Midwifery 122 (2023) 103676

Contents lists available at ScienceDirect

Midwifery

journal homepage: www.elsevier.com/locate/midw

Midwives' experiences with a safe childbirth checklist: A grounded theory study

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ARTICLE INFO

Article history:
Received 22 April 2021
Revised 30 March 2023
Accepted 4 April 2023

Keywords:
Checklist
Qualitative study
Midwife
Handover
Grounded theory

ABSTRACT

Objective: The aim of this study was to explore midwives' experiences with a safe childbirth checklist used in handover situations from birth to hospital discharge. Quality of care and patient safety is highly recognised and a priority within health services globally. In handover situations, checklists have proven to reduce unwanted variation by standardising processes, which in turn contribute to increased quality of care. To improve the quality of care, a safe childbirth checklist was implemented at a large maternity hospital in Norway.

Design: We conducted a Glaserian grounded theory (GT) study.

Setting and participants: A total of 16 midwives were included. We included three midwives in one focus group and conducted 13 individual interviews. Years of experience as midwives ranged from one to 30 years. All included midwives worked in a large maternity hospital in Norway.

Findings: The main concern faced by the midwives who used the checklist included *no common understanding of the purpose of the checklist nor consensus on how to use the checklist*. The generated grounded theory, *individualistic interpretation of the checklist*, involved the following three strategies that all seemed to explain how the midwives solved their main concern: 1) not questioning the checklist, 2) constantly evaluating the checklist, and 3) distancing oneself from the checklist. Experiencing an unfortunate event concerning the healthcare of both mother or newborn was a condition that could alter the midwives understanding and use of the checklist.

Key conclusions: The findings in this study showed that a general lack of common understanding and consensus on the rationale for implementing a safe childbirth checklist led to variations between midwives in how and whether the checklist was used. The safe childbirth checklist was described as long and detailed. It was not necessarily the midwife who was expected to sign the checklist who had carried out the tasks signed for. To ensure patient safety, recommendations for future practice include securing that separate sections of a safe childbirth checklist are limited to a specific time-point and midwife.

Implications for practice: Findings emphasise the importance of implementation strategies supervised by the leaders of the healthcare services. Further research should explore the understanding of organisational and cultural context when implementing a safe childbirth checklist to clinical practice.

Introduction

Quality of care and patient safety is highly recognised and a priority within health services globally (WHO, 2017, p. 1(World Health Organization, 2016)). In high-income countries, the quality of maternal and neonatal healthcare is generally high (Miller et al., 2016); however, parts of practice may still lead to inadequate, unnecessary or harmful care (Koblinsky et al., 2016; Miller et al., 2016; Renfrew et al., 2014). Childbirth and the immediate postnatal period are critical for maternal and neonatal survival, and globally this period is associated with severe complications for both mother and newborn (Albolino et al., 2017).

Nearly half of all adverse events within healthcare have been associated with poor communication, and failure in handover between healthcare professionals may result in adverse events, such as lack of correct care, misuse or poor utilisation of resources (Birmingham et al., 2015; Manias et al., 2016; O'Connell et al., 2008; Street et al., 2011; World Health Organization, 2007). Thus, poorly handled handover situations may be a potential threat to patient safety (Saastad, 2017, 2014; World Health Organization, 2007).

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https://doi.org/10.1016/j.midw.2023.103676

Improving quality of care requires a systematic and continuous focus on and evaluation of healthcare services (Albolino et al., 2017; Lavender, 2016; World Health Organization, 2016). One recognised tool to support evidence-based practice is the implementation and use of checklists (Albolino et al., 2017; Haynes et al., 2009). Checklists have been shown to be an inexpensive, flexible and effective tool in planning safety in some healthcare settings (Thomassen et al., 2010; World Health Organization, 2008, 2015). However, potential barriers to checklist utilisation may be related to cultural resistance, lack of personnel or motivation amongst healthcare professionals, or a fear of losing autonomy or limiting clinical judgement (Brun-Pedersen and André, 2017; Geerligs et al., 2018; World Health Organization, 2015). In 2015, the World Health Organization (WHO) introduced an implementation guide for safe childbirth checklists. The implementation guide was designed as a tool to improve the quality of facility-based care for mothers and infants (World Health Organization, 2015).

To improve the quality of care, a checklist was implemented at a large university hospital in Norway. The purpose of the checklist was to secure safe childbirth from birth to hospital discharge. After the handover from the delivery room to postnatal care, the checklist would follow mother and newborn until discharge from the hospital. There is an increase in the use of checklists within healthcare, but few studies explore healthcare workers and their challenges when implementing and using a checklist (Brun-Pedersen and André, 2017; Thomassen et al., 2010). The aim of the study was therefore to explore midwives' experiences with the use of a safe childbirth checklist used in handover situations from birth to hospital discharge.

Method

A Glaserian grounded theory study (GT) was conducted using a constant comparative method for collecting and analysing data (Glaser Barney and Strauss Anselm, 1967). GT is an inductive method focusing on social processes and interaction intending to develop a theoretical explanation of a social phenomenon grounded in data (Giske, 2014 s.94; Glaser, 1978, 1992; Gynnild, 2014 s.14). Grounded theory (Glaser, 1978, 1992) was used to explain the actions used amongst midwives implementing and using a safe childbirth checklist used from birth to hospital discharge. Sampling in grounded theory is a process guided by the developing theory, and therefore both individual and focus group interviews are useful when understanding the phenomena being studied (Glaser Barney and Strauss Anselm, 1967).

For strengthening the reporting of the data, a COREQ checklist was used (Appendix 1).

The safe childbirth checklist

The checklist in question consisted of the three following main sections: 1) items related to birth, 2) items related to safe handover from the delivery room to postpartum care, and 3) items related to care after handover until discharge (Appendix 2). The checklist was designed for midwives to sign the checklist after each of the three main sections. The safe childbirth checklist fit within a A4 paper, was filled in manually and after discharge the checklist was scanned and added to the woman's digital medical record.

Participants and setting

Midwives eligible for the study were midwives who worked in a specialised obstetric unit at a large university hospital, where the checklist had been implemented. In line with Glaser (1978), the sampling was guided by the emerging theory as in theoretical sampling and the initial aim of the study was to identify the study sample's main concern with a given topic. Sixteen midwives with varying years of experience, with specific experience of having used the checklist, creators, implementers, and ward leaders, were recruited to participate in the study. A total of 13 individual interviews and one focus group interview including three midwives were conducted. The number of years of experience as midwives ranged from one to 30 years (mean 9,4 years). Notably, only eight midwives provided data on years of experience as midwives. The participants recruited were either working in high- or low-risk delivery wards, in postnatal wards or in a combined delivery and postnatal ward. Midwives from all hospital wards using the checklist are represented in the study sample (i.e. four different wards). In line with grounded theory, the aim was to let the data speak for itself (Glaser, 1978, p.8). Therefore, participants were not invited to give feedback on collected data. The wards were all part of a larger university hospital with approximately 5000 deliveries per year.

Data collection

Data were collected from October 2017 to January 2018. NN2 conducted the interviews and NN4 facilitated during the interviews. The interviews were conducted before, during or after a shift at the participants' own workplace. A meeting room at the university hospital was used to avoid interference, and all the interviews were recorded. The individual interview lasted between 20 and 45 min, and the focus group interview lasted 60 min. Each participant was interviewed once, and the interviewer made all the arrangements regarding time and place in agreement with the participants.

A semi-structured interview guide using open-ended questions was used to conduct the interviews (Appendix 3). All the interviews opened with the question: "Can you please tell me about the use of the safe childbirth checklist?" Due to the emerging grounded theory, the interview guide was adjusted once by adding explicit questions about how the checklist was filled out. In line with the methods, the intention was to expand and confirm hypotheses with a deductive approach in the additional interviews and for the evolving of the theory (Glaser, 1978). The added questions include the following: 1. "In relation to *breastfeeding experience (good, bad)*; how do you document breastfeeding experience? Do you ask the woman about this again in the postpartum ward, if a colleague has already ticked for it prior to handover from the delivery ward? What do you think if I told you that some midwives explain that it is unclear to them how to understand the womenś breastfeeding experiences based on the documentation on the safe childbirth checklist?", 2. "Can some tasks on the list limit any needed follow-ups in cases where the task has been checked too soon after birth or if a task is incorrectly documented? If so, in what ways?", and 3. "Can you please explain how you experience that midwives use the safe childbirth checklist?". All the interviews were recorded and transcribed verbatim by NN1.

Data analysis

Each interview was analysed before the next interview. The interviews were analysed in accordance with grounded theory methodology by using open, selective and theoretical coding progressively. Each interview was analysed manually and compared with the previous interview combined with memos and written textual notes from the data collection in a continuous process (Glaser Barney and Strauss Anselm, 1967; Glaser, 1978, 1992; Hjälmhult et al., 2014). The process started with open coding manually line-by-line while focusing on the incidents. Constant

comparison was later used to explore differences and similarities (Glaser Barney and Strauss Anselm, 1967; Glaser, 1978, 1992; Hjälmhult et al., 2014). When the midwives' main concern was identified, the study advanced to identify patterns of behaviour by which the midwives resolved their main concern. Throughout the analysing process, memos and theoretical ideas were used to develop codes, categories, and their relationships. This helped to generate hypotheses based on the data collected. Codes were selectively grouped into universal categories related to the core category, "individualistic interpretation of the checklist." To validate the findings, the core category was compared with existing literature and data collection stopped when saturation was achieved (Glaser & Strauss, 1967; Glaser, 1978, 1992). During the analysis process, codes, memos, and categories were discussed and written amongst all authors. The core category was also compared to literature on the field (Glaser, 1992). Glaser (1978) emphasized the importance of avoiding external influence during analysis, and therefore, participants were not invited to provide feedback until the theory was fully developed. To support the findings, relevant quotations were identified and translated from Norwegian to English.

Reflexivity

At the time of conducting the study, three of the authors were midwives, while the fourth author was a student midwife. Additionally, two of the authors had first-hand experience using the safe childbirth checklist that was studied in their clinical practice.

Ethical considerations

The Norwegian Data Protection Official for Research approved the study (reference number: 54,239/3/BGH). In accordance with Norwegian law, approval by the Regional Medical and Health Research Ethics Committee was not required. Ethical principles were ensured in the following way: All participants received written and oral information about the study, confidentiality issues, and the possibility and means of withdrawal. Written informed consent was obtained prior to participation. All data were anonymized, and the recordings were deleted after they had been transcribed. Each interview was transcribed immediately after the interview was conducted. All procedures were in accordance with the Declaration of Helsinki.

Findings

The midwives' main concern, the generated grounded theory, the three strategies describing how the midwives solved their main concern and a condition for changing strategy is described in Fig. 1. The midwives' main concern was identified as "no common understanding of the purpose of the checklist' nor consensus on how to use the checklist".

While the midwives in the current study employed different strategies when using the safe childbirth checklist, it is important to note that the safety of both mother and newborn was consistently cited as a primary factor guiding their choice of strategy. However, there was uncertainty whether the checklist could be used as a quality improvement initiative or more as a list of reminders of what to do. This uncertainty resulted in the grounded theory "individualistic interpretation of the checklist". The midwives interpreted the use of the checklist according to how they understood the checklist, how the working conditions were and their personal attitudes towards the checklist. The theory *Individualistic interpretation of the checklist* consisted of three strategies: *following the system, evaluating the system and distancing themselves from the system.* Each strategy had corresponding conditions and consequences influencing how the checklist was used. The three strategies did not represent a dynamic or linear process, but a persistent pattern, meaning that the midwife's first introduction to the checklist was decisive to how the midwife used the checklist, and this use did not alter as their experience as a midwife increased. The level of experience of the midwife, whether novice, competent, or expert, did not seem to affect their choice of strategy when first introduced to the checklist. Additionally, our findings suggest that midwives rarely altered their initial strategy. However, we observed that experiencing an unfortunate event related to either the mother or newborn that could be attributed to the use of the checklist was a significant motivator for midwives to switch to an alternate strategy. One midwife explained how an unfortunate event made her change her attitude towards the checklist, such as when she experienced tasks being ticked off the list without having been carried out:

> "Newborn screening for example [routine blood tests of the newborn], it has been forgotten… but it has been ticked off the list." Midwife 10

Another midwife said:

> "[Without the checklist,] things that can be forgotten included treatment of rhesus negative mothers, or… I have experienced that someone forgot a vaccine" Midwife 8

Other unfortunate events that midwives have mentioned include a failure to use name tags for both the mother and newborn, newborns being inadvertently overlooked during daily examinations conducted by the paediatrician on infants born within the past 24 h, and a lack of attention given to items on the checklist related to breastfeeding support.

One shared experience, regardless of ward or seniority as midwife, was that all the participants experienced variation in the use of the checklist. The unwarranted variation in the use of the checklist may be explained by its inconsistent design, such as more than 30 items on the list, or the fact that the checklist followed the woman and newborn for days. The midwives in the study did not describe a common understanding on how to use checklist, and this uncertainty seemed consistent within and amongst the wards at the hospital. The checklist was described as an individual instrument to facilitate each midwife, and not as a part of a common patient safety strategy.

Not questioning the checklist

Midwives who described not questioning the safe childbirth checklist considered the checklist to be important. These midwives further described feeling obligated to use and trust the checklist. The dominant condition of this strategy was mainly characterised by the midwives' sense of duty towards their management or head of staff. The midwives felt obligated to use the checklist and by not questioning the checklist, the midwives worked in agreement with the guidelines given by the management. One midwife, considered to be competent with four years of experience, put it like this:

> "When the checklist was implemented, I just started using it since we were told that we were going to use it." Midwife 7

Midwives who did not question the checklist experienced the checklist as an efficient tool, and they trusted the checklist when it was correctly filled out. Still, they expressed that there were uncertainties related to the use of the checklist, but these uncertainties were solved by adjusting the use to their own preferences. The checklist controlled and guided their work by systematically checking out tasks that were completed. When the midwives came across checklists that were incomplete or incorrectly filled out, the midwives described how they compensated for this by filling in the missing parts. By not questioning the checklist, the mid-

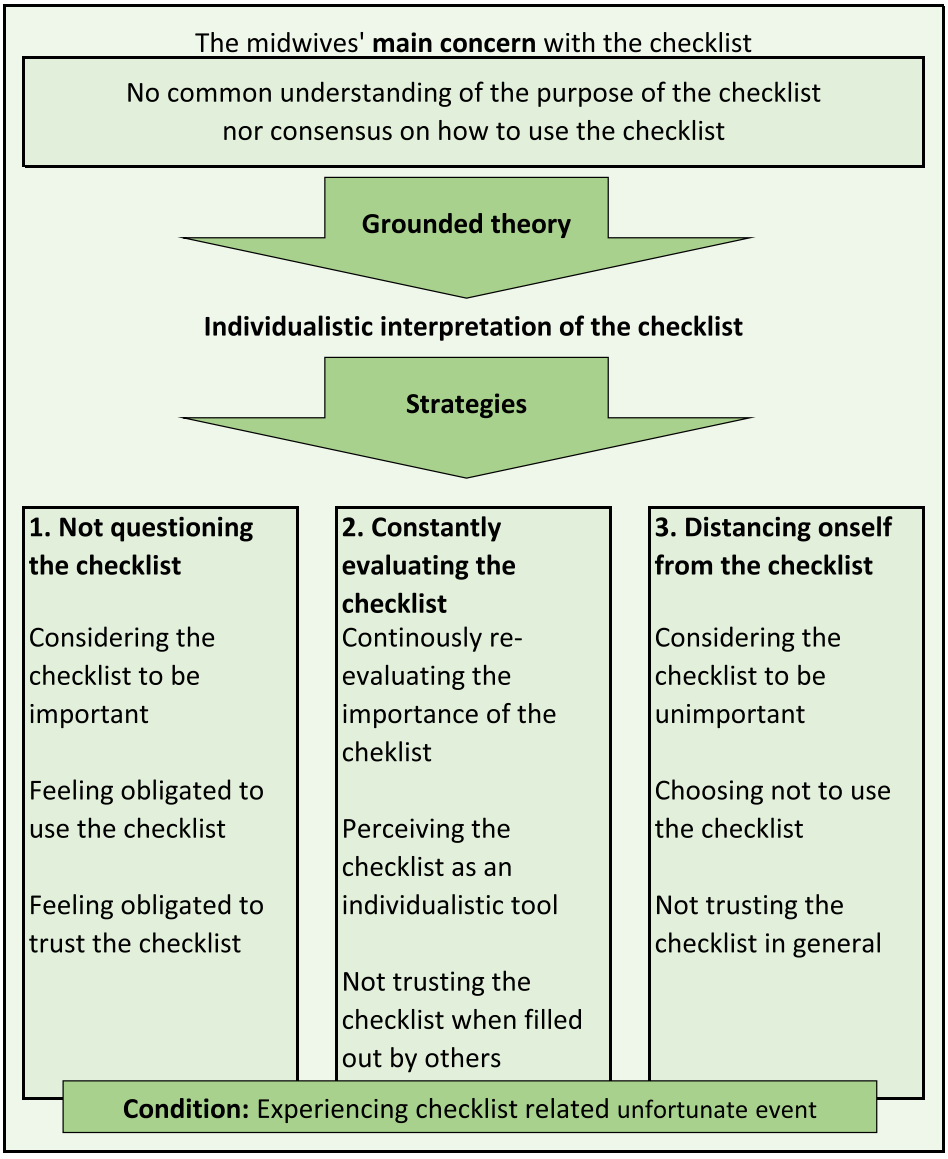

Fig. 1. The midwives' main concern the generated grounded theory the three strategies describing how the midwives solved their main consern and condition for changing strategy.

wives signed off on several sections of the checklist that they had not performed or observed themselves. Hence, they did what they were told to do, but the midwives using this strategy did not describe reporting uncertainties about the checklist to those responsible for development of the checklist. However, they had many thoughts about the potential for improvement of the checklist. One midwife said:

> "If things are busy, you can end up just thinking awwww … but with the checklist it's simply checking things off one after another… and you do all the rest a lot quicker because you remember more easily what the next step is, rather than spending a long time thinking - what was I supposed to do now?" Midwife 2

One midwife who was involved in the implementation process described the process in the following way:

> "The implementation [strategy] was just to say that you must do this: 'Here is a sheet and this is a work tool to help you ensure that we do everything that needs to be done [before discharge]'. The background was also an increase in early discharge. After the change, there was much more to be done in a short time. Practice needs to be equal for all [midwives]. We need this to ensure that we do what needs to be done and ensure that nothing is missed." Midwife 12

For some midwives it felt safe to have the checklist. These midwives were both experienced and less experienced as midwives, and they said things such as "I love it [the cheklist]!" (Midwife 1) or "I am new to the ward, and I find it [the checklist] very useful." (Midwife 4).

Constantly evaluating the checklist

Some midwives constantly evaluated the importance of the checklist. These midwives perceived the checklist as an individual tool not to be trusted when filled out by others than themselves. The condition of this strategy was more pragmatic where the midwives prioritised the use of the checklist in concurrence with the number of tasks on the actual shift. When the midwives had several competing tasks and duties, they deprioritised the checklist, but when the shift was quiet and foreseeable, they used the check-

list according to how they meant the checklist should be filled out. The midwives adjusted the use of the checklist to what was most suitable and practical to themselves. Midwives that used the strategy of constantly re-evaluating the checklist seemed to have a more personal approach to the checklist where they merely made their own version of how to fill out the checklist. This personal version was influenced by the midwife's earlier experiences with an unfortunate event related to the checklist, and the midwives described how they only trusted their own way of filling out the checklist. Not trusting their colleague's work in the handover situation resulted in double checking, reviewing and filling out what they felt were missing parts, and the consequence was a higher workload leading to frustration and hampered workflow. One midwife described the paradox of documentation needs and her reasons for constantly re-evaluating the checklist as follows:

> "We keep documenting the same things in several systems. It is too much. There are too many places where details need to be documented and that's the problem (…) I think that it should be enough to document observations and tasks once, but things are repeatedly forgotten, that's why we have the checklist to remember the tasks… so… (laughs)" Midwife 10

Midwives who used the strategy of constantly re-evaluating the checklist described the checklist as a tool to discover irregularities in practice, and the discovery of irregularities contributed to patient safety by correcting the practice. By adjusting the use of the checklist, the midwives explained how they camouflaged unwarranted situations and the inaccuracy of the checklist. One midwife said:

> "As when things have been ticked off the list, and it turns out the tasks haven't been done. Or when nothing is checked off, even though everything already has been done. In my experience it's a good checklist for work I'm doing myself, but I cannot trust the checklist when it has been filled out by someone else." Interview 7

Midwives in the current study kept re-evaluating the use of the checklist, and the leaders in the current study were aware of the individual practices, such as this leader:

> "Yes, the checklist is scanned and put in the [woman's] journal (…) It [the checklist] gives us a chance to see what the midwives are doing and see that they are checking off the items [needed to be done] on the list. It has to be done [completing the list]. It is, in a sense, a requirement that it be filled in, but we know that it depends on the person. Who actually does [fill in the list]." Midwife 12

Distancing oneself from the checklist

Midwives who distanced themselves from the checklist explained considering the checklist to be unimportant. Therefore, these midwives stated that they did not to use the checklist or trust the checklist. The dominant condition of this strategy was distancing themselves from the checklist by not using it. The midwives reported that they continued to perform their clinical practice as if the checklist had not been implemented. This silent protest seemed influenced by two aspects: the implementation process of the checklist and a concern about losing clinical skills. The midwives described that they were critical of how the checklist had been implemented, focusing on lack of information and lack of a proper plan demonstrating how and why the checklist was implemented. Some midwives described the implementation process as a top-down process with little interest in the perspective of the midwives using the checklist, or arguments supported in research-based evidence. These midwives argued that the checklist was redundant because it only contained sections that they considered basic clinical midwifery skills. The midwives were concerned that the checklist could lead to a reduced ability to critically observe, reflect, interpret, and act if a standardisation of their practice was defined by a checklist. Furthermore, they suspected that using the checklist could be a potential threat to patient safety as the checklist could give an impression of false security because midwives might forget to observe what is not on the checklist, and by that lose part of their clinical competences. One midwife put it like this:

> "That checklist is provoking… I believe it can be a threat to patient safety because midwives forget what to do and how things are to be done, and you also forget why you should do things". Midwife 13

In contrast, when asked what the leaders thought about the reasons for not using the checklist, one answered:

> "They don't like the fuss, they don't see the importance, they don't… well… In the end, it is all about routine." Midwife 13

Discussion

The midwives' main concern with the checklist was identified as "no common understanding of the purpose of the checklist nor consensus on how to use the checklist". A general lack of consensus on the rationale for implementing the checklist influenced its use, opening up for individualistic interpretations. The emergent grounded theory of "individualistic interpretation of the checklist" explained how the midwives resolved their main concern. We identified the following three main strategies related to the use of the checklist: not questioning the checklist, constantly evaluating the checklist, distancing oneself from the checklist. The year of experience as a midwife did not appear to influence their choice of strategy when introduced to the checklist. While the midwives seldom altered their initial strategy, one condition that seemed to motivate a midwife to change strategy towards the use of the checklist was if the midwife herself experienced an unfortunate event related to mother or newborn which could be related to unintended use of the checklist, such as failed follow-up of rhesus negative mothers.

Since the checklist was used differently based on the midwives' personal beliefs and attitudes, it was difficult to ensure a common understanding and equal use of the checklist. This resulted in uncertainty amongst the midwives and potentially failing to ensure the safety of mother and her newborn from birth to hospital discharge. Suggesting several approaches to a checklist may be productive, the WHO implementation guide for safe childbirth (World Health Organization, 2015) note some variation in use of a checklist do exist, such as when some birth attendants chose to read the task first and then complete the task (i.e. Read-Do), while others complete the task and use the checklist to confirm that the task has been completed (i.e. Do-Confirm). In maternity care, however, few implementation studies report the use of a model or framework guiding the implementation process (Dadich et al., 2021). Checklists are cheap and allegedly easy to implement (Thomassen et al., 2010), and are often used when healthcare workers face a variation of challenges related to quality and safety (Clay-Williams and Colligan, 2015; Thomassen et al., 2014). A systematic review on the effects of using a safety checklist in medicine concluded that safety checklists seem to be effective tools for improving care in various settings (Thomassen et al., 2014). None of the included studies reported negative effects related to the use of such a checklist (Thomassen et al., 2014; Storesund et al., 2020). Implementing a checklist is not all positive, as implementing a checklist may lead to double documen-

tation of several tasks and observations. Registering the same information more than once is problematic in health care, thus the threshold for implementing a new checklist should be high. Findings from this study indicate there is a lack of awareness related to the importance of a clear implementation strategy for safe childbirth checklists.

In 2008, The WHO published an implementation guide for surgical safety checklists (World Health Organization, 2008). In 2015, a separate implementation guide for safe childbirth checklists was introduced (World Health Organization, 2015). When assessing the recommendations in the WHO implementation guides, we find several possible explanations for the challenges observed related to the implementation of the checklist investigated in the current study. Firstly, the WHO recommends that a single person participating in caring for the patient is made responsible for ticking the boxes on the list (World Health Organization, 2008). In the current study, the checklist followed the mother and infant, thus several midwives were expected to use the same checklist resulting in an ethical dilemma for midwives who signed checklists based on tasks performed by colleagues. Secondly, for the checklist to be effective, the care providers should aim to accomplish the different steps of the list effectively and undisturbed (World Health Organization, 2008), introducing the aspects of time and external noise. In the current study, the checklist was expected to be effective across midwives and their various tasks, wards and hospital shifts, i.e. ranging from hours to days, depending on the individual mother's or infant's needs. In most health facilities, childbirth include a flow of similar events critical to patient safety. To ensure safe practice, WHO therefore suggests a implementing a checklist which includes the following four separate sections: 1) on admission, 2) just before pushing (or before caesarean), 3) soon after birth (within 1 hour), and 4) before discharge (World Health Organization, 2015). Notably, the WHO Safe Childbirth Checklist must be adapted to fit local needs before the checklist is launched (Perry et al., 2017; World Health Organization, 2015). Further, it is essential to engage local leaders and encourage local ownership for the checklist to be successfully implemented (Perry et al., 2017; World Health Organization, 2015). Adopting the WHO checklist could potentially solve several of the problems described by the midwives in the current study, such as when each section of the checklist would be limited to a specific time-point and midwife. The findings of the current study indicate that the consequences of implementing a checklist without assessing current recommendations on how to best implement a checklist may pose a threat to patient safety.

Some midwives were particularly eager to follow the ward's routines and ticking the boxes on the checklist appeared more important than checking if the tasks were completed or not. For midwives who silently protested against the checklist, the implementation of the checklist was perceived as a form of structural distrust in their professional judgement. Midwives in Britain have been found to feel overwhelmed at work, caused by a heavy workload and poor staffing (Cull et al., 2020). Similar findings are reported in a Norwegian study, adding that midwives often experience insufficient support from their midwifery leaders and powerlessness in a constantly changing work environment ruled by a medical model of care (Lukasse and Henriksen, 2019). A culture of fear or distance to management seems to exist within maternity care (Curtis et al., 2006). Thus, regardless of whether the midwife aims to be an ideal employee or is silently protesting the use of the checklist, the combination of the different midwives' strategies in solving their shared main concern may represent a challenge to patient safety. Though a checklist may initially seem irrelevant or time-consuming, the WHO Safe Childbirth implementation guide advocate that successful implementation of the checklist will allow birth attendants to perform their practices more safely, easily and quickly (World Health Organization, 2015).

The individual adjustments and lack of common understanding affected the midwives differently. It is a paradox when some midwives chose not to prioritise the checklist during busy shifts, while others find the checklist particularly useful in such situations. One might argue that the use of a checklist challenges best practice in midwifery if a midwife or the system are more concerned about routines and ticking boxes, and less concerned about offering individualised care based on the midwives' professional judgement. Woman-centred care is recognised as a quality marker of maternity services (De Labrusse, Ramelet, Humphrey, and Maclennan, 2016). Therefore, when care is standardised and based on a checklist, this may challenge addressing the different needs of different mothers and infants. Previous research has shown that a checklist may be effective when assessing patient safety (Thomassen et al., 2014). However, the result in the current study suggests that a checklist needs to be limited to few and specific tasks and proper implementation strategies are warranted. Adapting the WHO Safe Childbirth Checklist to the local setting and establishing a professional team to take ownership of the implementation process may be a good place to start (World Health Organization, 2015).

Strength and limitations

A strength of this study is that the participants' views of using the checklist are grounded in empirical data given by the participants from the hospital using the checklist. Grounded theory method focuses on human actions and interactions and is therefore well suited when exploring experiences with a given phenomenon (Glaser Barney and Strauss Anselm, 1967; Glaser, 1978, 1992). The participants were all midwives representing all the different wards at the maternity hospital, securing diversity and different experiences using the checklist. However, all the participants came from the same hospital and experiences related to the use of the checklist will reflect the context an organisational culture experienced within this hospital. Furthermore, our grounded theory seems relevant to the strategies used by the midwives, and the theory could be adjusted to new data when it emerges.

Conclusion

The findings in this study showed that a general lack of common understanding and consensus on the rationale for implementing a safe childbirth checklist resulted in individualistic use of the checklist. The safe childbirth checklist was described as long and detailed. It was not necessarily the midwife who was expected to sign the checklist who had carried out the tasks signed for. To ensure patient safety, recommendations for future practice include securing that separate sections of a safe childbirth checklist is limited to a specific time-point and midwife. Further research should explore the understanding of organisational and cultural context when implementing a checklist in clinical practice.

Ethics approval and consent to participate

The study was approved by The Norwegian Data Protection Official for Research (approval number: 54,239/3/BGH). All participants were given a written consent.

Consent for publication

Not applicable.

Data availability

Data that support the findings for this study are available from the Western Norway University of applied science research server. All data can also be made available on request from the corresponding author.

Funding

Not applicable.

Credit author statement

NN2 and NN4 drafted the study and contributed to the data collection. NN1, NN2, NN3 and NN4 drafted the manuscript and contributed to data analysis and interpretation of data. NN1 led the process of finalising the manuscript before publication. The final manuscript was read and approved by all authors.

This manuscript is based on NN2's Master thesis and her collection of data as a student in Master in Midwifery. During the recruitment and collection of data the first author was a nurse and midwifery student. NN4 was her main supervisor, who moderated the interviews and facilitated the master student during the data collection process. NN1, NN3 and NN4 all have experience in performing qualitative research.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

We thank the midwives for participating and sharing valuable data for this study.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.midw.2023.103676.

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