Implications of Technology in Nursing Practice

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By (Name)

The Name of the Class (Course)

Professor (Tutor)

The Name of the School (University)

The City and State where it is located

The Date

Abstract

Technology adoption in healthcare is an inevitable trend in the world today. Technology-based solutions to challenges affecting nurses' jobs is a reliable approach to dealing with burnout, low motivation, poor well-being, and low job satisfaction among nurses. The current study evaluated the implications of using electronic health records in nurses' working environments. The analysis aimed at evaluating how electronic health records affect job satisfaction, motivation, well-being, and burnout among nurses. The study used a qualitative literature review, and the results indicated that electronic health records led to high motivation among nurses, low burnout, higher job satisfaction, and enhanced nurses' well-being. The study evaluated how electronic health records affect nurses' emotional wellbeing and perceptions about their work. The conclusion from this analysis was that adopting electronic health records had positive implications for nurses' work. Therefore, the current review recommended that healthcare providers should embrace electronic health records as a service improvement technology because it enhances nurses' working conditions and increases their effectiveness.

Implications of Technology in Nursing Practice

Digital devices, primarily smartphones, have become the first thing most people use when they wake up and the last they look at before falling asleep. The high and frequent interactions with digital technology affect how people access information, their perceptions, expectations, and overall health. In nursing, modern technologies affect the working processes and how nurses interact with their peers, patients, and the access to information regarding their work and patients. The increased access to Electronic Health Records (EHR) affects how nurses work, job satisfaction, burnout, and motivation. Nurses have a responsibility to ensure they provide patient-centered care in healthcare facilities. Patients use modern technology to access data about various healthcare services, which leads to increased expectations. Failure to achieve the expected treatment value leads to dissatisfaction among patients. Although many researchers have concentrated on the implications of technology on nursing practice, and although nurses make up the most significant portion of workers in healthcare, limited research has been done on the impacts EHR adoption has on nurses' jobs. Thus, the current review analyzes the new technology's impacts on intensive care unit nurses' work regarding job satisfaction, burnout, motivation, and well-being.

Research Question

Population	Nurses in healthcare facilities
Intervention	Electronic Health Records
Comparator	Traditional paper-based record-keeping methods
Outcomes	Nurses' job satisfaction, burnout, motivation, and wellbeing.

How does adopting Electronic Health Records (EHR) as opposed to the traditional paper-based record-keeping methods, in healthcare facilities, influence nurses' job satisfaction, burnout, motivation, and wellbeing?

Methods

Aims and Objectives

The role of EHR in intensive care unit nurses' job satisfaction, burnout, motivation, and wellbeing has not been widely analyzed. The aim of this thesis is to increase the understanding of how EHR affects intensive care unit nurses' job satisfaction, burnout, motivation, and well-being, how EHR affects nursing processes and functions, and

1. To determine the implications of EHR on intensive care unit nurses' job satisfaction.
2. To evaluate the effects of EHR on critical nursing processes and burnout rates.
3. To determine the effectiveness of EHR in enhancing motivation among intensive care unit nurses.
4. To find out how EHR technology influences intensive care unit nurses' wellbeing.

Inclusion and Exclusion Criteria

The proposed sources will be evaluated to determine the ones that are relevant and the ones that should be excluded from the research. One of the inclusion criteria will be the year of publication. Due to the importance of the issue at hand and its impact on the target audience, the information contained herein is expected to be recent and accurate. Therefore, the current systematic review will only use sources that were publicized within the last five years. The rationale for this approach is that any sources that were publicized more than five years ago are obsolete and unreliable because the healthcare field is highly dynamic. For instance, sources written before 2019 cannot capture the implications of COVID-19 on healthcare services. Therefore, their coverage of the effectiveness of EHR may be inaccurate because the pandemic changed many aspects of technology usage in healthcare. The other rationale is that using recent sources increases the relevance of the information in those sources because the conditions under which the sources were written are similar to the conditions prevailing in the contemporary world. For instance, sources written within the last five years capture the health policies and reforms by the current US regime. On the other hand, sources written before 2019 will not contain such reforms. Consequently, any sources written more than five years ago will be excluded from this review. Therefore, time will be a critical consideration in the inclusion and exclusion processes.

The other inclusion criterion is the nature of research in a scholarly paper. In evaluating materials from other researchers, this review will use sources that utilize information from reliable sources like government websites and journal articles. In other words, any sources used in the study are the ones that have valid information sources that can be used in future research. Such references should also be verifiable. For instance, any articles that use blogs, Wikipedia, and social media as the primary data source will be excluded from the review, while those that use data from government websites and such verifiable platforms will be included. Articles that quote data from peer-reviewed journals will be considered relevant. The rationale for this approach is that all research included in this review should be verifiable and accurate to avoid misleading information.

The third criterion is the content covered in the source. All sources included in this review must have details about the use of technology in nursing and its implications on nurse work. For instance, sources explaining how nurses respond to the adoption of EHR in healthcare facilities will be considered relevant. In contrast, the ones not mentioning technology usage in healthcare will be excluded from the review. The rationale of this approach is that the sources associated with the use of EHR are relevant to determining how this technology affects nurses and why it matters in healthcare.

For instance, a source that explains technology's role in nurse motivation and job satisfaction would be considered relevant in the current review. In contrast, any sources that do not cover anything to do with the implications of technology on nursing work would be excluded for being irrelevant.

The fourth criterion is the type of trials used. The current review will only use sources that apply randomized controlled trials. The rationale for this approach is that sources that use this approach are more reliable than the ones that use other methods. The primary advantage of using this approach is that randomized trials reduce bias and are a dedicated approach to determining the cause-effect relationship between variables. Randomized controlled trials provide a valid platform to test the implications of certain factors and how they relate to each other. Thus, the sources included in this review use randomized controlled trials because they will be more reliable in providing the required information.

Geographic coverage will also be a consideration in choosing the sources to include in the review process. In most cases, researchers focus their work on a specific area, meaning the research uses data collected within that region. In the current review, the focus is on the implications of EHR on nurses in the US. Therefore, the sources included in this review have data from the US and several developed countries, where relevant comparison helps provide a conclusion. Consequently, the included sources of information collect data from the US, Canada, Australia, and the UK. The rationale for this approach is that the sources contain data related to the challenges of using EHR in developed countries. Sources with data related to developing countries like many African countries will be excluded because their analysis will be irrelevant in understanding the implications of EHR in the developed economies. The other rationale is that since technology adoption in developing countries differs from the adoption in developed countries, information from the two regions differs. Thus, when choosing the information to consider in the current review, the region where this information was collected will be a critical factor to consider. The inclusion and exclusion criteria are shown in Table 1.

Table 1: Inclusion and Exclusion Criteria

Criterion	Rationale
Publication year	Articles older than five years are considered obsolete because the healthcare field is highly dynamic.
Nature of research	The sources should use information from reliable sources like government websites and peer-reviewed journal articles, not blogs and Wikipedia.
Content covered	Sources considered in this research will be those that have information related to EHR and nurses' jobs. Other sources that do not meet this criterion will be excluded.
Trials used	Sources that use randomized controlled trials will be used, while others will be shunned.
Geographic coverage	Only sources related to nursing activities in the US, Australia, Canada, and the UK will be considered. The rationale is that the current review aims at evaluating nursing activities in the US, Australia, Canada, and the UK, which will be used for comparison.

Information Sources

Selecting information sources is a critical step in any research process because it determines the accuracy and reliability of the data included in the research. The current review will use data from articles that meet the criteria in Table 1. To acquire such sources, the first step will be to determine the databases to consider. Thus, as explained in Table 2, the sources used in the review will come from government databases, journals, and independent researchers who meet the
criteria in Table 1.

Table 2: Information Sources

Source	Rationale
Journal articles	The rationale is that journal articles contain valid and peer-reviewed information. The search criterion will involve signing up for journals and accessing the sources through the school library. Some journals are also publicly accessible, so there will be no need to sign up or subscribe. The sources were accessed on August 11, 2023
Government databases	The review will evaluate relevant sources on databases like Google Scholar to identify the relevant independent research. The sources were accessed on August 12, 2023.
Research by independent researchers	The review will involve evaluating government databases because they are unbiased and verifiable. The sources were accessed on August 12, 2023
Filter words	The filter words include electronic health records, job satisfaction, burnout, motivation, well-being, randomized controlled trials, year of publication (2019 – 2023), and geographic region. The regions included in the current research include the US, UK, Canada, Australia.

To achieve the above research outcomes and determine the relevant databases, the review involves the use of filter words to help determine the sources that meet the criteria. Some filter words are electronic health records, job satisfaction, burnout, motivation, well-being, and randomized controlled trials. The filter process also includes the use of words like the US, Canada, Australia, and the UK. The filter words eliminated the unwanted sources that were not conducted within the desired geographic region and did not cover the intended topic. Lastly, publication time was also used to filter the sources written within the last five years. By selecting sources published from 2019 to date, the review ensured that only recent sources were used and that all outdated sources were excluded. Using this approach, the study included four sources shown in Table 3.

Table 3: Studies used in the review

Source	Description and CASP (Critical Appraisal Skills Programme)
Jedwab, R.M., Hutchinson, A.M., Manias, E., Calvo, R.A., Dobroff, N., Glozier, N. and Redley, B. (2021). Nurse motivation, engagement and well-being before an electronic medical record system implementation: a mixed methods study. *International Journal of Environmental Research and Public Health, 18(5),* p.2726.	This source is relevant to the current review because it explains the association between nurse motivation, well-being, and EHR. Therefore, the results in this source are relevant to the recent research. As a peer-reviewed journal, this source meets the criterion. The limitations of this source are that it covers only some valuables and uses mixed methods.
Jedwab, R.M., Manias, E., Hutchinson, A.M., Dobroff, N. and Redley, B. (2022). Understanding nurses' perceptions of barriers and enablers to use of a new electronic medical record system in Australia: A qualitative study. *International Journal of Medical Informatics, 158,* p.104654.	The source explains the use of electronic medical record systems in Australia and nurses' perceptions of their usage. Thus, this source's results compare the use of EHR in the US and Australia. This source is a peer-reviewed journal, which meets the criterion. The limitation of this source is that it covers only some valuables and focuses on Australia rather than the US, where the review is based.
Lown, B.A., Shin, A. and Jones, R.N. (2019). Can organizational leaders sustain compassionate, patient-centered care and mitigate burnout?. *Journal of Healthcare Management, 64(6),* pp.398-412.	The source explains the possibility of reducing burnout among nurses through compassionate, patient-centered care anchored on using EHR in the US. Thus, the source is relevant because it covers information from the US and was written within the desired time limit. The limitation is that this source does not cover the direct relationship between burnout and EHR.

Ye, J. (2021). The impact of electronic health record–integrated patient-generated health data on clinician burnout. *Journal of the American Medical Informatics Association, 28(5),* pp.1051-1056.	This study explains the use of EHR and its implications on nurse burnout in the US. Therefore, this source's results are relevant because it was written two years ago, is peer-reviewed, and discusses one of the objectives of this study. The limitation of this source is that it only covers some valuables.

As shown in Table 3, the sources used in the current review match the expected criteria. The filtering words helped identify sources within the required criteria. The Critical Appraisal Skills Program (CASP) information shows that the sources are relevant and helpful in the current review information.

Results and Synthesis

Research results from various sources indicate that adopting modern technology in nursing has direct and indirect implications. The data from the sources included in this review show that many nurses consider technology as one of the critical factors affecting their well-being, job satisfaction, motivation, and burnout. The qualitative information in this review shows that the use of EHR is prevalent in many US hospitals and that nurses' job satisfaction, motivation, well-being, and burnout have a direct relationship with the working conditions within which nurses work. Therefore, since EHR is part of the working environment for nurses, it has direct and indirect implications for these factors.

Motivation and workplace well-being are critical factors affecting nurses' work. According to Jedwab et al. (2021), workplace well-being and motivation affect how nurses work. The results from this research show that positive motivation at work supports career development and positive behavior. Motivation and well-being also have a directly proportional implication on work engagement. Motivated nurses portray a higher work engagement, which leads to improved patient outcomes. Adopting modern technologies like EHR increases nurse engagement and motivation. Therefore, EHR contributes to motivating nurses, leading to more nurse-patient engagement. Also, Jedwab et al. (2021) state that motivation changes nurses' behaviors at work. The intrinsic and extrinsic factors associated with motivation directly impact the motivation rates among nurses. Introducing EHR is among the most effective extrinsic factors affecting motivation rates because this technology determines how nurses accomplish their duties.

Thus, EHR enhances nurses’ work, leading to higher motivation.

Nurses' well-being increases with technology use, while burnout reduces with advanced technology adoption. Technology makes things easier and increases the ability to accomplish numerous tasks simultaneously. For instance, the nurses using EHR can access patients’ records easily, leading to a higher rate of achieving self-efficacy. This high self-efficacy increases job satisfaction and well-being (Jedwab et al., 2021). Also, high burnout leads to low job satisfaction and well-being. In other words, nurses with a high level of burnout have low job satisfaction and low well-being. Burnout is also associated with satisfaction rate, whereby high job satisfaction leads to high burnout. As stated in the research by Jedwab et al. (2021), psychosocial stressors like complex healthcare environments, clinical safety, patient safety and outcomes, and meeting expected performance lead to high burnout among nurses. Nurses in some departments, like emergency and critical care units, are more prone to stressors than others. Adopting EHR helps reduce stressors, leading to lower stress and burnout.

A nurse's well-being and burnout directly affect job satisfaction, intentions to stay, and work engagement. According to Jedwab et al. (2021), nurses exposed to high burnout and low well-being have low intentions to stay and low job satisfaction. The researchers expound on burnout and associate it with a high rate of contemplating leaving the job. Introducing EHR, which improves nurses' efficacy in their work, leads to increased job satisfaction, contributing to positive perceptions about adopting this technology. For instance, EHR increases the ease of accessing a patient's records, reducing nurses’ burnout when using traditional paper-based records. The reduced burnout leads to low cynicism, high job satisfaction, and motivation.

Nurse motivation has a direct relationship with workflow efficacy. According to Jedwab et al. (2022), nursing work enablers and barriers affect the satisfaction level that nurses express in their work. Enablers are the factors that make work easier, while barriers are the factors that reduce work efficacy. Adopting EHR is among the most effective enablers because it changes how nurses access and use information within healthcare facilities. On the other hand, a lack of technology like EHR leads to high burnout, low job satisfaction, and low motivation. According to Jedwab et al. (2022), nurses' job satisfaction, burnout, well-being, and motivation depends on emotions attached to their work. If the feelings are positive, nurses find higher job satisfaction, well-being, and motivation, which means low burnout. The vice versa is also true.

Therefore, this research implies that EHR increases positive outcomes among nurses because it enhances their efficacy and reduces frustrations that lead to negative emotions related to their duties.

There is an urgent push to reduce burnout in clinical environments. Research shows that burnout is among the leading challenges in healthcare, leading to massive turnover rates. Nurses spend long hours in hospitals, leading to burnout. A lack of proper data management also contributes to burnout because nurses have to work with massive amounts of data stored in different sources. Introducing EHR is among the most reliable approaches to deal with this challenge because it enables nurses to reduce the amount of time and energy they spend on various tasks. Having acknowledged burnout as a significant challenge in healthcare, clinical managers show an increased rate of engaging the nurses and other stakeholders in reducing burnout (Lown et al., 2019). The researchers note that, although it is common to have compassion in mission and vision statements, there are minimal efforts to enhance nurses' well-being, and most clinical environments ignore the connection between burnout and compassion and how they affect job satisfaction. This research explains that many nursing organizations aim to reduce burnout to increase job satisfaction, motivation, and well-being. Thus, the research regarding burnout and its connection to nurses' work is not new.

The US law supports reduced burnout and increased compassion in nursing work. According to Lown et al. (2019), there have been many positive changes in nursing since the passing of the Health Information Technology for Economic and Clinical Health (HITECH) Act in 2009 and the passing of the Affordable Care Act in 2010. One of the changes has been the high adoption of technology, including electronic health records, virtual care modalities, and artificial intelligence. The high adoption has led to higher job satisfaction, well-being, and motivation among nurses because it reduces burnout. Therefore, this research implies that the law in the US supports the technological adoption proposed in this research.

Adopting EHR enables patients to participate in the medical process, making it easier for the nurse to administer medications because of increased patient compliance. According to Ye (2021), patients who use portable devices like embedded sensors, wearable devices, remote monitoring devices, and apps installed in their smartphones have a higher response rate to medications and compliance rate.

This rate leads to low burnout among nurses because the follow-up reduces, and nurses have an easier time administering medications. Also, patient-generated health data (PGHD), EHR, secure messaging, and patient portals increase patient participation and compliance with medication processes (Ye, 2021). Therefore, adopting EHR in healthcare has positive implications for nurses' work.

Clinical burnout reflects challenges in job responsibilities and has a direct impact on job satisfaction, motivation, and well-being. According to Ye (2021), clinical burnout implies demanding workplaces, emotional intensity, and stress associated with duties and responsibilities. Therefore, using modern technology like EHR increases the efficacy of nurses, reduces stress at work, and nurses get more satisfaction and accomplishment from their work. For instance, using EHR reduces time spent in diagnosis processes because nurses can easily access data regarding patients. However, it is critical to acknowledge that introducing EHR could also lead to technostress, whereby nurses encounter challenges regarding the new technology, leading to frustrations and low job satisfaction. This research implies that the proposed technological adoption could negatively affect nurses' work. Nevertheless, introducing modern technology like EHR helps reduce challenges in a nursing environment. The researches included in this analysis indicate that, although much has been researched about EHR and its implications on nurses' work, more is needed to know about the impacts this technology has on nurses in intensive care units.

Discussion

The results from the studies included in this research indicate that the use of EHR in healthcare has positive outcomes for nurses. One of the evidence-based revelations in the results is that using EHR leads to a higher work engagement level among nurses (Jedwab et al., 2021). While it may seem like an obvious relationship, it is essential to evaluate what it means for nurses and the role they play apparent working environments. First, work engagement means that nurses are more motivated toward their work. The rationale for this view is that nurses are more likely to spend more time doing their work when they have high regard and satisfaction with their work. Logically, one would have a higher work engagement when they are more satisfied with it, as opposed to when frustrated. In cases where nurses have low engagement, it implies that they are less motivated and could be frustrated by their duties and responsibilities. Based on this assumption, it is valid to conclude that nurses' work engagement indicates satisfaction.

Career development and positive behavior in nursing activities, which increases with the use of EHR and other technologies in healthcare, implies that the nursing environment becomes conducive to growth when technology becomes part of the nurses' job. In other words, adapting modern technology makes it easy for nurses to achieve personal and professional development. Therefore, nurses working in healthcare facilities with more technological adoption are likely to achieve professional growth faster than nurses working in environments where traditional paper-based records are used. In most contexts, nurses do not have adequate professional and personal growth because they work in competitive environments with resources restraint (Jedwab et al., 2021). For instance, nurses working in clinical environments where training is often done annually due to financial constraints cannot grow their careers as fast as they would have wished. However, with the use of technology like EHR, nurses can grow their careers because this technology makes their work easier, creates more time for development, and reduces operating costs for healthcare facilities, making it possible to offer more training sessions. Therefore, the results in this evaluation imply that technology adoption is a valuable tool to induce growth and job satisfaction among nurses.

Technology usage reduces burnout, and nurses can live a quality life during and after work. According to Jedwab et al. (2021), cynicism, associated with turnover thoughts or the intention to stay, increases when nurses have high burnout. Therefore, nurses working in a tedious environment are likely to have a high cynicism, which means they would have more intentions to quit their jobs than nurses working in peaceful and less tiresome environments. Ye (2021) states that the intentions to quit or stay and other issues associated with job satisfaction, motivation, and well-being, are usually emotional. Consequently, high cynicism among nurses leads to emotional detachment and high turnover rate. Modern technology like EHR could increase efficacy by reducing the struggle to diagnose cases and propose the appropriate treatment plan. Therefore, nurses can offer treatment services more efficiently, leading to higher feelings of pride and happiness in their work. Consequentially, technology leads to more conviction among nurses that their work is satisfactory. Technology reduces burnout in nursing work, which shows the need to evaluate how it affects the nurses working in intensive care units. The rationale for this intention is that burnout varies across various departments. Therefore, it is critical to evaluate if adopting technology has the same implications for people from various departments.

Observing and regulating psychosocial stressors like complex healthcare environments, clinical safety, patient safety and outcomes, and meeting expected performance could determine the outcomes of adopting modern technology in nursing. According to Jedwab et al. (2021), nurses work in complex environments with frequent pressures to meet strict goals. The goals are critical because they could lead to the patient's death. The pressure from this urge to achieve various goals could affect nurses' perceptions of their work and lead to high burnout rates. Adopting technology-based interventions like the EHR could alleviate the situation by improving communication, access to information, and patient compliance. As stated by Ye (2021), patient participation in the healthcare processes positively impacts nurses' work. This connection implies that patient compliance increases for nurses who embrace EHR and other technologies associated with their work, leading to better patient outcomes. Subsequently, psychosocial stressors reduce, and nurses experience lower burnout. In departments like emergency and the intensive care unit, the psychosocial stressors' frequency and intensity may differ because of the nature of the cases the departments deal with.

The urgent push to reduce burnout in the nursing environment through EHR implies that technology is a reliable solution to challenges affecting nurses. Although burnout, well-being, motivation, and job satisfaction are emotions-related, technology could reduce their negative implications. The analysis of results from Jedwab et al.' (2022) research shows that 24.1% of the factors classified as enablers or barriers in healthcare involve emotions. This data implies that through technology-based solutions, it is possible to change the emotional aspects of nursing work. For instance, nurses working in busy departments like intensive care units are likely to have a lot of emotional attachment to their work because it involves critical patient moments. Consequently, the burnout and the resultant dissatisfaction with their work are also higher than that of nurses in less critical areas. This association implies that technology-based solutions like EHR are reliable options for solving emotion-related healthcare challenges. Thus, by evaluating the adoption of EHR in intensive care units, it is possible to improve nurses' job satisfaction, reduce burnout, enhance job satisfaction, and increase motivation. One scenario where such motivation could be achieved is when nurses engage modern technology to determine the past treatment procedures used on a patient in the intensive care unit and use this information to decide on the most appropriate medication to give. When such procedures succeed, nurses' motivation and job satisfaction increase.

Patient participation contributes to the emotional satisfaction nurses have in their work. According to Ye (2021), the emotional attachment between nurses and their work determines their satisfaction. Thus, a failure to achieve the expected and desired patient satisfaction leads to reduce emotional satisfaction, which means nurses get burnout. Patients in the intensive care unit may not be able to participate in the treatment process because of their condition. However, maintaining good records in the EHR systems is a form of participation. Therefore, nurses in the intensive care unit could use such records to achieve accurate and effective treatment procedures. On the other hand, with EHR records, nurses do not struggle to access patient data and this information enhances their decision-making. Nurses with effective and reliable decision-making support systems, supported by technology-based approaches, have lower burnout because their decisions are accurate and evidence-based.

Advanced clinical practices could have long-lasting solutions to challenges affecting nursing practices. Research by Ye (2021) shows that patient-generated health data (PGHD) affects nurses' work significantly. This impact shows that nurses depend largely on records, mostly the PDHD. Therefore, improving the interpretation capability of any data associated with service delivery in healthcare would positively impact the nurses' perceptions of their work. When using EHR in the intensive care unit, nurses can evaluate the effectiveness of their work by measuring the nature of their accuracy in determining the treatment plans to follow. Therefore, since EHR is a tool to enhance PGHD, it plays a vital role in managing patients' and nurses' outcomes. There is still a research gap on how EHR affects nurses in the intensive care unit based on the complexity of their duties.

Conclusion and Recommendations

The findings in the current analysis show that using electronic health records (EHR) positively impacts nurses' job satisfaction, motivation, and well-being, and reduces burnout. In the studies analyzed in the current review, the focus was on the different ways in which technology affects nurses' working environment. The findings can be applied to changing how clinical environments operate in real-world contexts. For instance, this information gives surety to clinical environment managers that technology is a reliable solution to burnout challenges, low motivation, and unreliable data for decision-making. Therefore, this research analysis gave the target audience the necessary evidence to decide whether to implement EHR. Specifically, this research analysis showed that EHR could improve the working conditions for nurses in the intensive care unit. Although most researchers focus on general nursing activities, the research outcomes can be generalized and applied in the intensive care unit context.

Healthcare leadership could use the review's results to evaluate adopting technology-based solutions to manage nurses' working environments. The limitation of this application is that some researchers do not specify the geographic location their results can be applied to, and one of the sources is based on the Australian nursing environment. However, this limitation does not affect the results of the analyses and the fact that technology-based solutions are effective in various hospital departments. Therefore, clinical departments should implement the provisions of this analysis to deal with challenges in nursing environments.

Dissemination Strategy

Although the information in this research is evidence-based and anchored on valid research, it is crucial to acknowledge that the healthcare sector is highly dynamic. Therefore, one of the limitations to sharing this information is that the solutions and implications analyzed herein may not apply to all nursing activities. For instance, data from some of the sources written in 2021 and 2019 may be inapplicable today because of the changes that have taken place in healthcare. Such changes may have been instituted by the end of the pandemic and changes in factors like legal provisions associated with the healthcare sector. Some changes in the technology used a few years ago, when the research was written, could also have changed, meaning the application of the results from such research cannot be accurate in the contemporary world. The two limitations could make the outcomes highlighted in this research inaccurate.

The other barrier is that the law may restrict some of the facts listed in the studies evaluated in this review. Patent laws may require clinical officers to acquire consent from the authors before implementing their research outcomes. Also, the outcomes in this research may not apply in some hospitals because of the cultural, social, and financial differences between those hospitals and those evaluated by the researchers. For instance, one of the researchers focused on the Australian nursing environment. This research contains relevant causal-effect relationships. However, its details may not fit in an American nursing environment because of the cultural differences between the US and Australia. Lastly, the results in this research may be limited in other places because it is based on the period affected by the COVID-19 pandemic. All sources used were publicized between 2019 and 2023, when global healthcare experienced massive distortions. Thus, the results may not be appropriate for future applications.

References

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