ORIGINAL ARTICLE

Exploring the Role of Self-leadership in Nurses' Technology Acceptance in the Digital Era

Alita Dewi Percunda[1,2], Djazuly Chalidyanto[3]

[1] Department of Hospital Administration, Faculty of Technology and Health Management, Institut Ilmu Kesehatan Bhakti Wiyata, Kediri, 64114, East Java, Indonesia
[2] Nursing Department, Bhayangkara General Hospital, Kediri, 64122, East Java, Indonesia
[3] Department of Health Policy and Administration, Faculty of Public Health, Universitas Airlangga Surabaya, 60115, East Java, Indonesia

ABSTRACT

Introduction: Information system in hospital is a crucial key factor for high performance to support efficacy and efficiency. Nurses play important role in patient care as they do most tasks in medical and management aspect. Researches in technology acceptance has revealed some factors that contribute to the usage of information system. Self-leadership as a process to achieve self-direction is necessary to have good performance in modern days. Research of the correlation these two factors is limited. Thus, this research aimed to analyze correlation between self-leadership and technology acceptance in nurses. **Materials and methods:** A questionnaire (RSLQ) to measure self-leadership variables and technology acceptance (UTAUT) variables was given to clinical nurses of nursing department. Simple random sampling brought out sample size of 104-validated questionnaires from 149 population. Data analysis had been done for descriptive values and non-parametric test for correlation coefficient of each variable and sub-variables. **Results:** Respondents are mostly female (76.9%) with dominant age group 20 – 29 years old (41.3%). The highest score of self-leadership variable is self-goal setting (3.20 ± 0.422) and technology acceptance variable is social influences (3.22 ± 0.460). The result shows significant correlation between self-leadership and technology acceptance ($p<0.05$) and all its three sub-variables ($p<0.05$). **Conclusion:** Self-leadership is correlated to technology acceptance and its sub-variables. Increasing self-leadership could improve technology acceptance among nurses. Low technology acceptance of nurse could be caused by still developing information system at hospital and other factors.
Malaysian Journal of Medicine and Health Sciences (2025) 21(3): 196-202. doi:10.47836/mjmhs.21.3.23

Keywords: Nurse, Self-leadership, Technology acceptance, Hospital, Information system

Corresponding Author:
Alita Dewi Percunda, Master
Email: alita.dewi@iik.ac.id
Tel : +628123291917

INTRODUCTION

Self-leadership is defined as a combination of a person's own behavior self-direction and motivation to increase their performance, cognitive self-evaluation, dan self-influence (1). In this dynamic era, organization needs their employee to be more autonomous and self-leadership. They have to be more adaptive and responsive towards rapidly changing environment. Employee with self-leadership will engage more to organization and generate innovation (2).

Health care around the world are facing huge challenges in its operations and need to adapt to rapid changes of health care system. One can supprot health care in this situation is digitalization. Implementation of digital technology will benefit health care such as hopital in reducing cost and improve their process (3). Digital transformation in hospital will give advantages such as performance improvement. This would also give hospital great opportunity for development (4)

Health care provider made decision based on evidence-based and using health care data for its quality improvement. Health information management is part of the health system. It can improve acess and quality of service. Health information is strongly related to health care performance and system strengthening interventions. Health professionals at hospital in developing country are less motivated to use information system (5). Hospital information system should gives benefits for hospital activities such as patient records documentation, billing management, medical error potential reduction, and patient care quality improvement. However, studies showed that information system usage in hospital gives some consequences such as increase working time, incompatibility to clinical flow, and interruptions in

healthcare providers work (6).

Research on health information technology mostly focuses on its design and implementation. These researches did not improve the usage of information system that already implemented (7). One of crucial topic of information system implementation in hospital is to understand factors affecting usage of technology. These factors has been studied with many theories using different technology acceptance models (8). A voluntary or intended use of a certain technology is defined as technology acceptance (9).

Technology Acceptance Model (TAM) was developed in 1989 and has been popular model to evaluate the usage and acceptance of information system (10). Technology acceptance is described as the opposite term of rejection or refusal, and defined as the positive decision to the usage of innovation. Since decades, TAM has been applied in various domains to understand and predict the behaviour of users (11). TAM explaines user's motivation by perceived usefulness, perceived ease of use, and attitude toward using. Many researchers develop TAM concepts to build new theories. One of the latest concept is Unified Theory of Acceptance and Use of Technology (UTAUT). This theory unified the concepts used before to develop their construct which is effort expectancy, performance expectancy, social influence, and facilitating condition (12). Technology acceptance models and theories were used to understand healthcare techlogies using that has been a crucial issue in the last decade. Among all models and theories, UTAUT is known as the most used and popular theory in healthcare field (13).

Performance expectancy or perceived usefulness is known as the extent to which people perceived that their job performance will enhance by using the information system (14). Perceived enjoyment measure the level of perceived user enjoyment while using an information system, not included the system consequences (15). Social influence is defined as social factors that affect a person to adopt or reject a new system such as subjective norms, image, and voluntariness (14). It also included the importance of others approval of targeted behavior (16). In term of the importance of technology acceptance among healthcare workers, many researchers had found many factors correlated to it such as accesibility, self-efficacy, job fit, optimism, and many more (17). We also tried to look for other factor that can be contributing to technology acceptance. One of the important factor to improve the quality of hospital information system and to promote its utilization is leadership commitment (5).

The importance of patient safety and quality of care at hospital has raised the need of higher performance. One should not depend on leader or other people to be well performed. The need to engage and focus on the job are increasing (18). Top down leadership is changing nowdays to a new model which empower employees to have greater responsibility on their own work-related behaviors. Many organizations has attracted to self-leadership, a process to influence oneself to perform more effectively. Self-leadership is defined as a behavioral and cognitive process of self-evaluation and self-influence and then a person can achieve self-direction and self-motivation to mold their behaviors to enhance performance in positive ways (19). It is rooted form several theories such as self-influence and self-regulation, self-control, and self-management (20). Factors correlated to self-leadership such as personal traits and transformational leadership. Employee with self-leadership tend to have productive cognition, attitudes, and behaviors (21).

Self-leadership involves application of three sets of approaches, behvior-focused strategy, constructive thought patterns, and natural reward strategies (22). Behavior focused strategy is specific approaches to identify noneffective behaviors and replace it with effective behavior. Some strategies used are self-observation, self-goal setting, self-reward, self-correcting feedback, and self-cueing (19). This strategy focuses inself-awarenessto create behavioral management especially tasks that important but unpleasant (23). Constructive thought patterns involve perceptual process to induce positive thinking patterns that could increase performance including self-talk, mental imaginery (visualizing successful performance), and evaluating belief and assumption (22). Natural reward strategy focus on enjoyable aspects of an activity to make a person motivated by the task itself. It include the feelings of greater competence, purpose, and self-control. For example, an employee could feel more enjoy by listening to music or another personal touches in work environment (20).

Higher job demands in hospital due to greater task toward patients and communities needs a highly manageable work. Nurses as the first vanguard in patient care will also have much stressor due to high requirement. Management of activities in hospital is influenced by many factors, external and internal. As a health profession, nurses need to aquire self-leadership to perform better (18). Together with the challenging situation of information system in hospital, we need to search for factors contributing to better technology adoption such as self-leadership. By examine their relationship, we hope that nurses can nurture as much as traits to have higher performance especially in digital era.

MATERIALS AND METHODS

We used a quantitative research and did one time cross sectional study. Questionnaires were given to the respondents. We used simple random sampling in this research by randomly select respondents of nurses

from employee database. The research was conducted during July to August 2023. Respondents were informed about the research and its ethical issues before they gave their consent. The participating respondents were given questionnaire. The questionnaire consist of two section. The first section was used to measure self-leadership which consist of eighteen items of behaviour focussed subvariable, five items of natural reward subvariable, and twelve items of constructive thought subvariable. All items are in four Likert scale (strongly disagree, disagree, agree, strongly agree). This section was adapted from Revised Self-Leadership Questionnaire (24).

The second section was used to measure technology acceptance which had five items for performance expectancy subvariable, six items for perceived enjoyment subvariable, and six items for social influence subvariale with four Likert scale (strongly disagree, disagree, agree, strongly agree) adapted from Latip et al [NO_PRINTED_FORM] (10)

This research was conducted at Bhayangkara Police Hospital in Kediri, East Java, Indonesia. It is a public police hospital with 278 beds capacity. We focused on the nurses in Nursing Department of the inpatient unit. Total number of 104 valid questionnaires are collected and processed from 149 population. The data collected was analyzed using IBM SPSS Statistics Ver 26 for descriptive and inferential. The data used for this research are both valid and reliable showed by the Cronbach's alpha sig > 0.06 and Pearson correlation sig < 0.05.

Ethical Clearance

This study has been approved by the Faculty of Nursing Universitas Airlangga with Ethical Approval Sertificat No 2970-KEPK.

RESULTS

From 104 sample size of respondents, 80 respondents are female (76.9%). Dominant age group is between 30 – 39 years old (39.4%). Majority educational background is nursing associate's degree about 57 people (54.8%). Respondent characteristics can be seen in Table I.

Table I: Respondent Characteristic

Characteristic	N (%)
Sex	
Female	80 (76.9%)
Male	24 (23.1%)
Age	
< 30 years	37 (40.6%)
30 – 39 years	41 (39.4%)
40 – 49 years	18 (17.3%)
≥ 50 years	2 (1.9%)
Latest Education	
Associate's Degree	57 (54.8%)
Bachelor's Degree	47 (45.2%)

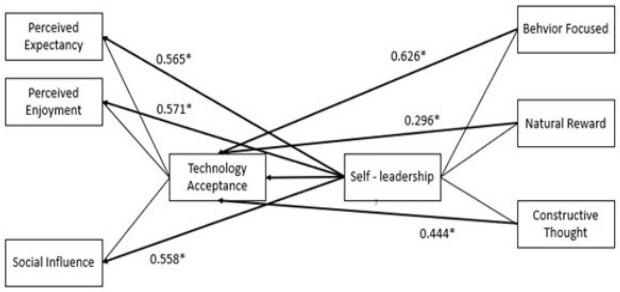
Descriptive analysis was done for each variable and subvariables. We can see that technology acceptance was higher than self-leadership. Constructive thought was the highest subvariable of self-leadership while social influence was the highest subvariable of technology acceptance. Detailed descriptive analysis is shown in Table II.

Table II: Descriptive Analysis

Variable	Mean	SD
Self-Leadership	3.05	.317
Behavior focused	3.04	.313
Natural reward	2.92	.451
Constructive thought	3.12	.399
Technology Acceptance	3.19	.434
Performance expectancy	3.19	.470
Perceived enjoyment	3.14	.456
Social influence	3.22	.456

*SD: Standard Deviation

Nonparametric correlation analysis was used to evaluate the correlation between technology acceptance and self leadership with the result sig .000 (corelation coefficient 0,588). So it can be concluded that technology acceptance is correlated with self-leadership. Detail correlation analysis in Fig.1 show correlation of self-leadership to all subvariables of technology acceptance and all self-leadership subvariables are also correlated to technology acceptance.



*) Sig (Correlation Significant) CI 95%

Fig. 1: Correlation analysis (*p<0.05)

DISCUSSION

Many factors have been studied affecting technology acceptance in nurses such as training of the system, social influence, environment, support from physicians, subjective norm, and job relevance (17). Self-leadership however were never studied before. This new founding about the correlation between self-leadership of nurse and technology acceptance hopefuly can help management to boost their performance.

Indonesia has their transformation in health system and were more rapid since COVID era. The importance of digital information in hospital needs particiaption of all healthcare workers in its usage. In a study in 2016 in Indonesia has found the causes of low usage

of information system such as difficulty of information system usage, low intention to use information system, low enjoyment of using the system, and low of organizational support. These finding (25). Technology acceptance model has been used as a model in many studies about health technology including patient care information system, electronic medical record, mobile system, clinical information system, adverse event information system, and hospital information system (17). Adapted form theory of reasoned action, technology acceptance model was developed. This theory focus on how attitude toward behavior will affect behavioral intention and lead to actual behavior which underline two important factors, perceived ease of use and perceived usefulness. External variables could intervene technology acceptance such as compatibility, visibility, result demonstrability, output quality, image, prior use, experience, transitional support, and subjective norm (26).

Factors that positively influence intention to use technology other than technology acceptance such as trust and facilitating condition. Moreover technological anxiety, user's resistance, perceived risk, and privacy negatively influence it (27). Personality traits such as optimism and innovativeness are become predictors of technology acceptance (28). A study once revealed that performance expectancy was the most influental factors to intention to use (29). This statement is contrary to our finding since social influence is our most important factor. It could be caused by different environment since we took research in an urban area which the hospital was still starting the implementation of information system. The transitions period will bring different atmosphere for nurses. Study in Nigeria also found that information sharing, defined as the capability of data shared internally or externally correlated to social influence. The developin team should take it to consider since it can increase the intention to use (30). It is also founded that healthcare professional attitude is the strongest effect to intention to use (31). Other than nurse personal factors, organizational factors contribute to technology acceptance are also important. These factors are adequate education and training, supporting implementation of information system by creating champions involvement of nurse during design state, and enough practical technological support (32).

Data show the increasing workload and work pressure of nurses. Heavy workload will lead to mismanagement, decline of job quality, increase nosocomial infection. Unsupported work environment could also lead to job stress (33). Nurse fatigue was also profen to be negatively correlated with nurse outcomes (work outcome, nurse health, and safety outcomes), patient safety outcomes, and hospital organizational outcomes (costs, workface, nurse absence, and turnover). It would be best to take a great account to nurse workload and performance since nurse fatigue is importance (34). Optimizing nurses' performance is crucial for hospital. Nurses'performance has been correlated to efficient functioning of hopital and better patient health outcomes (35). Management should take concern these issue since they would decrease the nurse performance and endanger patient safety. Aside from the high workload, in this era, nurse will have to utilise technology like information system in hospital to access, manage data, and provide care. The usage of technology by nurse will improve, enhance, and transform patient care and clinical treatment. It is important for nurse to have the knowledge and skills to utilise technology (36).

Other than correlated to technology acceptance, self-leadership can also make a nurse regulate their own behavior and cognition to be more aligned with the goals and needs so can be more meaningful and enjoyable. Self-leadership is also a strategy to achieve well-being and performance. Nurse with self-leadership tend to work more autonomously and less dependend. This would make them incharge of their job demands and achieve work-related goal. Employee with higher self-leadership were reported to have greater work engagement (37). Self-leadership could also increase innovative work behavior by moderating knowledge sharing. Knowledge sharing is behaviors that involves interchanging knowledge or data to collaborate with others in developing new ideas. As we know that knowledge is a significant aspect of innovative work (38).

Self-leadership involve self-motivation more than reliance on external factors. The degree of self-leadership could be vary among people. Personality is responsible for 34% variance of self-leadership and predominantly driven by conscientiousness. The effect of this trait is by the openess that drive the behavior focused strategy (21). Employees that are hopeful and optimistic have greater chance to thrive at work by better experience of learning. This can boost their self confidence that can lead them do develop self-leadership. Employee with proactive personality will be more likely to develop self-leadership (39). Behavior focused strategy focus on improving awareness to goals they are trying to acomplish, especially tasks that they want to procrastinate. Behavior focused strategies are self-observation, self-goal setting, self-reward, self-punishment (or self-correcting feedback), and self-cueing (18).

Natural rewards are the enjoyable part of work that can pull employee to have higher performance. Activity or task that is naturally motivating will promote more effective self-leadership. Natural rewards are closely tied to a given activity. The rewards are built into the activity itself. Activity can be seen as natural rewards if it can make people more competent and help people to feel self-controlling. Activity has also make people derive sense of purpose from doing it. They have to believe in

its worth (40). The constructive thought trategies include a specific thought oriented in eliminating irrational thinking and focus on imagination of positive future performance. Sometimes difficult situations will trigger negative thinking. Constructive thought will face this situation by self-analysis to identify and replace it with more positive thought. Through mental imaginary they will create experience behavioral of actual performance. It is also called imaginary practice, symbolic rehearsal, and mental practice (24). Nurse could practice self-leadership cognitively by self-talk about care needs when facing a patient. They visualise positive outcomes of the intervention they will conduct (41)

Self-leadership strategies have been proven to have relationship with occupational well-being. This relationship would impact negatively to job burnout (42). As we evaluate the importance of self-leadership for nurse, especially its correlation to technology acceptance in this hospital digital transformation era, it is better we also understand how to encourage and increase self-leadership. Organizational climate and corporate culture are aspects of work context strategies that can contribute to natural enjoyment of task performance. Another strategy, task performance process strategies is when an employeeacquired self-awareness about activities they enjoy and doing their work with these preferences (43). Self-leadership are described as a competence or capability thus could be learned. Some researches have experimented in self-leadership training. All skills of self-leadership could be optimized by specifi training. Training have the biggest effect on visualizing successful performance, self-talk, self-reward, and self-cueing (44). Other than self-leadership, hospital management should also pay attention to other aspect for nurse to gain digital technology capability. It was all start at the education process of a nurse where digital capability and informatics education shoulde be learned. Acess to data especially at the point of care is also important to a better decision making. The information system design should also assisting nurse in reducting the errors, less the workload, and improving time management. To adopt better of a new information system, nurses should believe that the system itself will enhance patient care (45). Technology and information might be designed and developed greatly, but in the end, if users do not involved or used it, it will all be a waste. Acceptance is the key concept that has to be concern of management. All aspects that can increase the technology acceptance will contribute to the success of a new system (46). Self-leadership that has been proven to influence performance are also correlated to technology acceptance. Thus, it will be beneficial for hospital management to increase their nurse self-leadership.

This research was conducted in a single hospital environment and as the researchers knowledge, this was the first attempt to evaluate the correlation of self-leadership and technology acceptance. It could be a start for another research to study the issues more comprehensive before we generalized the correlation. Exploration on both aspects and their correlation should be done deeper and wider with more sample as well as multiple place. Respondents participated in this research are nurses, it is also important to explore this area on other healthcare workers on hospital and other healthcare facilities.

CONCLUSION

All strategies in self-leadership including behavior focused, natural reward, and constructive thought were correlated to technology acceptance. Self-leadership itself is also correlated to all aspects of technology acceptance such as performance expectancy, perceived enjoyment, and social influence. High workload and stressor of nurses in hopital in digital transformation era should be a concerned to hospital management. Increasing self-leadership should bring gread benefit to nurse itself, patients, and hospital. It is important to support nurse in learning and applying self-leadership strategies.

ACKNOWLEDGEMENT

The author would like to express gratitude to Kediri Bhayangkara Police Hospital that supported our research.

REFERENCES

1. Park HJ, Kim SK, Yu S. Validity and Reliability of the Korean Version of the Self-Leadership Questionnaire for Nursing Students. Sage Open. 2024 Jan 1;14(1).
2. Nientied P, Toska M. SELF-LEADERSHIP AND EMPOWERING LEADERSHIP IN A WESTERN BALKAN CONTEXT. International Review of Management and Marketing. 2021 Jan 18;11(1):36–47.
3. Nygren JM, Lundgren L, Bɑckstrɯm I, Svedberg P. Strengthening Digital Transformation and Innovation in the Health Care System: Protocol for the Design and Implementation of a Multidisciplinary National Health Innovation Research School. JMIR Res Protoc. 2023;12.
4. Iljashenko O, Bagaeva I, Levina A. Strategy for establishment of personnel KPI at health care organization digital transformation. In: IOP Conference Series: Materials Science and Engineering. Institute of Physics Publishing; 2019.
5. Kebede M, Adeba E, Adeba E, Chego M. Evaluation of quality and use of health management information system in primary health care units of east Wollega zone, Oromia regional state, Ethiopia. BMC Med Inform Decis Mak. 2020 Jun 12;20(1).
6. Ologeanu-Taddei R, Morquin D, Domingo H,

Bourret R. Understanding the acceptance factors of an Hospital Information System: evidence from a French University Hospital. AMIA Annual Symposium Proceedings [Internet]. 2015 Nov [cited 2024 Feb 26];2015:1001–7. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4765578/
7. Holden RJ, Karsh BT. The Technology Acceptance Model: Its past and its future in health care. Vol. 43, Journal of Biomedical Informatics. 2010. p. 159–72.
8. Alqudah AA, Al-Emran M, Shaalan K. Technology acceptance in healthcare: A systematic review. Vol. 11, Applied Sciences (Switzerland). MDPI; 2021.
9. Chau PY, Jen-Hwa Hu P. Investigating healthcare professionals' decisions to accept telemedicine technology: an empirical test of competing theories. Information and Management. 2001 Apr;39(2002):297–311.
10. Latip MSA, Noh I, Tamrin M, Latip SNNA. Students' Acceptance for e-Learning and the Effects of Self-Efficacy in Malaysia. International Journal of Academic Research in Business and Social Sciences. 2020 May 27;10(5).
11. Taherdoost H. A review of technology acceptance and adoption models and theories. In: Procedia Manufacturing. Elsevier B.V.; 2018. p. 960–7.
12. Taherdoost H. A review of technology acceptance and adoption models and theories. In: Procedia Manufacturing. Elsevier B.V.; 2018. p. 960–7.
13. Alqudah AA, Al-Emran M, Shaalan K. Technology acceptance in healthcare: A systematic review. Vol. 11, Applied Sciences (Switzerland). MDPI; 2021.
14. Venkatesh V, Davis FD. A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. Manage Sci. 2000;46(2):186–204.
15. Latip MSA, Noh I, Tamrin M, Latip SNNA. Students' Acceptance for e-Learning and the Effects of Self-Efficacy in Malaysia. International Journal of Academic Research in Business and Social Sciences. 2020 May 27;10(5).
16. Holden RJ, Karsh BT. The Technology Acceptance Model: Its past and its future in health care. Vol. 43, Journal of Biomedical Informatics. 2010. p. 159–72.
17. Rahimi B, Nadri H, Afshar HL, Timpka T. A systematic review of the technology acceptance model in health informatics. Vol. 9, Applied Clinical Informatics. Georg Thieme Verlag; 2018. p. 604–34.
18. Goldsby E, Goldsby M, Neck CB, Neck CP. Under pressure: Time management, self-leadership, and the nurse manager. Adm Sci. 2020 Sep 1;10(3).
19. Houghton JD, Dawley D, DiLiello TC. The Abbreviated Self-Leadership Questionnaire (ASLQ): A More Concise Measure of Self-Leadership. International Journal of Leadership Studies. 2012;7(2):216–27.
20. Houghton JD, Neck CP. The revised self-leadership questionnaire:Testing a hierarchical factor structure for self-leadership. Journal of Managerial Psychology. 2002 Dec 1;17(8):672–91.
21. Harari MB, Williams EA, Castro SL, Brant KK. Self-leadership: A meta-analysis of over two decades of research. J Occup Organ Psychol. 2021 Dec 1;94(4):890–923.
22. Prinsloo C, Jooste K. Self-leadership of nurses in a critical care outreach service: The development of a conceptual framework. Health SA Gesondheid. 2022;27.
23. Goldsby MG, Goldsby EA, Neck CB, Neck CP, Mathews R. Self-leadership: A four decade review of the literature and trainings. Adm Sci. 2021;11(1).
24. Houghton JD, Neck CP. The revised self-leadership questionnaire:Testing a hierarchical factor structure for self-leadership. Journal of Managerial Psychology. 2002 Dec 1;17(8):672–91.
25. Nugroho HSW, Notobroto HB, Rosyanti L. Acceptance model of a mandatory health information system in Indonesia. Healthc Inform Res. 2021;27(2):127–36.
26. Legris P, Ingham J, Collerette P. Why do people use information technology? A critical review of the technology acceptance model. Information and Management. 2003 Jun 19;40(2003):191–204.
27. Kamal SA, Shafiq M, Kakria P. Investigating acceptance of telemedicine services through an extended technology acceptance model (TAM). Technol Soc. 2020 Feb 1;60.
28. Strudwick G. Predicting Nurses' Use of Healthcare Technology Using the Technology Acceptance Model: An Integrative Review. CIN - Computers Informatics Nursing. 2015 May 1;33(5):189–98.
29. Kim S, Lee KH, Hwang H, Yoo S. Analysis of the factors influencing healthcare professionals' adoption of mobile electronic medical record (EMR) using the unified theory of acceptance and use of technology (UTAUT) in a tertiary hospital. BMC Med Inform Decis Mak. 2015 Dec;16(1).
30. Idoga PE, Toycan M, Nadiri H, 3elebi E. Factors Affecting the Successful Adoption of e-Health Cloud Based Health System from Healthcare Consumers' Perspective. IEEE Access. 2018;6:71216–28.
31. Kalayou MH, Endehabtu BF, Tilahun B. The applicability of the modified technology acceptance model (Tam) on the sustainable adoption of ehealth systems in resource-limited settings. J Multidiscip Healthc. 2020;13:1827–37.
32. Ibrahim S, Donelle L, Sidani S, Regan S. Factors influencing Registered Nurses' intention to use Health Information Technology in clinical practice: An integrative literature review cjni.net/journal. Canadian Journal of Nursing Informatics [Internet]. 2019 Apr [cited 2024 Feb 26];14(1–2). Available from: https://cjni.net/journal/?p=5981

33. Yosiana Y, Hermawati A, Mas'ud MH. The Analysis of Workload and Work Environment on Nurse Performance with Job Stress as Mediation Variable. Journal of Socioeconomics and Development. 2020 May 12;3(1):37.
34. Cho H, Steege LM. Nurse Fatigue and Nurse, Patient Safety, and Organizational Outcomes: A Systematic Review. Vol. 43, Western Journal of Nursing Research. SAGE Publications Inc.; 2021. p. 1157–68.
35. Daba L, Beza L, Kefyalew M, Teshager T, Wondimneh F, Bidiru A, et al. Job performance and associated factors among nurses working in adult emergency departments at selected public hospitals in Ethiopia: a facility-based cross-sectional study. BMC Nurs. 2024 Dec 1;23(1).
36. Brown J, Pope N, Bosco AM, Mason J, Morgan A. Issues affecting nurses' capability to use digital technology at work: An integrative review. J Clin Nurs. 2020 Aug 1;1–19.
37. van Dorssen-Boog P, de Jong J, Veld M, Van Vuuren T. Self-Leadership Among Healthcare Workers: A Mediator for the Effects of Job Autonomy on Work Engagement and Health. Front Psychol. 2020 Jul 16;11.
38. Asurakkody TA, Kim SH. Effects of knowledge sharing behavior on innovative work behavior among nursing Students: Mediating role of Self-leadership. Int J Afr Nurs Sci. 2020 Jan 1;12.
39. Abid G, Arya B, Arshad A, Ahmed S, Farooqi S. Positive personality traits and self-leadership in sustainable organizations: Mediating influence of thriving and moderating role of proactive personality. Sustain Prod Consum. 2021 Jan 1;25:299–311.
40. Manz CC. Improving Performance through Self-Leadership. National Productivity Review [Internet]. 1983 [cited 2024 Feb 26];2(3):288–97. Available from: https://onlinelibrary.wiley.com/doi/abs/10.1002/npr.4040020308
41. Prinsloo C, Jooste K. Self-leadership of nurses in a critical care outreach service: The development of a conceptual framework. Health SA Gesondheid. 2022;27.
42. Sjublom K, Juutinen S, Mɑkikangas A. The Importance of Self-Leadership Strategies and Psychological Safety for Well-Being in the Context of Enforced Remote Work. Challenges. 2022 Apr 4;13(1):14.
43. Manz CC. Self-Leadership: Toward an Expanded Theory of Self-Influence Processes in Organizations. Vol. 11, Goldfried & Merbaum. Mills; 1986.
44. Furtner MR, Sachse P, Exenberger S. Learn to influence yourself: Full range self-leadership training. Journal of the Indian Academy of Applied Psychology. 2012;2:299–309.
45. Brown J, Pope N, Bosco AM, Mason J, Morgan A. Issues affecting nurses' capability to use digital technology at work: An integrative review. J Clin Nurs. 2020 Aug 1;1–19.
46. Taherdoost H. Importance of Technology Acceptance Assessment for Successful Implementation and Development of New Technologies. Global Journal of Engineering Sciences. 2019 Jan 8;1(3).