.

Specific Objectives:

1. Assess the relationship between transformational leadership and turnover intentions.
2. Evaluate the connection between leadership practices and environmental sustainability.
3. Identify triangulation factors affecting leadership's impact on turnover intentions.

Research Questions

1. How does transformational leadership affect turnover intentions?
2. How does leadership influence job satisfaction and sustainability?
3. What factors mediate the relationship between leadership and turnover intentions?

Feasibility Considerations

The feasibility of this study is supported by several key factors that enhance its value to both the healthcare and educational sectors in Malaysia. First, the study can leverage Malaysia's substantial pool of nursing students, many of whom are also working professionals. These students can be accessed through collaborations with nursing schools and hospitals, providing a diverse and representative sample. The ability to tap into this group increases the likelihood of obtaining a comprehensive view of the impact of transformational leadership on nurse retention.

LITERATURE REVIEW

The Application of the PRISMA Model

To achieve a comprehensive review, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) model guided the systematic collection and synthesis of relevant literature. Key terms such as "nursing shortage," "intent to leave," "nursing workforce," and "transformational leadership" yielded 20 relevant studies published between 2019 and 2024. These studies were sourced from databases **open access OUM e library**, Sciences Direct, PubMed, CINAHL, and Scopus. PRISMA's structured approach ensured only studies meeting rigorous quality criteria were included, allowing for a consolidated review that highlights common themes, conflicts, and emerging gaps.

Table 3: Stage and figure using prisma model

Stage	Number of Studies
Identification	450
Screening	120
Eligibility	40
Included for Analysis	20-30

Transformational Leadership

Transformational leaders inspire and motivate teams, fostering trust and commitment. This style emphasizes innovation and inclusivity, addressing burnout and dissatisfaction (Northouse, 2021). In healthcare, transformational leadership has shown potential in improving retention by aligning organizational goals with individual aspirations.

Factors Influencing Turnover Intentions

Job Satisfaction: Dissatisfaction from high workloads and low compensation drives turnover. Studies highlight leadership's role in improving job satisfaction through supportive practices.

Workplace Culture: Inclusive and respectful environments reduce disengagement and improve retention. Transformational leaders promote diversity and cohesion.

Compensation: Competitive pay structures align workforce stability with financial incentives.

Theoretical Framework

The Spiral Successful Outcomes (SSO) model integrates micro and macro factors influencing workforce dynamics. Four Key elements include leadership Practice skilled, communication advance, collaboration relationship, technological integration.

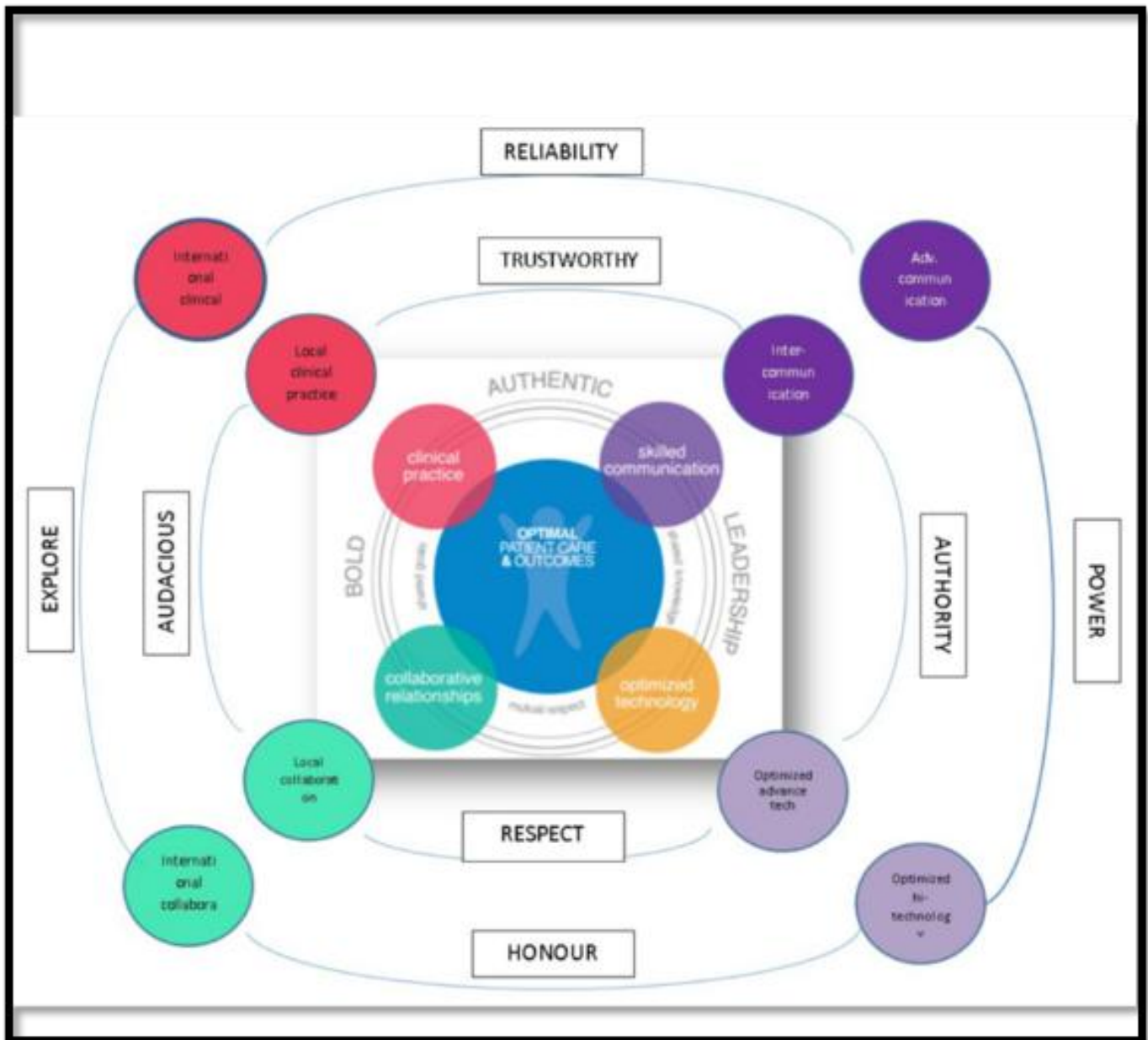


Table 1: Adopted Model Spiral Successful Outcomes (SSO) nursing for success theory Kian, L., Kok Fei, T. L., & Yusof. S M. Y. (2019) to Spiral Successful Outcomes (SSO) trial.

Powers for Leaders

Inspiring tele-ICU model (2000) adopted in to SSO by Kian, L., Kok Fei, T. L., & Yusof. S M. Y. (2019). The integration of technology within the SSO model presents numerous advantages for nursing leadership, particularly in streamlining processes and enhancing organisational efficiency. Advanced digital tools and artificial intelligence (AI) significantly optimise workflows, reducing the administrative burdens that often

distract healthcare professionals from patient care. By automating repetitive tasks, leaders can allocate more time and resources to high-priority activities (Zhang & Lin, 2022; Romero & Cullen, 2020).

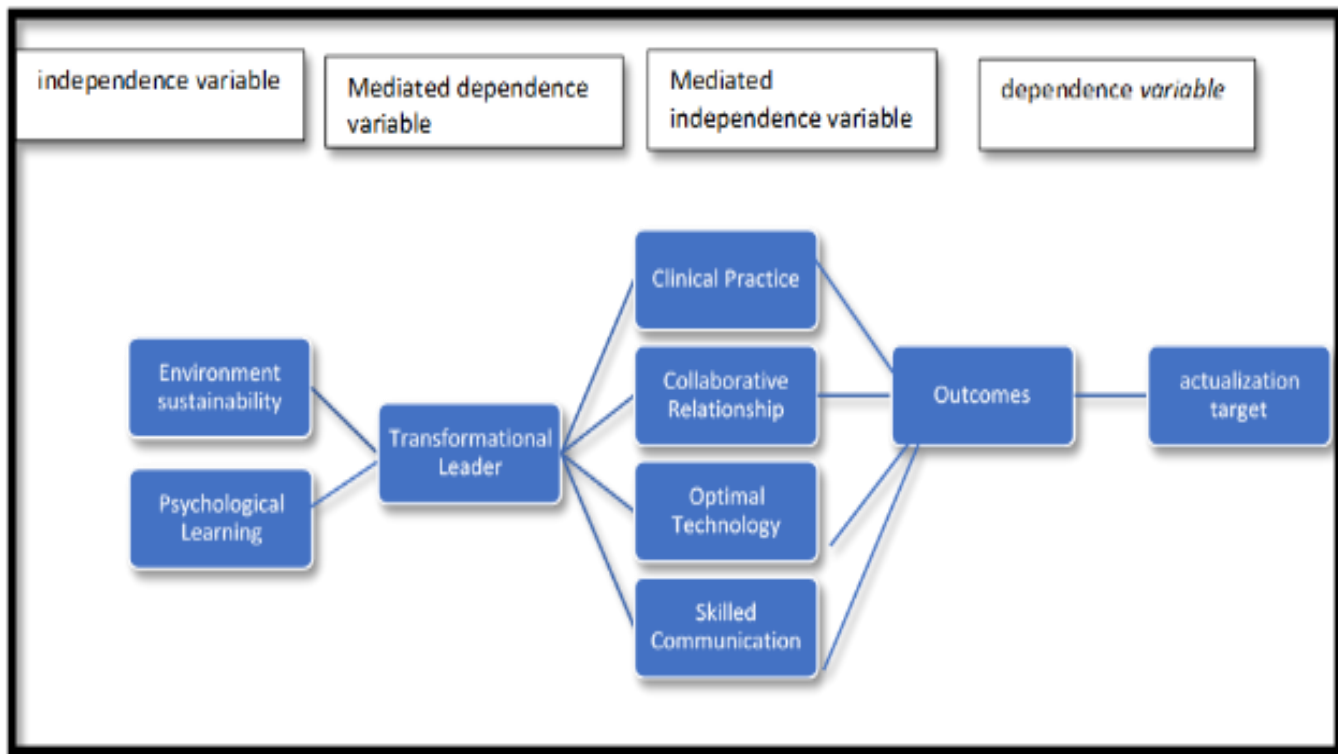


Table 2: Adapted spiral successful outcomes model theory by Law kian, Teddy lian kok fei, Yusof. S.M Y (2019) to working conceptual framework transformational leadership intentions to leave (2025)

METHODOLOGY

Research Design

A mixed-methods approach combines quantitative surveys (70%) and qualitative interviews (30%). Quantitative tools measure transformational leadership and turnover intentions, while interviews explore contextual insights.

Population and Sample

Target Population: Registered nurses enrolled in Open University Malaysia’s nursing programs.

Sampling: Purposive sampling of 500 participants ensures diverse representation across demographics and healthcare settings.

Data Collection

Quantitative Data: Surveys assess leadership effectiveness, job satisfaction, and turnover intentions using validated instruments like the Multifactor Leadership Questionnaire (MLQ).

Qualitative Data: Semi-structured interviews explore experiences and perceptions of leadership impacts.

Data Analysis

Quantitative: Statistical methods (e.g., regression analysis) identify relationships between variables.

Qualitative: Thematic analysis uncovers patterns and contextual factors influencing perceptions.

Ethical Considerations

Approval from ethics committees ensures participant confidentiality and informed consent. Anonymized data secures privacy.

FINDINGS

Demographics

Participants included 80% female respondents, with an average of five years of experience. Most were employed in public hospitals (65%).

Relationship Between Leadership and Turnover Intentions

- Transformational leadership scores averaged 4.2/5.
- Turnover intentions averaged 2.9/5.
- A significant negative correlation ($r = -0.65$, $p < 0.01$) was observed, with leadership explaining 50% of turnover variance.

Mediation Analysis

Organizational commitment partially mediated leadership's impact on turnover, reducing leadership's direct effect (from $\beta = -0.68$ to $\beta = -0.50$).

Qualitative Insights

Interviews revealed mentorship and inclusive policies as key factors enhancing satisfaction and retention.

DISCUSSION

Findings affirm transformational leadership's role in reducing turnover through professional growth and organizational commitment. Challenges include cultural dynamics and resource constraints. Leadership strategies must integrate workload management, competitive compensation, and inclusive practices.

RECOMMENDATIONS

1. **Mentorship Programs:** Targeted support for nursing students fosters growth and resilience.
2. **AI-Driven Workload Management:** Optimizes resource allocation, reducing burnout.
3. **Policy Enhancements:** Evidence-based strategies align with sustainability goals and workforce retention.

Action Plan Strategic

Strategic Plan: Addressing Current Nurse Shortages and Intent to Leave Using the SSO Model

The current nursing shortage and increased intent to leave require a sustainable strategy grounded in the SSO (Skilled Communication, Collaboration, and Relationships) model to address immediate challenges and ensure long-term workforce stability. This strategy focuses on tackling key issues through skilled communication, collaboration, and adaptive leadership, integrating solutions for workload, compensation, and workplace culture.

Communication: Addressing the Six Main Issues for Nurses’ Intent to Leave

Table A: Strategic Interventions for Communication

Issue	Impact	Communication Strategy	Outcome
High Workload	Burnout, dissatisfaction, errors, and reduced patient care quality (Catania et al., 2024; Buchan et al., 2020)	Implement real-time communication tools to monitor workload distribution and address imbalances.	Reduced burnout and better workload equity.
Inadequate Compensation	Low morale, job dissatisfaction, and high turnover intentions (Fayez Salahat & Al-Hamdan, 2020; Sasso et al., 2019)	Transparent communication on pay structures, including plans for salary adjustments or non-monetary benefits.	Enhanced trust in organisational commitment to equity.
Poor Workplace Culture	Disengagement, isolation, and lower retention (Charoensri, 2022; Singh et al., 2024)	Foster open dialogue to address grievances and cultural inclusivity.	Improved team morale and inclusivity.
Limited Professional Growth	Stagnation, dissatisfaction, and reduced motivation (Crowley, 2023; Charoensri, 2022)	Develop clear communication on training opportunities and career pathways.	Enhanced engagement and skill development.
Ineffective Team Dynamics	Poor collaboration, increased conflicts, and care fragmentation (Sasso et al., 2019; Cummings et al., 2018)	Use structured communication protocols (e.g., SBAR) to ensure clarity in team roles and tasks.	Strengthened teamwork and reduced errors.
Resistance to Change	Lower adaptability to organisational shifts and evolving care demands (Romero & Cullen, 2020; Zhang & Lin, 2022)	Conduct regular change management sessions to foster open dialogue and mitigate resistance.	Smooth transition during policy or process changes.

Collaboration and Relationships: Building a Supportive Environment

Collaboration is pivotal in addressing systemic issues contributing to nurse shortages and turnover. Leaders must foster an environment of mutual support, leveraging interdisciplinary expertise to address challenges comprehensively. Collaborative models enhance patient outcomes and create a resilient workforce.

- Fostering Innovation:** Leaders can establish innovation teams comprising diverse healthcare professionals to develop creative solutions for workload management and retention challenges (Charoensri, 2022; Crowley, 2023).
- Holistic Care:** Collaborative care models ensure patients receive integrated services, minimising fragmentation and enhancing satisfaction (Farley & Latham, 2022; Catania et al., 2024).
- Building Professional Relationships:** Regular team-building exercises and open forums strengthen trust among staff, improving satisfaction and reducing turnover intentions (Crowley, 2023; Kingma, 2020).
- Encouraging Knowledge Sharing:** Leaders should implement platforms for knowledge exchange, fostering an environment of continuous learning (Cummings et al., 2018; Van Der Heijden & Bakker, 2021).

5. **Enhancing Engagement:** Recognising individual and team contributions promotes morale and a sense of belonging (Catania et al., 2024; Singh et al., 2024).

SSO Model in Nursing Leadership: Addressing the Six Main Issues for Nurses’ Intent to Leave

Table B: Strategic Interventions for Collaboration and Relationships

Issue	Impact	Collaboration and Relationships Strategy	Outcome
High Workload	Burnout, dissatisfaction, errors, and reduced patient care quality (Catania et al., 2024; Buchan et al., 2020).	Foster collaboration through interdisciplinary task-sharing and workload redistribution plans.	Reduced burnout and enhanced team support.
Inadequate Compensation	Low morale, job dissatisfaction, and high turnover intentions (Fayez Salahat & Al-Hamdan, 2020; Sasso et al., 2019).	Collaborate with financial management to identify budget reallocations and implement retention bonuses.	Improved job satisfaction and trust in leadership.
Poor Workplace Culture	Disengagement, isolation, and lower retention (Charoensri, 2022; Singh et al., 2024).	Establish collaborative team-building activities and peer support groups to strengthen relationships.	Enhanced morale and reduced feelings of isolation.
Limited Professional Growth	Stagnation, dissatisfaction, and reduced motivation (Crowley, 2023; Charoensri, 2022).	Develop mentorship programs and cross-department collaborations to provide skill development opportunities.	Increased engagement and career satisfaction.
Ineffective Team Dynamics	Poor collaboration, increased conflicts, and care fragmentation (Sasso et al., 2019; Cummings et al., 2018).	Implement conflict resolution frameworks and promote collaborative problem-solving through regular team huddles.	Strengthened team cohesion and fewer conflicts.
Resistance to Change	Lower adaptability to organisational shifts and evolving care demands (Romero & Cullen, 2020; Zhang & Lin, 2022).	Create collaborative change advisory groups to involve staff in decision-making and process evaluation.	Improved adaptability and smoother organisational transitions.

SSO Model in Nursing Leadership: Addressing the Six Main Issues for Nurses’ Intent to Leave

The following table highlights strategic interventions for nursing leadership focused on the adoption of technology. These strategies target six critical issues contributing to nurses' intent to leave, offering solutions aligned with the SSO model to enhance retention and job satisfaction.

Table C: Strategic Interventions for adoption of technology

Issue	Impact	Strategic Interventions	Outcome
High Workload	Burnout, dissatisfaction, errors, and reduced patient care quality (Catania et al., 2024; Buchan et al., 2020).	Implement real-time communication tools to monitor workload distribution	Reduced burnout and better workload equity.

	al., 2020)	and address imbalances.	
Inadequate Compensation	Low morale, job dissatisfaction, and high turnover intentions (Fayez Salahat & Al-Hamdan, 2020; Sasso et al., 2019)	Transparent communication on pay structures, including plans for salary adjustments or non-monetary benefits.	Enhanced trust in organisational commitment to equity.
Poor Workplace Culture	Disengagement, isolation, and lower retention (Charoensri, 2022; Singh et al., 2024)	Foster open dialogue to address grievances and cultural inclusivity.	Improved team morale and inclusivity.
Limited Professional Growth	Stagnation, dissatisfaction, and reduced motivation (Crowley, 2023; Charoensri, 2022)	Develop clear communication medium on training opportunities and career pathways.	Enhanced engagement and skill development.
Ineffective Team Dynamics	Poor collaboration, increased conflicts, and care fragmentation (Sasso et al., 2019; Cummings et al., 2018)	Use structured communication protocols (e.g., SBAR) to ensure clarity in team roles and tasks.	Strengthened teamwork and reduced errors.
Resistance to Change	Lower adaptability to organisational shifts and evolving care demands (Romero & Cullen, 2020; Zhang & Lin, 2022)	Conduct regular change management sessions to foster open dialogue and mitigate resistance.	Smooth transition during policy or process changes.

Improving Workplace Culture through Open Dialogue

Digital communication platforms enable anonymous feedback and real-time grievance reporting. These tools create a safe space for nurses to voice concerns, ensuring inclusivity and promoting cultural reform.

Table C: Strategic Interventions Integrating And Leverage Practice Leadership Styles

Transformational leadership should be adapted to the unique challenges of nurse shortages, balancing workload management, fair compensation, and cultural inclusivity.

- Adaptive Leadership:** Leaders must address immediate crises, such as nurse shortages, by reallocating resources and implementing flexible staffing models (Cummings et al., 2018; Sandhu & Liao, 2024). For example, using cross-functional teams to manage surges in patient care demand can reduce strain on individual nurses.
- Promoting Inclusivity:** Transformational leaders should prioritise inclusivity by incorporating cultural competency training and promoting diverse perspectives in decision-making (Sandhu & Liao, 2024; Singh et al., 2024).
- Aligning Goals:** Effective leaders align organisational objectives with team strengths, ensuring realistic workload distribution and equitable treatment (Buchan et al., 2020; Kingma, 2020).

SUSTAINABILITY INTERVENTIONS IN THE FUTURE

- Workforce Planning:** Leaders must engage in long-term workforce planning, including recruitment strategies targeting underrepresented groups and partnerships with academic institutions (Aluttis et al., 2020; Sasso et al., 2019).

2. **Continuous Professional Development:** Ongoing training programmes and mentorship initiatives ensure nurses remain engaged and equipped to handle evolving healthcare challenges (Crowley, 2023; Ebele et al., 2022).
3. **Leveraging Technology:** AI-driven tools can optimise staffing, predict turnover trends, and personalise retention strategies, ensuring efficient workforce management (Zhang & Lin, 2022; Romero & Cullen, 2020).
4. **Fostering Resilient Workplace Culture:** Transformational leaders must embed values of trust, inclusivity, and innovation within the organisation to create a supportive and adaptive culture (Catania et al., 2024; Singh et al., 2024).

Table D: Strategic Interventions

KEYS: FEASIBILITY FOR IMPLEMENTING TRANSFORMATIONAL LEADERSHIP PRACTICES OBJECTIVE: ADDRESSING NURSE SHORTAGES AND REDUCING THE INTENTION TO LEAVE THROUGH TRANSFORMATIONAL LEADERSHIP STRATEGIES.

Feasibility Plan: Leveraging AI and Data Analytics

1. **Goal:** Implement AI-driven tools (research, clinical tools monitoring, nurse assisted AI) to optimise staffing, predict turnover trends, and improve nurse retention.
2. **Steps for Implementation:**
 - a) **Pilot Programme:** Start with a small-scale pilot in one hospital unit to assess the effectiveness of AI-driven workload distribution tools.
 - b) **Partnership:** Collaborate with a tech provider to customise AI tools for the organisation's staffing needs.
 - c) **Training:** Provide training sessions for nurse managers and staff to understand and effectively use the AI system.
 - d) **Monitoring:** Continuously monitor the AI tool's impact on workload equity, nurse satisfaction, and patient care outcomes.
3. **Resources Needed:**
 - Financially strong investment for acquiring and customising AI tools (approximately \$50,000–\$100,000 depending on scale).
 - IT support for installation, integration, and ongoing maintenance.
 - Staff time allocated for training and feedback sessions.
4. **Expected Outcomes:**
 - Equitable workload distribution leading to reduced burnout and higher job satisfaction. Reduce multiple task at once in order to get the better outcomes
 - Identification of turnover trends through predictive analytics, enabling proactive retention strategies.
 - Improved nurse morale and retention rates within six months.

5. Feasibility Considerations:

- **Financial challenge:** Initial costs are high but justified by long-term savings from reduced turnover and increased efficiency.
- **Technological challenge:** Requires reliable infrastructure and integration with existing hospital systems.
- **Staff Engagement need and demand:** Effective communication about the tool's benefits is essential to ensure staff acceptance.
- **Collaboration engagement with win-win**

Example Feasibility Plan: Continuous Professional Development

1. **Goal:** Develop an ongoing mentorship programme for new nurses to enhance job satisfaction and reduce turnover.

2. Steps for Implementation:

- **Mentorship Framework:** Design a structured programme pairing new nurses with experienced mentors.
- **Training for Mentors:** Conduct workshops to equip mentors with coaching and leadership skills.
- **Regular Check-ins:** Schedule monthly progress reviews between mentors and mentees.
- **Feedback Loop:** Collect feedback from participants to refine the programme.

3. Resources Needed:

- Administrative support for coordinating mentorship pairs.
- Budget for training workshops and incentives for mentors (e.g., CPD credits or financial stipends).
- Time allocated for mentoring sessions (approximately 4–6 hours monthly per mentor).

4. Expected Outcomes:

- Increased job satisfaction among mentees due to professional support and career guidance.
- Enhanced leadership skills and satisfaction among mentors.
- Improved retention rates among newly hired nurses within 12 months.

5. Feasibility Considerations:

- **Cost:** Moderate investment required for training and incentives.
- **Time:** Mentors and mentees must balance the programme with their workloads.
- **Scalability:** Programme can start small and expand based on success metrics.

The feasibility challenge of implementing transformational leadership strategies by outlining practical steps, required resources, and expected outcomes. Adjustments can be made to fit the scale, budget, and specific needs of an organisation.

This strategic approach ensures that immediate challenges are addressed while building a resilient nursing workforce for the future

CONCLUSION

Transformational leadership offers a viable solution to mitigate nursing shortages by improving job satisfaction and reducing turnover trend intentions. Integrating leadership development with systemic reforms can ensure a sustainable nursing workforce, enhancing Malaysia's healthcare resilience.

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APPENDIXES

Appendixes 1: Questionnaires Table

Appendixes 2: Gantt Chart

Appendixes 3: Ethical Approval Letter Sample

Appendixes 4: Proposed Intervention-Friendly Protocol Guidelines Based on the SSO Model

Appendixes 5: Proposed Intervention with Six (6) Main Issues.