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Exploring Cultural Strain and Burnout Related to Digital Health Care System Among Nurses: A Qualitative Study

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ABSTRACT:

Background: Nurses are central to the effectiveness of digital healthcare systems, serving as primary users as well as facilitators. Nurses are the individuals who monitor digital system and online reporting along with care required by patients. Worldwide increase in digital strain and burnout has been observed. Along with benefits of digital healthcare system, nurses have also encountered some challenges. Digital-cultural strain, which can exacerbate stress and lead to burnout, is caused by a mismatch between nurses' cultural values, professional identities, and emotional capacities and the demands of technology.

Research Gap: The majority of burnout research is quantitative, Western-focused, and sees nurses as a homogeneous group, despite the fact that digitization is changing nursing practice globally, particularly through EHRs and AI tools. Furthermore, the cultural background is understudied, especially in Pakistan. There is an excessive dependence on surveys and a lack of first-hand information. There is no qualitative justification for department-specific EHR loads (ICU, ED, psychiatry).

Objectives: To explore nurses' experiences of cultural strain and burnout associated with the use of digital health care systems in clinical practice.

Method: A qualitative exploratory study was conducted to investigate the nurses' experiences of cultural strain and burnout related to digital health care system in clinical practice. In order to find the data fifteen registered nurses who had experience of digital health care systems were recruited through purposive sampling. In depth interviews were conducted to get information from the participants. Each interview was then transcribed by the researcher. The researcher manually assessed the data once it had been transcribed. Thematic analysis of the data revealed six major themes. The researcher used thematic analysis to identify various themes and sub-themes that emerged from the interviews.

Results: To determine the research findings six main themes were generated. The main themes were as, resistance among nurses to digital transformation; conflict between traditional versus digital care; high workload of electronic documentation; lack of organizational support; emotional exhaustion among nurses and adaptation and resilience strategies among nurses. These themes were further divided into Initial discomfort, Generational difference, Perceived loss of professional competence, Divided attention between caring and documentation, Reduced nurse patient interaction, Change in nurses'

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professional identity, Frequent data entry overload, Time pressure, Extended working hours, Inadequate training, Limited technical support, Lack of nurse involvement, Mental and Cognitive overload, Work-family Imbalance, Reduced motivation and burnout, Anxiety related to digital documentation, Peer support, Personal time management, Personal Coping strategies

Conclusion: The study's conclusions show that the shift to digital healthcare offers nursing practice both opportunities and challenges. The Nurses participated in this study acknowledged the benefits from digital health care technologies to enhance patient safety and improve monitoring. Along with the benefits, the use of digital care technology also brought some undesired resistance, cultural strains and increased burden of electronic documentation.

Implication & Contribution: Easily available technical support, responsive IT services, and supportive leadership will help nurses to be prepared for the new era challenges. It may help nurses to free up more time for nurses to oversee patient care.

BACKGROUND:

Digital transformation has drastically changed a number of industries over the last 20 years, including healthcare. Digital revolution in healthcare has resulted in digital healthcare, which addresses global issues including infectious and chronic diseases and improves health outcomes [1]. Rapid digital transformation is increasing globally in health care settings.[2] Workplaces, tasks, and workflows for nurses are significantly altered by the use of health care technology like electronic medical record (EMR) systems. [3]

Digital health care technology have revolutionized healthcare systems around the world, impacting both patient treatment and the day-to-day experiences of nurses.

Digitalization offers enormous possibilities for work organizations, streamlines procedures, and boosts productivity. Digital health care systems have been pushed to lower medical errors, enhance communication and information openness, lower documentation errors, and make patient data easier to access.[4]

Furthermore, workload can be reduced and more accurate patient care can be achieved with the use of digitalization.[5] The healthcare industry has benefited greatly from EMR systems, according to recent research. An estimated $81 billion has been saved annually in the US as a result of the adoption of EMRs in both public and private institutions.[6].

Nurses are central to the effectiveness of digital healthcare systems, serving as both primary users and facilitators of technologies like EHRs, monitoring systems, and telehealth platforms. Since digital tools directly influence their daily workflow, thus involving nurses in the training, and implementation of digital health care is essential.[7]

Digital health care system further overlaps with workplace cultural modifications initiating new stressors for nurses. The health system `moves toward electronic health records (EHR), telehealth systems, mobile monitoring tools, and digital documentation, all while juggling clinical responsibilities, and these intersections give rise to digital-cultural strain. [2]

At the same time, nurse burnout persists globally, threatening care quality, retention, and well-being.[8] Efficacy, quality & patient outcomes can be enhanced with digitalization in the health care, although it's too challenging. Medical errors can be reduced and quality of care can be improved with the help of electronic health records (EHRs). [7]

Burnout is a psychological state that develops as a result of prolonged work-related stress. It is especially common in the nursing profession due to extended shifts, high emotional demands, staff shortages, and growing administrative responsibilities that often overshadow patient-centered care.[5] Globally, nurse burnout rates are increasing. A systematic review found that 30% to 50% of nurses worldwide experience moderate to high levels of burnout, with emotional exhaustion emerging as the most prevalent symptom. This situation deteriorated further during the COVID-19 pandemic, as research showed that nearly half

of frontline nurses experienced psychological burnout, largely due to fear of infection, insufficient institutional support, and emotional exhaustion.[9]

Nurse burnout highlighted as a serious global concern according to recent studies, associated with lower job satisfaction, decline quality of patient care and safety. To streamline the healthcare system digital technologies were introduced, although it has opposite effects in many cases such as reduced professional commitments and mental stress.[10]

In public hospitals of Pakistan, digitalization is not fully implemented. Nurses interacts with social barriers as well as with technical issues such as deprivation of decision- making process and gender-based chain of commands. Due to inadequate infrastructure and deficient training nurses in Pakistan face stress during transitioning to digital systems. Additionally, nurses stated concern that digital documentation diverted them from direct patient care, which ruins central to their certified identity.[11]

OBJECTIVE:

To explore nurses' experiences of cultural strain and burnout associated with the use of digital health care systems in clinical practice.

MATERIAL AND METHODS:

Study Design:

A qualitative exploratory research study design was utilized to explore nurses' experiences of cultural strain and burnout associated with the use of digital health care systems in clinical practice

Study Setting and Population:

The research study was conducted at Fatima memorial hospital and Saleem Memorial Hospital Lahore, Pakistan. Those nurses who had been involved in digital health care prior to the study, willing to participate, and were having more than 6 months of experience while using digital health care system were recruited.

Data Collection:

The study participants were contacted at their working departments. The nurses were questioned carefully in order to incorporate them in accordance with the inclusion and exclusion criteria. In the study, only participants who met the inclusion criteria were included. The aims and objectives of the study were fully explained to the participants. Participants were assured that there would be no financial compensation and that their involvement in the study was completely voluntary. Consent was obtained from the participants, and the data was collected in a different room inside their wards to ensure confidentiality. Data was gathered through interviews and audio recordings. Data was collected directly from the primary researcher. Every study participant had an in-depth interview conducted in order to gather data. Through in-person interviews, the researcher was able to describe the experiences of cultural strain and burnout associated with the use of digital health care systems in clinical practice. Through these interviews, a more comprehensive understanding of the participant's overall experiences was obtained.

Data Analysis:

By employing Colaizzi's method, the analysis is comprehensive and trustworthy, ensuring the reliability and validity of its conclusions. It allowed academics to explore the underlying framework of an interaction by revealing emerging themes and their complex relationships.
The data was extracted, arranged, and analyzed using Colaizzi's data analysis technique as follows:

1. To get a basic idea of the entire content, each transcript was read in detail
2. Key quotes from transcripts that are relevant to the phenomenon being studied were extracted.
3. Important statements were used to formulate meanings.
4. The arrangement of developed meanings into theme clusters.
5. Including the results in a comprehensive explanation.
6. An explanation of the phenomenon's basic structure.
7. Verification of the study participants' conclusions

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RESULTS:

4.1. Demographic data Findings:

Table 1: Demographic Characteristics of the participants

Participant Number	Age in Years	Gender	Marital status	Qualification	Experience	Department	Designation	Type/ Hospital	Digital/ System	Frequency
1	27	Male	Single	GBSN	3 Years	ICU	Charge Nurse	Private Hospital	Yes	Daily
2	33	Female	Single	PRN	>10 Years	Medical Ward	Charge Nurse	Private Hospital	Yes	Daily
3	28	Female	Single	GBSN	5 Years	ICU	Charge Nurse	Private Hospital	Yes	Daily
4	30	Female	Single	GBSN	6 Years	ICU	Charge Nurse	Private Hospital	Yes	Daily
5	32	Male	Married	PRN	9 Years	ICU	Charge Nurse	Private Hospital	Yes	Daily
6	30	Male	Married	PRN	8 Years	ICU	Charge Nurse	Private Hospital	Yes	Daily
7	28	Female	Single	GBSN	3 Years	Medical Ward	Charge Nurse	Private Hospital	Yes	Daily
8	26	Male	Single	GBSN	3 Years	Medical Ward	Charge Nurse	Private Hospital	Yes	Daily
9	25	Male	Single	GBSN	2 Years	Medical Ward	Charge Nurse	Public Hospital	Yes	Daily
10	35	Male	Married	PRN	10 Years	Medical Ward	Charge Nurse	Private Hospital	Yes	Daily
11	27	Male	Single	GBSN	3 Years	Medical Ward	Charge Nurse	Private Hospital	Yes	Daily

12	28	Male	Single	GBSN	3 Years	Medical Ward	Charge Nurse	Private Hospital	Yes	Daily
13	29	Female	Single	GBSN	5 Years	Medical Ward	Charge Nurse	Private Hospital	Yes	Daily
14	25	Male	Single	GBSN	2 Years	Medical Ward	Charge Nurse	Public Hospital	Yes	Daily
15	27	Male	Single	GBSN	3 Years	ICU	Charge Nurse	Private Hospital	Yes	Daily

The results given in table 1 above, has described the demographics characteristics of the study participants. There are total 15 nurses included in this study where 10 are male and 5 are female nurses. Looking at the marital status, majority (12) participants were unmarried and (11) were having qualification of generic BS nursing. The experience was ranging from 3 years to 10 years and above where majority (11) participants were having experience between 2-6 years and very few were above 6 years of experience. The participants were mainly from Medical ward (9) study participants and from Intensive Care Unit (ICU) there were (6) participants. All 15 of the participants that is 100% were designated as charge nurses and working at private hospital. Furthermore all 100% of the study participants were exposed to the used of digital health care system on daily basis.

4.2. Qualitative Data Findings:

Each of the study participants had a semi-structured interview, which allowed them for a thorough examination regarding the use of digital health care system utilization. To find reoccurring themes and patterns, the transcripts of the interviews were thematically analyzed. The results of the qualitative analysis of the interview questions were divided into four main themes: resistance among nurses to digital transformation; Conflict between traditional nursing care and digital technology assisted care; High work load because of electronic documentation and Emotional exhaustion among nurses.

Table2. Cultural Strain and Burnout Related among Nurses Regarding Digital Health Care System

Theme	Sub-Theme
Resistance among Nurses to Digital Transformation	➢ Initial discomfort with digital system ➢ Generational difference in digital technology adoption ➢ Perceived loss of professional competence
Conflict between Traditional Nursing Care and Digital Technology Assisted Care	➢ Divided attention between caring and documentation ➢ Reduced nurse patient interaction ➢ Change in nurses' professional identity
High work load because of Electronic Documentation	➢ Frequent data entry and documentation overload ➢ Time pressure and work flow interruption ➢ Extended working hours beyond duty time
Emotional exhaustion among nurses	➢ Mental and Cognitive overload ➢ Reduced motivation and burnout ➢ Anxiety related to digital documentation

4.2.1. THEME 1: Resistance among Nurses To Digital Transformation:

Resistance to Digital Transformation was the first significant subject that emerged from the interviews. During the adoption of digital healthcare systems, nurses frequently reported feeling uneasy, afraid, and uncertain. The majority of nurses admitted that digital technology enhanced patient safety and healthcare quality, but they also stated that adjusting to new systems necessitated significant adjustments to their daily schedules and professional practices. Age, prior computer expertise, confidence, and organizational support all had an impact on resistance, which was most noticeable in the early phases of deployment.

Three subthemes emerged under this theme:

- Initial discomfort with digital system
- Generational difference in digital technology adoption
- Perceived loss of professional competence

4.2.1.1. Sub-theme 1: Initial discomfort with digital system**:**

When the digital healthcare system was initially implemented in their workplaces, nearly every participant reported feeling anxious. Throughout their careers, nurses said they had grown accustomed to using paper-based documentation, and they found it challenging to abruptly alter their regular working procedures. The early transition period was often described by participants as stressful and confusing.

A charge nurse responded to this change:

"At first, I resisted. I had been using paper paperwork for a few years. Paper records were familiar, despite their limits. I felt like I had to relearn nursing after the introduction of technological technologies" (P14).

Another participant stated that:

"I was uneasy at first. I didn't feel comfortable using computers, but I was secure in my nursing abilities. I was anxious about making mistakes, which made the first several months difficult" (P11).

4.2.1.2. SUB-THEME 2: Generational difference in digital technology adoption:

When it came to the acceptance of digital healthcare systems, participants frequently pointed out clear distinctions between younger and more seasoned nurses.

Younger, tech-savvy nurses and older colleagues who had devoted the majority of their careers to paper documentation were clearly at odds, according to several participants.

They thought that because younger nurses were more exposed to computers during their schooling, they transitioned more rapidly.

Interestingly, a few people said the following:

"Because we were already accustomed to using computers, younger nurses adjusted more rapidly. After working with paper records for many years, some senior nurses experienced anxiety and frustration" (P9).

Another nurse stated that:

"While an experienced nurse could be able to identify patient deterioration more quickly, a younger nurse might be more familiar with the program. Both abilities should ideally complement one another" (P14).

4.2.1.3. SUBTHEME 3: Perceived loss of professional competence:

Nurses' worries that digital competency was taking precedence over clinical skill constituted a significant component of resistance. Many participants voiced worry that proficiency with digital systems seemed to be more significant than years of nursing practice. Even while their clinical competency did not alter, many senior nurses experienced a wider loss of confidence as a result of their difficulties using new software.

For instance, the following verbatim quotation taken from a 35- year old male participant well explains this notion:

"I spent ten years learning how to become a competent nurse, yet this computer system has made me feel like a novice once more" (P10)

When discussing his personal experience of seeing younger coworkers grasp the system more quickly than he did, another charge nurse echoed this sentiment:

"When younger nurses finished documentation more quickly than I did, I recall becoming irritated. My confidence was impacted" (P5)

4.2.2. THEME 2: CONFLICT BETWEEN TRADITIONAL NURSING CARE AND DIGITAL TECHNOLOGY ASSISTED CARE:

The research revealed Conflict between Traditional Nursing Culture and Technology as the second main theme. A conflict between the conventional nursing values and the growing demands of digital healthcare systems was frequently mentioned by participants. Participants regularly voiced concerns that digital technologies were altering the character of nursing practice, even while they accepted that technology increased efficiency, patient safety, and information accessibility.

Direct patient care, empathetic communication, emotional support, and therapeutic interactions are all valued in the traditional nursing culture. However, participants noted that possibilities for meaningful patient contacts were frequently diminished by growing documentation requirements and reliance on technology. Numerous nurses expressed feeling torn between their professional dedication to patient-centered care and organizational demands for digital compliance.

Following are the three sub-themes

- Divided attention between caring and documentation
- Reduced nurse patient interaction
- Change in nurses' professional identity

4.2.2.1. Subtheme 1: Divided attention between caring and documentation:

The increasing tension between direct patient care and the need for computerized documentation was a major worry among nurses. It was common for nurses to claim that they were spending more time engaging with computers than with patients. The physical and attentional gap that results from concurrent patient engagement and documentation was described by several individuals. Documentation is a crucial part of professional nursing practice, according to several participants. Nonetheless, they believed that the amount of electronic paperwork had grown dramatically and frequently interfered with patient care tasks.

A medical ward nurse explained:

"A patient may start talking to me about their discomfort or concerns while I am recording observations. I'm typing while staring at the computer screen rather than keeping eye contact." (P02)

Another nurse stated that:

"The cardiac monitor may sound an alarm while I am speaking with a patient or family member. My focus instantly switches from communication to technology." (P12)

4.2.2.2. Subtheme 2: Reduced nurse patient interaction:

Participants frequently reported circumstances in which opportunities to interact effectively with patients and their families were restricted due to documentation obligations. Nurses stressed that trust, emotional health, and patient satisfaction are all greatly impacted by communication, which is an essential part of nursing care. A number of nurses related direct remarks made by patients or family members that emphasized how recordkeeping was seen as carelessness rather than attention to detail.

An ICU nurse recalled the words of a patient's wife:

"I am aware of the significance of the machines, but my spouse also requires a conversation partner." (P05)

Participant 11 shared the following experience:

"I wanted to take extra time to reassure the patient and explain their problem. But I also had to finish electronic documentation, check lab findings, and keep an eye on the equipment. I thought I could have offered more consolation." (P11)

Similarly, Participant 2 reflected:

"I had to go back to the computer after responding to the patient's inquiries. Afterwards, I felt that I had fulfilled my professional obligations, but I had failed to offer the emotional support I desired." (P02)

4.2.2.3. Subtheme 3: Change in nurses' professional identity:

Additionally, participants discussed how their perception of what it means to be a nurse was being influenced by digital healthcare systems. Nursing has historically been linked to clinical judgment, advocacy, compassion, and caring. Nonetheless, participants stated that professional standards were progressively being redefined by digital revolution.

In this context, one of the participant articulated the following sentiments:

"I used to think of nursing primarily as direct care, communication, observation, and assessment. Information management is becoming a part of nursing." (P12)

Participant 11 expressed a similar concern:

"Sometimes I feel more like a data manager than a nurse." (P11)

Likewise, Participant 4 explained:

"I wanted to help and educate people, so I became a nurse. I feel detached from that goal when too much effort is spent on documentation." (P04)

4.2.3. THEME 3: HIGH WORK LOAD BECAUSE OF ELECTRONIC DOCUMENTATION

Increased Workload Due to Electronic Documentation was the third significant theme found through thematic analysis. Participants frequently stated that their burden was much increased by electronic documentation. Digital systems were initially intended to increase productivity and decrease paperwork, but many nurses reported having the opposite effect.

Following three subthemes emerged within this theme

- Frequent data entry and documentation overload
- Time pressure and work flow interruption
- Extended working hours beyond duty time

4.2.3.1. Subtheme 1: Frequent data entry and documentation overload:

Throughout all of the interviews, one of the most commonly mentioned topics was documentation overload. According to the participants, computerized systems necessitated thorough documentation of almost all nursing activities. They believed that excessive regulations produced needless workload, even if they recognized the significance of documenting for patient safety and responsibility.

Participant 10 explained:

"Electronic recording is necessary for all nursing activities. There are moments when I think every minute of nursing care needs to be transformed into computer data." (P10)

Participant 1 similarly stated:

"Nurses are required to update several elements of the electronic system following each intervention. The quantity of documentation has substantially expanded." (P01)

4.2.3.2. Subtheme 2: Time pressure and work flow interruption:

Participants frequently complained about increasing time pressure and disruptions to clinical workflow caused by electronic documentation. Because nursing job is inherently unpredictable, patients' needs must be prioritized quickly. Participants clarified that, despite ongoing clinical actions, digital systems regularly required care.

Participant 14 stated:

"The system may provide alerts for insufficient documentation when one patient may require help and another may require medication. The nurse must determine what has to be attended to right away." (P14)

Participant 12 similarly explained:

"The computer needs my documentation, the machine needs my attention, and the patient needs my presence. It takes a lot of mental energy to manage all three at once." (P12)

4.2.3.3. Subtheme 3: Extended working hours beyond duty time:

The extension of nursing tasks outside of formal working hours was another significant result under the subject of increased workload. Because electronic records had not been completed during hectic clinical hours, participants frequently reported staying in the hospital after finishing their shifts or carrying documentation work home. Nurses frequently lingered past their assigned shifts to finish unfinished paperwork, which was a recurrent and consistent finding. Because it interfered with their personal life and limited opportunities for rest and recuperation, many participants identified this as one of the main causes of digital strain.

An ICU nurse described one such incident:

"I had about two hours of documentation left by the end of my shift. I stayed to do everything after my shift. I realized I had missed dinner with my family when I got home." (P05) After a particularly taxing shift, another nurse related a similar experience:

"I stayed after work to finish everything. I was thinking about work when I remembered I had forgotten to buy groceries on the way home."(P08)

4.2.4. Theme 5: EMOTIONAL EXHAUSTION AMONG NURSES

The fifth major theme identified from the qualitative analysis was Emotional Exhaustion from Digital Demands**.** Participants described digital healthcare systems as contributing to psychological and emotional strain through increased cognitive demands, continuous documentation requirements, and fear of errors, constant technological interruptions, and difficulty separating professional responsibilities from personal life.

Following are the subthemes emerged from this main theme 5

- Mental and Cognitive overload
- Reduced motivation and burnout
- Anxiety related to digital documentation

4.2.4.1. Subtheme 1: Mental and Cognitive overload:

As a result of managing several information sources at once, participants frequently reported experiencing cognitive overload. Digital healthcare, according to nurses, necessitated constant switching between direct patient care, electronic records, monitoring systems, medication information, alerts, and communication platforms. This constant attention shift was thought to be cognitively taxing. Participants frequently distinguished between physical fatigue and a more profound, irreversible mental tiredness associated with continuously juggling patients, computers, and monitors.

A nurse explained:

"Even while my body isn't particularly exhausted at the end of a shift, my head is." (P12)

Participant 7, who worked in a critical care environment, explained:

"The computer needs my documentation, the machine needs my attention, and the patient needs my presence. It takes a lot of mental energy to manage all three at once." (P07)

4.2.4.2. Subtheme 2: Reduced motivation and burnout:

Burnout and decreased motivation was the third subtheme under Theme 5. Participants experienced emotions of irritation, diminished drive, diminished enthusiasm, and emotional tiredness brought on by extended exposure to digital demands.

A nurse admitted:

"There are days when I question whether I can continue working under constant pressure... the increasing digital workload sometimes makes me feel less connected to the reasons I chose this profession." (P06)

An ICU nurse reported seeing this tendency in both himself and his coworkers.

"A number of seasoned coworkers have moved to less taxing departments. Some have thought about quitting hospital nursing entirely. The prevalence of burnout is rising." (P05)

4.2.4.3. Subtheme 3: Anxiety related to digital documentation:

Anxiety about documentation was a significant component of emotional weariness. Concerns were raised by participants regarding errors in electronic records, omission of necessary information, and failure to finish documentation by organizational deadlines. Because documents could be electronically tracked, audited, and reviewed, electronic systems were thought to increase accountability.

Participant 12 described this pressure:

"During audits, a missing entry or delayed documentation may raise issues. This makes people afraid of making mistakes. This strain eventually leads to emotional tiredness." (P12)

Similarly, Participant 4 reported:

"Sometimes I wonder if I recorded anything correctly. I continue to think about things that need to be done even after I have left the hospital." (P4)

DISCUSSION:

This discussions not only aims to restate the findings simply but also to relate it with relevant literature on nursing informatics, digital healthcare transformation, nurses' occupational wellbeing in digital health care systems. Furthermore this chapter also considers what are the similarities and differences between this study findings and prior research observations conducted in nursing practice, and nursing education. Where the current study reveals align findings with existing research literature, it has been highlighted as corroborating study evidence while on the other hand some diverge existing literature is also found which may also be discussed as a contributing of this present study.

The first theme developed in this study, **Resistance to Digital Transformation**, revealed that nurses are experiencing uncertainties, discomforts, and to some extent reduced confidence during this digital transformation from familiar traditional paper documentation practices to digital health care systems.

The current study found that when the digital healthcare system was initially implemented in their workplaces, nearly every participant reported feeling anxious.

A consistent qualitative research study which studied nurses' attitudes and readiness regarding electronic medical record use at a private hospital in a South African, found similar findings that despite recognizing the benefits of digital health care for high quality nursing care, nurses also reported resistance to this digital transformation . They related it to inadequate preparation among nurses for digitalization and unfamiliarity with the computer education [12].

According to another inline review study, interventions employing a variety of techniques, such as lectures, group projects, case studies, hands-on activities, simulation, and peer interaction, could enhance knowledge, skills, attitudes, self-efficacy, confidence, and work quality. Crucially, the analysis found that individualized coaching and organizational assistance are more important for developing digital competence than schooling alone [13]. Another previous mixed-method review of perceptions regarding EHR acceptance among nurses identified some factors as important determinants of technology acceptance among nurses, including perceived usefulness of digital health, ease of use from EHR, digital competence, organizational support, training, and involvement of nurses in implementation [14].

This is consistent with the current study's conclusion that resistance was a reaction to an abrupt disruption of long-standing, confidence-boosting practices rather than a rejection of technology per se.

The second subtheme is concerned with perceived generational differences while using technology. Participants in this current study stated younger nurses as more comfortable to operate computers and digital health care applications, whereas on the other hand senior nurses were perceived as relatively uncomfortable while operating the electronic health care systems.

Consistent finding were obtained by a previous study where a scoping review regarding digital healthcare competency among nurses found that factors like demographic and practical factors influence nurses' digital competence. The review further indicated that younger nurses and more educated nurses adapt the digital tools like computer technology quickly while the senior nurses face some difficulties in adapting digital technology but they bring valuable clinical skills and knowledge that can shape effective use of technology [15].

Another qualitative study in Saudi nurse managers was conducted to report digital leadership and informatics competence. It revealed that it varied markedly across different experience levels, and that generational resistance among nurses was a recurring barrier to digital health transformation even in the presence of an already existing formal national digital strategy [1].

As a result, the current research indicates that senior nurses' age disparities should not be viewed as a weakness. Rather, they offer a chance for reciprocal mentoring. While senior nurses can offer clinical judgment, communication skills, patient evaluation, and experiential expertise, younger nurses can offer digital help.

A more profound cultural aspect of digital transition is represented by the third subtheme, perceived loss of professional ability. Participants reported more than just having trouble learning software; some saw technical challenges as a threat to their confidence in their careers.

This concern among nurses for perceived loss of professional competence echoes the concern raised by a past study which found that senior nurse managers in a qualitative study themselves feared of being judged on computer system fluency rather than their accumulated clinical skills competence and leadership [1].

This multifaceted perspective is supported by a previous research on nurses' digital competency. In addition to personal traits, organizational support, training, and the therapeutic setting in which technology is employed all influence digital competence [15].

The results of this study were somewhat inconsistent with other research suggesting that nurses may view digital technologies favorably rather than primarily as a source of resistance. Participants in the current study talked about their first reluctance, worry, and confusion when adjusting to digital technology. On the other hand, in a qualitative research of clinical nurses, Jang and Yang (2025) found that nurses identified a number of advantages of digital nursing technologies, such as decreased workload, increased accuracy, increased efficiency, and extension of nursing services [16].

As a result, the current study recommends that organizations make it apparent that digital competence is an extension of modern nursing competency rather than a substitute for clinical skill. According to the findings, nurses' intention to stick with digital technologies may be strengthened by prior favorable technology encounters. Therefore, rather than nurses' innate reluctance to embrace digital healthcare, the resistance found in this study may be the result of contextual or implementation-related challenges.

Participants in this study reported instances where they had to split their focus between computer systems and patients. Documentation is a crucial part of professional nursing practice, according to several participants. Nonetheless, they believed that the amount of electronic paperwork had grown dramatically and frequently interfered with patient care tasks.

Consistently according to Johnson, Macieira, Madandola, Priola, and Keenan (2025), nurses interact with electronic health records for nearly a quarter of a twelve-hour shift on average. This time is taken directly from opportunities for direct patient contact. They also cited multisystem evidence showing that a significant percentage of nurses view EHR documentation time as excessive [17].

In another mixed method study it was found that even if EHR systems were specifically introduced to boost productivity and safety, a mixed-methods research of acute and critical care nurses revealed that documentation burden was substantially linked to poor system use and higher effort. These results corroborate the study's participants' impression that, over time, documentation has started to compete with caring rather than enhance it [18].

In this current study the reduced nurse-patient interaction was the second subtheme. A number of interviewees noted that nurses seemed to be more preoccupied with computers than with patients, which worried patients and their families. "Is the computer more important than my child?" was a rather pointed statement made by a mother, according to P06. These claims demonstrate how patients can see digital work. While patients may perceive the same activity as diminished focus or emotional disengagement, nurses may recognize that they are recording therapeutically significant information.

A prior study that found that the introduction of clinical technologies altered the nature and quality of nurse-patient communication and that nurses frequently had to actively compensate to preserve a sense of connection, particularly with patients experiencing limited digital or health literacy, is closely aligned with the decrease in therapeutic communication described by participants and the critical remarks attributed to patients and families about nurses "only looking at computers" [19].

Therefore, the current results lend credence to the idea that digital transformation should be assessed based on its impact on relational nursing care as well as documentation completion and system acceptance.

The findings show that there was conflict between traditional nursing values and technology-mediated care delivery methods in digital healthcare. Direct patient connection, interpersonal communication, clinical judgment, and hands-on treatment seemed to be valued by participants, whereas digital technologies occasionally diverted focus toward screens, documentation, and technological processes.

The third theme was "Increased Workload Due to Electronic Documentation," which included longer working hours beyond duty time, time pressure and workflow disruption, and frequent data entry and documentation overload.

A previous study consistently found that an overwhelming amount of paperwork results from a mismatch between the usability of the system and the realities of nursing care delivery, causing stress and needless extra work instead of the efficiency gains initially projected. It also connected this burden to nurse turnover [17].

Additionally, participants in this study reported conflicting priorities brought forth by technological technologies. "The patient needs my presence, the machine requires my attention, and the computer requires my documentation," is how P12 summed up this event. The central tension found throughout the investigation is encapsulated in this sentence. In addition to responding to patients, nurses have to keep an eye on clinical equipment and electronic records.

The findings of a past study are highly relevant which found that EHR use was one of the most common tasks during multiple shifts, according to a time-and-motion study of emergency nurses, and it was linked to higher mental strain and effort [20].

This finding is particularly important because after-hours digital work may transform an organizational workload problem into a personal wellbeing problem.

The results also show in this research study that the combination of the burden of paperwork, cognitive demands, inadequate organizational support, worries about one's professional identity, and labor beyond planned hours led to emotional tiredness.

A previous research study found consistent results, where inadequate assistance during adoption was found to be a significant factor in nursing burnout in a study of nursing informaticists. The survey indicated that involving nurses early in the creation and implementation of digital health might lead to more nursing-centered technology [21].

Usability and time spent in EHRs were found to have a significant impact on EHR-related stress, and job intensity further increased the burden, according to a systematic review that specifically looked at EHR stress and burnout [22].

Similarly, cognitive load is one of the ways that EHR-related paperwork and information demands may lead to burnout, according to current systematic research [23]. According to a study, the relationship between information and communication technology demands and nurses' emotional labor was partially mediated by techno-stress. This suggests that the psychological cost of digital demands actively influences how nurses manage their emotions while providing patient care rather than just adding to their already heavy workload (Atalla, Ali, & Mostafa, 2025).

CONCLUSION:

The study's conclusions show that the shift to digital healthcare offers nursing practice both opportunities and challenges. The advantages of digital technologies for patient safety, monitoring, recordkeeping, and information access were acknowledged by nurses. But the use of technology also brought about resistance, cultural conflict, a burden of paperwork, disruptions to workflow, issues with professional identity, cognitive overload, an imbalance between work and family, and exhaustion.

RECOMMENDATIONS:

- **Strengthen programs for digital competency and training:** To increase nurses' digital competencies and confidence in utilizing electronic health care systems, healthcare organizations should regularly offer practical training and refresher courses.
- **Strengthen technical and organizational assistance:** To help nurses deal with challenges related to digital health systems and lessen stress related to technology, hospitals should set up easily available technical support, responsive IT services, and supportive leadership.
- **Decrease the burden of digital documentation:** To free up more time for nurses to oversee patient care, health care companies should examine and streamline electronic documentation procedures, reduce needless data entry, and enhance the usability of digital systems.
- **Put these tactics into practice to control and avoid burnout:** Workplace interventions include sufficient staffing, task management, peer support, stress management programs, and chances for nurses to be involved in choices about the deployment and modification of digital systems should be developed by nursing administrators.

LIMITATIONS:

Even with the informative information gleaned from the qualitative study on culture strain and burnout among nurses regarding the digital health care system, it is imperative to recognize some limits.

First, the results may not be as applicable to bigger populations due to the study's small sample size.

Furthermore, the study's focus on a specific geographic or cultural environment may lead to bias considering how much experiences can vary between places and ethnic backgrounds.

It is crucial to be aware of the potential for sampling bias because people who volunteered to participate may have different opinions than those who declined.

Furthermore, subjectivity and recall bias could exist due to the qualitative nature of the study.

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