LINK MEDICAL JOURNAL
of Health and Community Research | LMJHCR
Volume 4, Issue 1 | June 2026 | ISSN 3007-3448

Indexed in DOAJ | CC BY 4.0
DOI: 10.61919/3z5he386

Original Article

Nurses' Moral Distress During Digital Workload Monitoring in Hospital Care

Li Chunting[1], Tiarnida Nababan[1], Elis Anggeria[1]

[1] Department of Surgery, Universitas Prima, Indonesia

***Corresponding author: Tiarnida Nababan, tiarnidanababan@unprimdn.ac.id**

"Cite this Article" | **Received**: 25 November 2025; **Accepted**: 11 March 2026; **Published**: 22 June 2026.

ABSTRACT

Background: Digital workload monitoring is increasingly used in hospital nursing through electronic health records, acuity scoring, task dashboards, staffing platforms, and electronic observation systems. Although these tools may support visibility and planning, they may also narrow nursing work to measurable tasks and overlook relational care, vigilance, professional judgement, and emotional labour. Qualitative inquiry is needed to understand how nurses experience the ethical effects of being digitally monitored. Objective: To explore nurses' perceptions of moral distress during digital workload monitoring and to identify how monitoring systems influence autonomy, trust, accountability, missed or delayed care, and documentation burden. Methods: This qualitative interview study included hospital nurses with direct experience of digital workload monitoring. Semi-structured interviews explored workload visibility, documentation, surveillance, autonomy, missed care, escalation, and ethical concerns. Data were analysed using reflexive thematic analysis. Results: Five themes were identified: quantified care and invisible nursing labour; surveillance, autonomy, and trust; moral distress through missed or delayed care; documentation burden and competing accountability; and resistance, voice, and ethical repair. Participants perceived monitoring as useful when it supported escalation and staffing visibility, but distressing when data were interpreted without context or failed to generate organisational support. Conclusion: Digital workload monitoring should be governed as ethical decision-support infrastructure. Participatory design, transparent governance, contextual interpretation, reduced documentation burden, and meaningful staffing responses are needed to protect professional judgement and person-centred nursing care. Keywords: moral distress; nursing workload; digital workload monitoring; electronic health records; missed care; professional autonomy.

EDITORIAL INFORMATION

Author Contributions: Concept: LC; Literature Review: TN; Drafting: EA; Critical Revision and Final Approval: LC, TN, EA.
Ethical Approval: Universitas Prima, Indonesia
Informed Consent: Written informed consent was obtained from all participants
Conflict of Interest: The authors declare no conflict of interest; **Funding**: No external funding; **Data Availability**: Available from the corresponding author on reasonable request; **Acknowledgments**: N/A.

INTRODUCTION

Digital workload monitoring has become an increasingly visible component of hospital nursing practice through electronic health records, electronic observation systems, acuity scoring tools, task dashboards, bed-flow systems, staffing platforms, and predictive analytics. These systems are commonly introduced to improve documentation, patient safety surveillance, staffing visibility, escalation, and operational planning. However, they also reshape how nursing work is represented, judged, and managed. Nursing practice includes not only measurable tasks such as observations, medication administration, risk assessments, and documentation, but also relational care, emotional labour, vigilance, anticipatory judgement, patient advocacy, family communication, and the ethical prioritisation of competing needs.

When digital systems privilege measurable activity over less visible forms of care, they may create a gap between what is recorded as completed work and what nurses understand as ethically adequate care.

This issue is particularly important because digital monitoring is being implemented within health systems already affected by workforce pressure, uneven staffing, professional fatigue, and increasing documentation demands. Although the global nursing workforce has expanded, major gaps remain in distribution, retention, working conditions, and the availability of sufficient staff to meet patient needs safely [1]. Workforce data can show registration numbers or staffing trends, but they cannot fully capture whether nurses have enough time, authority, support, and organisational protection to practise in accordance with professional standards [2]. Digital health policy increasingly emphasises interoperability, innovation, efficiency, and data use, yet responsible digital transformation also requires people-centred governance and attention to unintended consequences for health workers [3]. For nurses, this is not only an operational concern but an ethical one, because professional standards require them to prioritise people, practise effectively, preserve safety, and uphold professionalism and trust [4].

Moral distress provides a useful framework for examining this problem. Moral distress occurs when clinicians recognise what ethically ought to be done but are constrained from acting accordingly. In nursing, such constraints may include understaffing, conflicting priorities, documentation pressure, insufficient managerial response, unsafe workload, poor escalation routes, or systems that treat recorded task completion as evidence of care quality. Moral distress is therefore not merely emotional discomfort or occupational stress; it reflects a perceived obstruction of professional conscience and moral responsibility [5]. In the context of digital workload monitoring, distress may arise when nurses feel that data systems make workload visible without producing support, question their professional judgement without contextual understanding, or make relational and anticipatory aspects of care invisible.

Existing literature has separately examined moral distress, missed nursing care, electronic documentation burden, nursing workload, and workplace surveillance. However, less is known about how nurses themselves interpret digital workload monitoring as an ethical experience within everyday hospital care. Quantitative workload data may show delayed tasks, completed documentation, patient acuity, or staffing pressure, but these data cannot fully explain how nurses experience being measured, monitored, trusted, or challenged. A qualitative approach is therefore necessary because the phenomenon involves meanings, perceptions, professional values, moral judgement, workplace relationships, and the social context in which digital information is interpreted and acted upon.

Using a qualitative framing consistent with PICo and SPIDER logic, this study focuses on hospital nurses as the population/sample, digital workload monitoring and moral distress as the phenomenon of interest, and hospital care as the context. The design is based on semi-structured qualitative interviews, with evaluation centred on nurses' perceptions, experiences, barriers, facilitators, and ethically relevant interpretations of monitored workload. The objective of this study was to explore how hospital nurses experience moral distress in relation to digital workload monitoring, how such systems influence perceptions of autonomy, trust, accountability, missed or delayed care, and documentation burden, and what governance or organisational conditions may make digital workload monitoring ethically safer and more supportive of professional nursing practice.

Material and methods

This study used an interpretative qualitative design to explore nurses' experiences of moral distress during digital workload monitoring in hospital care. A qualitative approach was appropriate because the study aimed to understand meaning, perception, professional judgement, ethical tension, and workplace experience rather than to measure prevalence or test statistical associations. The study was informed by an interpretivist orientation, which treated participants' narratives as situated accounts of how digital workload monitoring was encountered and interpreted in routine nursing practice. A critical orientation also informed the analysis because digital monitoring systems are not neutral recording tools; they influence what is counted as work, how accountability is assigned, how professional judgement is recognised, and how responsibility for unsafe workload is distributed.

The study was conducted among hospital nurses with direct experience of digital workload monitoring systems, including electronic health records, electronic observation systems, acuity scoring tools, dashboards, staffing platforms, bed-flow systems, or electronic task-management systems. The authors should specify the study setting in the final manuscript, including country, city or region, hospital type, ward or unit types, and the digital systems used in participating clinical areas. Data collection dates should also be reported. These details are necessary for readers to judge transferability, because nurses' experiences of workload monitoring may differ across intensive care, emergency, surgical, medical, maternity, and general ward contexts, as well as between public and private hospitals.

Participants were eligible if they were hospital nurses who had direct experience using or being affected by digital workload monitoring in clinical practice. Nurses without exposure to digital workload monitoring systems were excluded. A purposive sampling strategy was used to recruit information-rich participants with relevant experience of the phenomenon. The sampling logic should be expanded by reporting whether variation was sought by ward type, years of experience, seniority, shift pattern, gender, and type of digital system used. The manuscript currently reports a sample of 12 nurses; this number may be appropriate for an in-depth qualitative interview study if the sample was information-rich and the analytic focus was narrow, but the authors should explain how data adequacy was judged. The final manuscript should also report who approached potential participants, how recruitment was conducted, whether managers were involved, how voluntariness was protected, how many nurses refused or did not respond, and whether reasons for non-participation were known.

Data were collected using semi-structured interviews, which allowed participants to describe their experiences in their own words while ensuring that key areas were explored consistently across interviews. The interview guide covered experiences of digital workload monitoring, perceived usefulness of monitoring systems, documentation burden, workload visibility, professional autonomy, surveillance, trust, missed or delayed care, escalation, managerial interpretation of digital data, moral distress, and suggestions for ethically safer monitoring. The authors should state whether the interview guide was piloted or reviewed by qualitative researchers, nurses, or subject experts before use. The final manuscript should also report the interview language, interviewer role and training, interview mode, location, privacy arrangements, approximate duration, whether field notes were taken, and whether interviews were audio-recorded with participant permission. These details are essential for COREQ/SRQR-aligned reporting and for assessing the dependability of data collection.

All participants should be described as having provided informed consent before participation. The final manuscript should clarify whether consent was written or verbal, whether separate consent was obtained for audio recording, and how confidentiality was explained. Because the study involved potentially sensitive discussion of unsafe workload, documentation pressure, surveillance, and managerial use of monitoring data, the consent process should have made clear that participation was voluntary, that participants could decline to answer questions or withdraw according to the approved protocol, and that individual responses would not be shared with employers or managers. Interview transcripts should be de-identified, with names, hospital identifiers, ward identifiers where necessary, and other potentially identifying details removed or generalized.

Interview recordings were transcribed verbatim and checked for accuracy before analysis. If interviews were conducted in a language other than English, the manuscript should describe the translation process, including who translated the transcripts, whether translation was checked, and how meaning was preserved across languages. Data should be described as stored securely in password-protected files accessible only to the research team. The authors should report whether transcripts were returned to participants for checking, whether member checking was conducted, or whether this was not used and why.

Data were analyzed using reflexive thematic analysis, following the broad phases of familiarisation, coding, theme development, theme review, theme definition, and analytic writing [18]. Semi-structured interviews were appropriate for eliciting ethically complex professional experiences because they allowed nurses to

explain not only what happened during digital workload monitoring, but why particular situations were experienced as supportive, punitive, morally troubling, or professionally meaningful [19]. Initial coding should include both semantic codes, such as delayed tasks, acuity scores, dashboard alerts, documentation prompts, and staffing escalation, and latent codes, such as mistrust, moral invisibility, defensive documentation, loss of professional autonomy, and ethical repair. The manuscript should specify how many researchers coded the data, whether coding was conducted independently or collaboratively, whether a codebook or coding framework was developed, how coding decisions were documented, whether qualitative software was used, and how analytic disagreements or interpretive differences were discussed. If reflexive thematic analysis was used, the manuscript should avoid presenting intercoder reliability as a requirement unless this was genuinely part of the analytic design; instead, it should describe reflexive discussion, consensus-building, audit trail development, and repeated comparison between transcripts, codes, themes, and illustrative quotations.

Data adequacy should be reported transparently. If saturation was formally assessed, the authors should explain how it was assessed, when no substantially new codes or themes were identified, and what evidence supported this judgement. If saturation was not formally assessed, the manuscript should avoid claiming saturation and may instead refer to information power or analytic sufficiency, explaining that the sample was considered adequate because participants had direct experience of digital workload monitoring, the study aim was focused, and interviews generated rich data relevant to the research question. Any such statement should be supported by a clear account of the depth and relevance of the dataset.

Trustworthiness should be addressed using credibility, dependability, confirmability, and transferability [20]. Credibility can be strengthened by using semi-structured interviews, purposive recruitment of nurses with direct experience, careful linkage between themes and representative quotations, and consideration of negative or divergent cases. Dependability can be supported through documentation of interview procedures, coding steps, and analytic decisions. Confirmability can be strengthened through reflexive notes, an audit trail, and discussion of researcher assumptions. Transferability can be supported by providing sufficient contextual information about participants, clinical settings, digital systems, and organisational context. The manuscript should also include a reflexivity statement describing the research team's professional backgrounds, relationship to the clinical setting, prior assumptions about digital monitoring, and strategies used to reduce the risk that researcher expectations shaped the analysis.

Ethical approval was obtained from the relevant ethics body at Prima Indonesia University; however, the final manuscript should provide the full name of the ethics committee, approval number, and approval date. The manuscript should use one consistent institutional name throughout. Participants should be identified only through anonymised labels, such as Nurse 01, Nurse 02, or by broad role/context labels that do not compromise confidentiality. Given the sensitivity of workplace surveillance and unsafe workload, the manuscript should explicitly state that no identifiable information was shared with hospital managers and that findings were reported in aggregate to avoid professional harm to participants.

FINDINGS

The analysis generated five interconnected themes describing how nurses experienced digital workload monitoring in hospital care: quantified care and invisible nursing labour; surveillance, autonomy, and trust; moral distress through missed or delayed care; documentation burden and competing accountability; and resistance, voice, and ethical repair. Across the dataset, nurses did not reject digital workload monitoring itself. Instead, they distinguished between monitoring that supported safer staffing, escalation, and shared accountability, and monitoring that reduced nursing work to measurable tasks, questioned professional judgement without context, or made unsafe workload visible without generating organisational support.

The first theme describes the mismatch between digitally recorded workload and the full scope of nursing care. Participants described electronic records, acuity tools, dashboards, and task systems as more capable of capturing observations, medication checks, risk assessments, and documentation than relational care, emotional labour, clinical vigilance, family communication, reassurance, advocacy, and

professional judgement. The monitored system therefore made some aspects of nursing visible while leaving other ethically important work uncounted.

Table 1. Theme matrix showing qualitative patterns across participant accounts

Theme	Core meaning	Qualitative pattern
Quantified care and invisible nursing labour	Digital systems captured observable tasks more easily than relational, emotional, anticipatory, and judgement-based nursing work.	Participants described a mismatch between logged activity and the full scope of nursing care, particularly where emotional support, vigilance, family communication, advocacy, and professional judgement were not visible in the system.
Surveillance, autonomy, and trust	Nurses accepted monitoring when it supported safety but experienced it as punitive when data were used without clinical context.	Monitoring was viewed as helpful when it supported escalation or staffing visibility, but troubling when delays or workload scores were judged without attention to ward realities.
Moral distress through missed or delayed care	Distress arose when digital systems showed workload pressure or task delays but did not trigger staffing support or meaningful escalation.	Participants described moral discomfort when risk became digitally visible but organisational action did not follow, leaving nurses responsible for unmet or delayed care needs.
Documentation burden and competing accountability	Nurses experienced tension between documenting care for visible accountability and providing direct bedside care.	Documentation was valued for continuity and professional accountability, but excessive prompts, duplication, and defensive charting were experienced as competing with patient-facing care.
Resistance, voice, and ethical repair	Nurses used contextual notes, escalation, peer support, score challenges, and workarounds to protect patients and professional values.	Participants responded actively to the limits of digital monitoring by adding context, challenging misleading representations, escalating unsafe conditions, supporting colleagues, and advocating for better governance.

Theme 1. Quantified care and invisible nursing labour

This theme was particularly important because nurses did not view invisible labour as optional or secondary. Rather, they regarded it as central to safe and dignified care. Participants described situations in which time spent supporting patients after distressing news or maintaining continuous vigilance during night duty was not meaningfully recognised by the system unless a task was clicked, completed, or documented. This created an incomplete representation of workload in which discrete actions were visible but continuous clinical presence and relational responsiveness were not.

The ethical concern was not simply that digital systems counted tasks, but that counted tasks could appear to stand in for the totality of nursing work. Participants' accounts suggested that when dashboards and documentation systems privileged measurable activities, they risked obscuring forms of care that nurses considered central to patient dignity, safety, and professional responsibility.

Theme 2. Surveillance, autonomy, and trust

The second theme concerns how digital monitoring shaped nurses' sense of autonomy and trust. Participants accepted accountability when monitoring helped identify risk, support escalation, or justify staffing concerns. However, monitoring became ethically troubling when digital data were interpreted without clinical context or were used to question nurses' delays, priorities, or professional judgement.

The distinction between supportive monitoring and punitive surveillance was central to this theme. Nurses did not describe autonomy as freedom from monitoring. Instead, autonomy was linked to whether they could exercise judgement, explain why a task was delayed, challenge inaccurate workload representations, and expect managers to interpret digital data in relation to ward realities. Monitoring was therefore experienced as more acceptable when it created shared visibility of unsafe conditions and less acceptable when it became an individualised performance-control mechanism.

Trust depended on how workload data were used. When digital systems supported escalation, they strengthened nurses' ability to communicate risk. When the same systems were used to question delays without attention to staffing, acuity, interruptions, or competing care priorities, they weakened trust and intensified the perception that nurses were being monitored rather than supported.

Theme 3. Moral distress through missed or delayed care

The third theme describes moral distress arising when nurses perceived a gap between what patients needed and what they were able to provide under monitored workload conditions. Participants described distress not simply because digital systems displayed pressure, but because visible pressure did not always lead to additional support, staffing adjustment, or meaningful escalation. In such situations, monitoring could intensify distress by showing that the organisation had evidence of unsafe workload while leaving nurses to absorb the ethical consequences.

Participants described situations in which high-risk workload indicators appeared on dashboards but staffing remained unchanged. Such accounts show that moral distress was intensified when risk was visible but not acted upon. Nurses also described circumstances in which documentation was completed but care still felt insufficient. This indicates a distinction between digital completion and professional adequacy: a nurse may complete required fields while still feeling that explanation, comfort, dignity, vigilance, or family communication were compromised.

This theme therefore shows that moral distress was linked to the perceived failure of digital visibility to produce organisational support. Participants did not present digital monitoring as the sole cause of missed or delayed care. Rather, they perceived monitoring as morally distressing when it exposed workload pressure without enabling an effective response, or when it allowed documentation completion to stand in for adequate care.

Theme 4. Documentation burden and competing accountability

The fourth theme describes the ethical tension between documenting care and delivering care. Participants valued documentation because it supports continuity, safety, legal accountability, and professional responsibility. However, they also described duplication, repeated prompts, defensive charting, and documentation demands that competed with direct bedside care. Documentation burden therefore became morally significant when nurses felt forced to choose between visible accountability to the system and immediate responsiveness to patients.

This theme was more than a complaint about administrative workload. For nurses, documentation became ethically charged when it altered priorities during busy shifts. Participants described situations in which completing the record appeared professionally necessary, yet remaining at the bedside appeared more responsive to the patient's immediate needs. This produced a conflict between what was visible to the system and what was meaningful in the patient-care encounter.

The findings suggest that documentation burden contributed to moral distress when digital records became the main evidence of care quality. In such circumstances, nurses could feel compelled to prioritise defensible documentation even when they believed that direct relational care, explanation, comfort, or monitoring required their attention.

Theme 5. Resistance, voice, and ethical repair

The fifth theme describes how nurses responded actively to the limitations of digital monitoring. Participants used strategies such as contextual narrative notes, challenging inaccurate scores, escalating unsafe workload, supporting colleagues, creating informal workarounds, and calling for better governance.

These actions should not be interpreted simply as resistance to technology. In many accounts, they represented attempts to protect patients, preserve professional judgement, and repair ethical gaps between what the system recorded and what care required.

This theme is important because it shows that nurses were not passive recipients of digital monitoring. They attempted to make monitoring more clinically meaningful by adding context, contesting misleading data, and using available channels to advocate for safer care. However, the effectiveness of these strategies depended on whether managers listened, whether escalation routes were psychologically safe, and whether digital risk signals triggered practical responses.

Resistance and voice therefore functioned as forms of ethical repair. Nurses attempted to correct incomplete digital representations, protect patient care, and preserve professional values within systems that did not always capture the complexity of bedside nursing work.

Overall, the findings suggest that nurses' moral distress was shaped by the relationship between digital representation, professional judgement, workload pressure, and organisational response. Participants described digital monitoring as ethically useful when it made unsafe workload visible, supported escalation, or gave nurses evidence to justify staffing concerns. However, they described it as ethically harmful when it narrowed nursing work to measurable tasks, failed to recognise relational or anticipatory care, intensified documentation burden, or allowed managers to question delays without understanding ward conditions.

The strongest contrast in the findings was therefore not between digital and non-digital care, but between monitoring used as a supportive safety infrastructure and monitoring used as decontextualised performance surveillance. Digital workload monitoring became ethically meaningful when it was linked to context, support, and professional judgement. It became morally distressing when visibility did not translate into action, when documentation substituted for care quality, or when nurses' accounts of unsafe workload were challenged by incomplete digital representations.

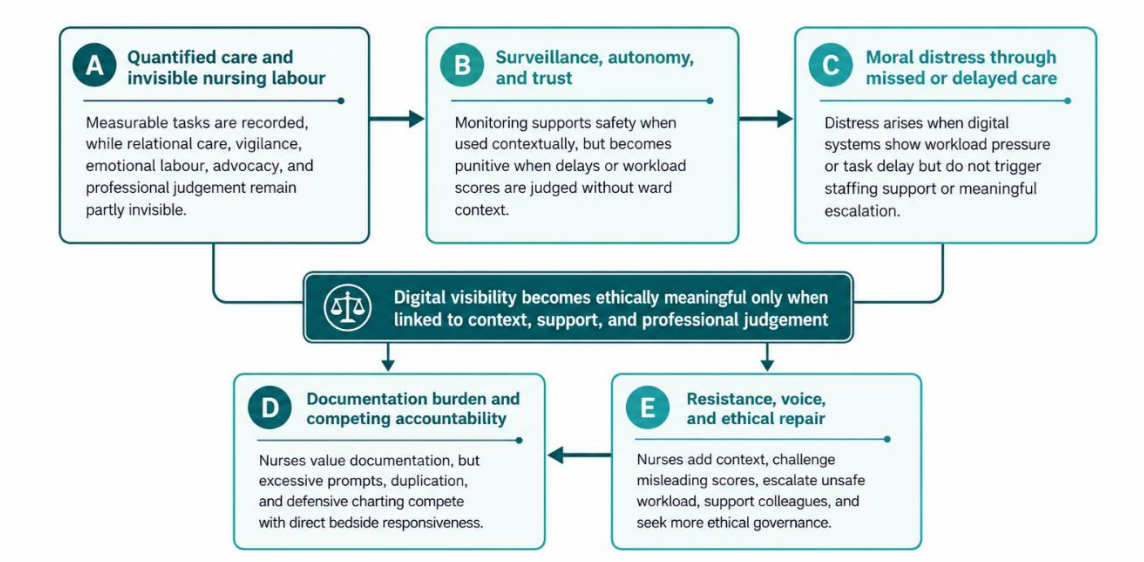

Figure 1 Qualitative thematic model of nurses' moral distress during digital workload monitoring

DISCUSSION

This qualitative study explored how hospital nurses experienced moral distress in relation to digital workload monitoring. The findings suggest that moral distress did not arise from digital monitoring alone, but from the way digital workload data were interpreted, governed, and acted upon within resource-constrained hospital environments. Nurses appeared to distinguish between monitoring that supported safer staffing, escalation, and shared accountability, and monitoring that reduced nursing work to measurable task completion, questioned professional judgement without context, or made unsafe

workload visible without generating organisational response. This distinction is important because it shows that digital workload monitoring is not inherently harmful or protective; its ethical meaning depends on whether it strengthens or weakens nurses' capacity to provide safe, dignified, and professionally accountable care.

The first major insight concerns incomplete visibility. Digital systems were described as better able to capture observations, medication checks, risk assessments, documentation fields, and task completion than relational care, emotional support, anticipatory vigilance, family communication, advocacy, and professional judgement. This finding is consistent with wider concerns that digital systems can improve visibility while also narrowing attention to what is easily counted [21]. In nursing practice, this narrowing has ethical consequences because some of the least measurable aspects of care are also central to dignity, safety, reassurance, and professional identity. The findings therefore support the argument that workload dashboards, acuity scores, and documentation completion should be treated as partial indicators requiring contextual interpretation rather than complete representations of nursing value.

The second major insight relates to surveillance, autonomy, and trust. Participants did not appear to reject accountability or digital visibility in principle. Monitoring was perceived as useful when it helped nurses demonstrate unsafe workload, justify escalation, or communicate staffing pressure. However, it became ethically troubling when digital data were used to question delays, compare performance, or judge nurses without asking what was happening on the ward. Similar concerns have been raised in literature on digital monitoring and workplace surveillance, where data systems can reshape power relationships, reduce trust, and shift responsibility onto individual workers when organisational context is ignored [22,26]. In this study, professional autonomy was not simply a desire to be unmonitored; rather, it involved the ability to exercise judgement, explain clinical priorities, contest inaccurate workload representations, and expect fair interpretation of digital data.

The findings also extend discussion of missed or delayed care. Participants described moral distress when digital systems signalled workload pressure or delayed tasks but did not trigger additional support. In such situations, digital visibility could intensify distress because it suggested that the organisation had evidence of risk but left nurses to carry the ethical burden of unmet care needs. This resonates with missed care literature, which shows that workload pressure may force nurses to ration, delay, or omit aspects of care that they recognise as important [8,9]. However, this study should not be interpreted as evidence that digital monitoring caused missed care. Rather, the qualitative findings suggest that nurses perceived monitoring as morally distressing when it exposed workload pressure without creating practical staffing, escalation, or prioritisation responses.

Documentation burden was another important mechanism through which digital workload monitoring became ethically charged. Participants valued documentation as a means of continuity, safety, and professional accountability, but they also described duplication, excessive prompts, and defensive charting as competing with direct patient care. This aligns with evidence that electronic documentation can contribute to work pressure when it is poorly integrated with clinical workflow [12,13,24]. The ethical issue is not documentation itself, but the point at which documentation becomes a substitute for, or competitor with, bedside responsiveness. When nurses feel that the safest professional action is to complete the record rather than remain with the patient, digital accountability may become misaligned with care quality.

The theme of resistance, voice, and ethical repair shows that nurses were not passive recipients of digital monitoring. They attempted to add context through narrative notes, challenge misleading scores, escalate unsafe workload, support colleagues, and advocate for more appropriate governance. These actions should not be dismissed as resistance to technology; they can be understood as forms of moral agency through which nurses attempted to repair the gap between digital representation and clinical reality. Digital tools in hospitals therefore require participatory implementation, transparent feedback mechanisms, and psychologically safe routes for staff to question data outputs, report unsafe conditions, and identify unintended consequences [25,28].

Several implementation implications follow from these findings. First, workload monitoring systems should include structured but brief opportunities for contextual explanation, allowing nurses to document why tasks were delayed or why a workload score did not reflect ward reality. Second, high-risk workload indicators should trigger defined organisational responses, such as senior nursing review, task reprioritisation, temporary staffing support, redistribution of work, or documented justification when support is unavailable. Third, nurse managers should be trained to interpret digital workload data as contextual safety signals rather than as isolated performance indicators. Fourth, low-value or duplicative documentation should be regularly audited and reduced. Fifth, bedside nurses should be involved in procurement, design, implementation, evaluation, and revision of digital workload systems. These steps are consistent with workforce guidance emphasising professional judgement, escalation, and staffing decisions based on patient need rather than numerical indicators alone [29,30].

Trustworthiness and limitations should be considered when interpreting the findings. As a qualitative study, the purpose was not to estimate the prevalence of moral distress or quantify the effect of digital monitoring, but to generate interpretive insight into how nurses made sense of monitored workload. The sample size was limited and should be interpreted as information-rich rather than statistically representative. Participants may have softened criticism because digital surveillance, staffing pressure, and managerial interpretation are professionally sensitive issues. If participants were recruited through workplace channels, social desirability and perceived employment risk may have influenced responses. The study relied on interview accounts rather than direct observation of digital system use, documentation behaviour, escalation decisions, or staffing responses. Translation or transcription processes may also have affected meaning if interviews were conducted in a language other than English. Transferability depends on the similarity of other settings to the hospitals, wards, digital systems, and organisational cultures represented in the study; therefore, richer contextual description is required in the final manuscript.

Despite these limitations, the study contributes to nursing ethics and digital health literature by showing how digital workload monitoring may become morally significant when it affects trust, autonomy, visibility, accountability, and organisational responsibility. The findings suggest that digital monitoring should be evaluated not only by data completeness, operational efficiency, or documentation compliance, but also by whether it helps nurses protect dignity, escalate risk, preserve professional judgement, and secure meaningful support for safe care.

CONCLUSION

This qualitative study suggests that nurses' moral distress during digital workload monitoring is shaped by the interaction between digital representation, professional values, workload pressure, and organisational response. Participants perceived monitoring as acceptable and potentially useful when it supported escalation, staffing visibility, shared accountability, and safer care. However, monitoring became ethically troubling when it reduced nursing work to measurable tasks, made relational and anticipatory care invisible, intensified documentation burden, questioned professional judgement without context, or displayed unsafe workload without triggering support. Digital workload monitoring should therefore be implemented as ethical decision-support infrastructure rather than as a complete measure of nursing value. Hospitals should involve nurses in system design, ensure transparent data governance, create routes to contest inaccurate workload representations, reduce low-value documentation, protect professional judgement, and link high-risk workload signals to meaningful managerial and staffing responses. These actions may help ensure that digital monitoring supports, rather than undermines, safe and person-centred nursing care.

REFERENCES

1. World Health Organization. State of the world's nursing 2025 [Internet]. Geneva: World Health Organization; 2025 [cited 2026 Jun 1]. Available from: https://www.who.int/publications/i/item/9789240110236

2. Nursing and Midwifery Council. The NMC register: 1 April 2024 to 31 March 2025 [Internet]. London: Nursing and Midwifery Council; 2025 [cited 2026 Jun 1]. Available from: https://www.nmc.org.uk/globalassets/sitedocuments/data-reports/march-2025/annual-data-report-march-2025.pdf

3. World Health Organization. Global strategy on digital health 2020–2025 [Internet]. Geneva: World Health Organization; 2021 [cited 2026 Jun 1]. Available from: https://www.who.int/publications/i/item/9789240020924

4. Nursing and Midwifery Council. The Code: professional standards of practice and behaviour for nurses, midwives and nursing associates [Internet]. London: Nursing and Midwifery Council; 2018 [cited 2026 Jun 1]. Available from: https://www.nmc.org.uk/standards/code/

5. Salari N, et al. The severity of moral distress in nurses: a systematic review and meta-analysis. Philos Ethics Humanit Med. 2022;17:13. doi:10.1186/s13010-022-00126-0

6. Alimoradi Z, et al. Moral distress among nurses: a systematic review and meta-analysis. Nurs Ethics. 2023. Available from: https://pubmed.ncbi.nlm.nih.gov/37029930/

7. Orgambidez A, et al. Moral distress and emotional exhaustion in healthcare professionals: a systematic review. Healthcare (Basel). 2025;13(4):393.

8. Lake ET, et al. Missed nursing care and patient outcomes. Med Care. 2022.

9. ShamsiKhani S, et al. Nurse staffing and missed care: a systematic review. Nurs Open. 2025.

10. Royal College of Nursing. Nursing workforce standards [Internet]. London: Royal College of Nursing; 2021 [cited 2026 Jun 1]. Available from: https://www.rcn.org.uk/Professional-Development/publications/rcn-workforce-standards-uk-pub-009681

11. Nagle LM, et al. Nursing informatics and the digital health landscape. Can J Nurs Leadersh. 2023.

12. Heponiemi T, et al. Electronic health record stress and work-related wellbeing. Int J Environ Res Public Health. 2021;18(2):725.

13. Birkholz L, et al. Digital nursing documentation and professional burden. J Clin Nurs. 2025.

14. Lamoureux E, et al. Data-driven hospital management and care labour. Soc Sci Med. 2024.

15. Waterfield D, et al. Workplace surveillance and digital performance management. Work Employ Soc. 2022.

16. World Health Organization. Ethics and governance of artificial intelligence for health [Internet]. Geneva: World Health Organization; 2023 [cited 2026 Jun 1]. Available from: https://www.who.int/publications/i/item/9789240029200

17. Nuffield Council on Bioethics. Artificial intelligence in healthcare and research [Internet]. London: Nuffield Council on Bioethics; 2018 [cited 2026 Jun 1]. Available from: https://www.nuffieldbioethics.org/publications/artificial-intelligence-ai-in-healthcare-and-research

18. Braun V, Clarke V. One size fits all? What counts as quality practice in reflexive thematic analysis? Qual Res Psychol. 2021;18(3):328-52. doi:10.1080/14780887.2020.1769238

19. DeJonckheere M, Vaughn LM. Semistructured interviewing in primary care research: a balance of relationship and rigour. Fam Med Community Health. 2019;7(2):e000057. doi:10.1136/fmch-2018-000057

20. Korstjens I, Moser A. Series: practical guidance to qualitative research. Part 4: trustworthiness and publishing. Eur J Gen Pract. 2018;24(1):120-4. doi:10.1080/13814788.2017.1375092

21. Anderson JE, et al. Digital health and workarounds in hospital care. BMJ Qual Saf. 2023.
22. Nilsson L, et al. Nurses' experiences of digital patient monitoring. J Clin Nurs. 2025.
23. Lee S, et al. Nurses' perceptions of electronic patient surveillance. J Adv Nurs. 2024.
24. Jeilani A, et al. Exploring nurses' experiences of electronic documentation burden. BMC Nurs. 2025.
25. Hicks LK, et al. Ethical implementation of digital tools in hospitals. BMJ Lead. 2024.
26. Murad A, et al. Surveillance and algorithmic control at work. AI Soc. 2024.
27. Rottgen K, et al. The governance of algorithmic management at work. Regul Gov. 2025.
28. Sarpong K, et al. Digital work, trust and employee voice in health care. Hum Relat. 2026.
29. Royal College of Nursing. Nursing workforce standards: updated edition [Internet]. London: Royal College of Nursing; 2025 [cited 2026 Jun 1]. Available from: https://www.rcn.org.uk/Professional-Development/publications/rcn-workforce-standards-uk-pub-012-608
30. World Health Organization. Global strategic directions for nursing and midwifery 2021–2025 [Internet]. Geneva: World Health Organization; 2021 [cited 2026 Jun 1]. Available from: https://www.who.int/publications/i/item/9789240033863