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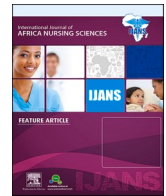
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Understanding the barriers to Ghanaian midwives' ability to provide quality care: Using classic Grounded theory methodology in a new context

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ABSTRACT

Background: Interpretive-naturalist methodologies, including Grounded Theory are increasingly being used in health research in Ghana however, none of the studies that have used Grounded Theory in the setting has used the methodology in full.

Aim: The main aim of this article is to describe the experiences, the strengths and limitations of using Glaserian Grounded Theory methodology to understand the barriers to Ghanaian midwives' ability to provide quality maternal and neonatal care.

Design: Glaserian Grounded Theory methodological principles were adhered to in this study in relation to the use of literature, participant recruitment, data collection and analysis, and theory development. Data were collected through semi-structured interviews and non-participant observation. The study population comprised 33 participants, made up of 29 midwives and four other workers whose work was relevant to the functioning of the midwives that took part in the study. The midwives were recruited from 10 health facilities in seven districts in the Greater Accra Region of Ghana. Glaserian Grounded Theory was used in this study therefore constant comparison was employed in the data analysis.

Findings: The study led to the discovery of a middle range grounded theory – “Doing magic with very little”, that explains the factors that affect the midwives' ability to provide quality care to women and neonates.

Conclusion: This paper contributes to the body of work on methodological knowledge. We provide new information about the factors that researchers planning to use Glaserian Grounded Theory in similar contexts could consider.

1. Background

Researchers investigating health care phenomena in Ghana have used both positivist and interpretive-naturalist methodologies (Ayanore, Pavlova, & Groot, 2016; Mills, Williams, Adjuik, & Hodgson, 2008; Nesbitt et al., 2013). In recent times the latter has become more prevalent as researchers have begun to recognise the need to understand phenomena from a multiple reality perspective. A number of interpretive-naturalistic or qualitative methodologies have been employed in understanding health phenomena in the country (Boateng, East, & Evans, 2018; Challa et al., 2018; Effah, Ersser, & Hemingway, 2017). No study has however, been conducted in this setting to investigate maternity care that followed the Grounded Theory (GT) methodological principles in full resulting in the discovery of a grounded

theory. Crissman et al. (2013) reported that they conducted a qualitative investigation of pregnant women's perspectives on skilled birth attendance and facility-based delivery in rural Ghana using a GT-informed approach, however, they did not apply the methodology across the study and a Grounded Theory did not emerge in their findings. The aim of this article is to describe the experiences, the strengths and limitations of employing Glaserian GT methodology to investigate the barriers that Ghanaian midwives face in their bid to provide quality care to women and neonates.

Glaserian GT is an interpretive-naturalist or a qualitative methodology. According to Given (2015), “qualitative research explores the process at play in society, examines the meanings that individuals make of particular events, and provides a window into understanding why people do what they do and think what they think” (p. 2). Over the

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years, scholars have distinguished between the positivist (empirical) paradigm and the naturalistic-interpretivist worldview (Speziale et al., 2011). In essence, the physical sciences are seen as dominated by positivism, which advances the view that the world around us is made up of singular truths that can be studied and understood through quantitative techniques (Krauss, 2005).

In contrast, those that identify with the naturalistic-interpretive paradigm assert that there exists a multiplicity of realities and thus, an individual's or a group's experience is shaped by their interactions with these realities (Krauss, 2005). Those who subscribe to this school of thought believe, therefore, that there is no single reality but only that which is produced through individuals' or groups' fusion of the knowledge that exists in their cognitive system, and external knowledge or realities that exist in their environment (Krauss, 2005). The naturalistic-interpretive, otherwise known as qualitative research, has been proposed as the most appropriate method for studying individuals' or groups' behaviours and their interaction with their environment (Speziale et al., 2011). A qualitative methodology – Glaserian GT was thus chosen for this study that investigate the barriers to midwives' ability to provide quality care.

2. The origin of Grounded theory

There are several qualitative methodologies available to naturalistic-interpretive researchers. These include Ethnography, Phenomenology and GT. GT methodology was developed by Barney Glaser and Anselm Strauss in the 1960 s, when they worked on a research study investigating the processes and interactions that took place between health staff and terminally ill patients in hospices (Glaser & Strauss, 1966). The method is believed to have been influenced by the two originators' backgrounds, that is, Glaser's training in Columbia University's quantitative survey method and Strauss's experience gained from the Chicago Schools' use of qualitative research (Cooney, 2010; Kenny & Fourie, 2015). GT uses an inductive and iterative process which involves systematically collecting, coding, and analysing data to arrive at a substantive hypothesis, known as a theory (Glaser & Strauss, 1967; Kenny & Fourie, 2015). In contrast to other methodologies that involves collecting data and subsequently analysing them or gathering data for the purpose of verifying existing theories or hypotheses, in GT, data collection and analysis is conducted concurrently. The data from initial encounters are analysed before more data is generated and analysed, always building on already discovered codes, themes, categories, and properties through constant comparison culminating in the development of a theory (Birks & Mills, 2015; Goulding, 2002). As well as Glaser's and Strauss' academic backgrounds, the methodology's roots are found in Symbolic Interactionism (SI), which was originally explored by Charles Cooley and George Herbert Mead and further developed by Blumer (Goulding, 2002).

During its early days, the methodology was criticised as positivist and lacking a straightforward 'how to' description for researchers to follow (Pieterse, 2020; Stern, 1994). Anselm Strauss subsequently collaborated with nurse researcher Juliet Corbin to address these issues (Strauss & Corbin, 1998). They presented a systematic way that researchers could deduce theory from data through a sophisticated and rigid pre-stated framework of coding and analysis that contrasted the earlier stance by Glaser and Strauss that theory should emerge through the analysis of data without the researcher's preconceived ideas (Ahmed & Haag, 2016; Charmaz & Keller, 2016). Apart from differences in the way that data analysis is conducted, Strauss and Corbin's method also differed from the original in terms of the use of literature before data collection. Whilst Glaser has remained true to the original version of the methodology and continues to assert that the researcher should use prior literature minimally, Strauss and Corbin encourage the researcher to read widely for understanding, and to apply the knowledge and their personal experiences to the data they collect and analyse to bring forth the theory (Strauss & Corbin, 1998). Glaser criticise this way of arriving

at the theory as 'forcing' - the tendency to manipulate the data to support predetermined theory or ideas, thereby limiting the abstraction of the theory (Glaser, 2002).

There is now also a third variant of GT. Kathy Charmaz, who studied under Glaser and Strauss, considered both the original (now referred to as the 'Glaserian' or classic) version and Strauss and Corbin's adaptation and used both as the basis for a methodology that supports the construction of theory through the interaction of people's (informants') perspectives and research practices. In this third iteration of GT (commonly referred to as 'Charmazian', or 'constructivist' GT), the researcher interacts with, discusses and makes meaning of the data acquired with the participants to develop the theory of the phenomenon being explored (Charmaz, 2014). The crucial difference in this version is that the researcher is considered a valid informant: the Glaserian principle of entering the field of study having little knowledge of, or having expunged oneself as much as possible of preconceived ideas on the phenomenon of interest, does not stand in Charmazian GT. As noted earlier, Glaser has remained true to the original methodology, which has more recently been framed as critical realism research within a post positive paradigm (Birks & Mills, 2015). To reiterate, GT focuses on bridging the gap between theory and method and the grounding of theory through data rather than on verification of theory or hypotheses.

3. Choosing Glaserian Grounded theory methodology to study Ghanaian midwives' practice

Glaserian GT was chosen for exploring the barriers to Ghanaian midwives' ability to provide quality care because it provides a way to explain ongoing behaviours of participants and the way they solve their issues of concern (Glaser, 2002). Glaserian GT allows researchers to focus not only on what the participants would say, but to also observe what they do. Glaserian GT's focus on the observational aspect is important because, as Glaser asserts, participants may not have a complete understanding or be conscious of the processes that they are involved in (Glaser, 2002).

Different to Glaser's version, Straussian GT places more emphasis on prior knowledge, experience, and literature to drive the data gathering and analysis throughout the research, and as such does not encourage the unforced emergence of theory (Stern, 1994). In this study, as the aim was to conduct a fully inductive study, the Straussian version was deemed inappropriate because of the need to let the theory of the phenomenon emerge from the data without missing anything important or inaccurately classifying the data into pre-determined categories. The Charmazian (Constructivist) variant of GT was also deemed unsuitable for this study: the first author who conducted the fieldwork and led the analysis is not a midwife and so does not have comprehensive knowledge in the area of midwifery (Strauss & Corbin, 1998). Glaserian GT was thus considered an ideal choice for the study, essentially because the lead researcher's lack of comprehensive knowledge or experience in the area was an advantage as it helped the study to be truly inductive. Choosing Glaserian GT, therefore, had the ability of ensuring that the key findings and the conceptual ideas of the study were addressed by the data.

4. Theoretical sensitivity

Theoretical sensitivity in GT refers to the qualities of the researcher which include personal and professional experiences and the literature he or she has been exposed to which influences his or her ability to generate understanding and meaning of the data and his ability to separate relevant factors from the irrelevant in the data (Ahmed & Haag, 2016; Glaser & Strauss, 1967). Glaserian GT emphasises the need to keep theoretical sensitivity as low as possible at the inception of the study to allow the analysis of the data to augment the researcher's theoretical sensitivity (Glaser 2002). It is therefore, recommended that the researcher purges preconceived ideas and theories as much as possible

to let the theory emerge from the data and thereby avoid ‘forcing’ (Glaser, 2002; Glaser & Strauss, 1966).

Bracketing is a key part of some qualitative research philosophies that are undertaken by using interviews and observations (Gearing, 2004). Speziale et al. (2011) describe bracketing to involve finding out and making known preconceived notions or ideas on the phenomena of interest at the beginning of a study. By conducting bracketing researchers lay aside beliefs, values, and experiences to enable them describe participants life experiences accurately (Chan, Fung, & Chien, 2013). Although bracketing is not prescribed in Glaserian GT, Birks and Mills, (2015) emphasises the need for researchers using GT methodology to discern their personal and philosophical positions at the beginning of a research study., Groen, Simmons, and McNair (2017) identified the process of acknowledging preconceptions at the beginning of a Glaserian GT study as bracketing. Glaser and Strauss (1967), however acknowledged that the tabula rasa principle (Chenail & Maione, 1997), of starting from a blank state is not possible.

Although the first author is not a midwife, he has personal and professional experience of Ghanaian maternity care. It was thus necessary that he discerns his preconceived ideas about what to expect in the field. The first author’s experience in the Ghanaian maternity care included having worked in a project on maternal and neonatal health and being a husband, a father, and a community member. These factors could have influenced what and how he asked study participants about maternal and newborn care, the way he observed the midwives at their workplaces, and the way he examined the data if he had not first acknowledged how they might have done so. The first author thus noted down any preconceptions he had about the phenomenon of interest and discussed them with the other two authors, and therefore was able to examine the data through a ‘clear’ lens.

5. Using Glaserian GT to investigate the barriers to quality midwifery care in Ghana

5.1. Study setting and participants

The study was conducted in the Greater Accra Region of Ghana. The region is in the south-eastern part of the country and is situated along the coast. Ghana’s capital, Accra is found in this region. Ghana is located on the western coast of Africa and shares borders with Cote d’Ivoire to the west, Burkina Faso to the north and Togo to the east. In 2017, Ghana’s population was estimated to be over 28 million (Kpessa-Whyte, 2018). Health care in the country is largely provided by the Ghana Health Service (GHS) and the Christian Health Association of Ghana (CHAG) (Ghana Statistical Service, 2015).

The target population for the study were midwives working in the labour/birth environments in public hospitals. Two forms of sampling were employed in this study. A purposive sampling was first used, followed by theoretical sampling. Purposive sampling involves using non-probability sampling to choose individuals that have characteristics of interest to the study (Silverman, 2010). As data analysis and theory development progressed, theoretical sampling was used to recruit individuals who could provide information relevant to the emerging theory. In theoretical sampling the sampling of additional population is based on the theoretical constructs (Draucker, Martsof, Ross, & Rusk, 2007). The study participants were recruited from ten purposefully selected health facilities as follows: four from metropolitan areas, three from peri-urban areas and three from rural areas. For midwives to be recruited into the study they should have been working in the labour/birth environments for a period of not less than one year and must be willing to take part. The recruitment of the midwife participants took place in the labour/birth environments of the health facilities during non-participant observation.

In all, 33 participants were interviewed, consisting of 29 midwives and four other workers whose work contributed directly towards the functioning of the midwives. The midwives ages ranged between 26 and

59 years. The average working experience of the midwives was 8 years. The demographic details of the midwife participants are provided in Table 1 below.

The midwives were recruited from 10 GHS health facilities in seven districts in the region. Three health facilities (one in the metropolitan area, one health facility in a peri urban area and one health facility in the rural area) were initially selected using purposive sampling considering the urbanisation characteristics of the region (Silverman, 2010). Midwives were recruited from additional health facilities as data collection and analysis progressed based on the findings from the analysed data.

Ethical Consideration

Ethical approval for the study was obtained from the Edith Cowan University Human Research Ethics Committee (number 18162) and the Ethical Board of the Ghana Health Service in Accra, Ghana (GHS-ERC: 009/10/17). The participants were verbally informed about the study and given information sheets to peruse. When participants agreed to take part in the study, they were asked to sign consent forms. The participants were informed in the consent form and verbally that they could stop the interviews or withdraw from the study at any time without any negative consequences.

6. Data collection

Fieldwork for the study took place from 15th January to 10th August 2018. Three forms of data were used in the study: data that was acquired through semi structured interviews with the participants; non-participant observation data; and memos that were documented throughout the research process. Memos are written reflective commentaries that are made during the process of undertaking a GT study (Birks & Mills, 2015; Bowen, 2009). The memos aided the processes of exploring and developing of codes and identifying where else to gather data. They detailed the supporting assumptions, developing changes and the applicability of categories. They also aided the integration of the theory.

Before data collection, the interview guide for the initial interview was pre-tested in an adjoining geographical region within Ghana, and subsequently revised. Those midwives who were interviewed during the pre-testing were not included in the study sample. The data collection at each facility began with a period of non-participant observation in the labour / birth environments as participants went about their duties (Glaser, 2002; Hernandez, 2010). Non-participant observation was carried out in line with naturalistic observation whereby participants are observed in an open way without the manipulation or stimulation of their behaviour (Punch, 2013). The actions and behaviours of the

Table 1
Demographic characteristics of midwife participants.

| Demographic variable | Category | Frequency |
|----------------------------|--------------------------------|-----------|
| Age (years) | 25 – 29 | 4 |
| | 30 – 35 | 12 |
| | 36 – 39 | 3 |
| | 40 – 45 | 3 |
| | 46 – 49 | 2 |
| | 56 – 59 | 5 |
| Working experience (years) | 1 – 5 | 12 |
| | 6 – 10 | 8 |
| | 11 – 15 | 6 |
| | 15 – 20 | 3 |
| Education | Diploma in midwifery | 25 |
| | Bachelor’s degree in midwifery | 4 |
| Health Facility type | District Hospital | 22 |
| | Health Centre | 7 |
| Health facility location | Metropolitan | 16 |
| | Peri-urban | 7 |
| | Rural | 6 |
| Sex | Male | 1 |
| | Female | 28 |

(Ismaila, Bayes, & Geraghty, 2021).

participants were observed as they unfolded. This enabled the first author to experience the interactions of the participants within their environment, which included infrastructure, water and sanitation, equipment and supplies and other work aids. Through the non-participant observations, the researcher acquired ideas on what was going on for the midwives.

The midwives were invited to participate in face-to-face semi-structured interviews during the period of non-participant observations. Although a prepared question plan was used in the interviews, the interviews were conducted in a flexible way that allowed the natural flow of conversation (O'Leary, 2014). All the interviews were conducted in secluded places or rooms at the health facilities to ensure the privacy of the participants. The interviews, which were conducted in English, lasted for a period of 45–60 min. The emergent incidents from non-participant observations were used for further probing during interviews (Glaser, 1998). All interviews were audio-recorded with participants' permission. At the inception of the study, the interview questions included the following: What are the barriers to your ability to provide quality midwifery care to women and newborns? Can you explain to me how these barriers affect your ability to provide quality care? Can you describe some instances where these factors have served as barriers in your work? What are the effects of these barriers on your ability to provide quality care? What do you do to reduce these effects? The interview guide was revised as more interviews were conducted to give dimension and clarification to the already identified incidents, and categories.

The study was deemed to confer a low risk of adverse effect on the study participants. It was acknowledged that, to describe and explain what challenged their capacity to provide quality care, participants had to recount difficult clinical practice situations. Therefore, the researchers arranged for a clinical psychologist to be available to provide support should the participants have experienced distress when discussing past negative clinical practice situations, however, none of the midwives required the service. Further, the first author who collected all data arranged to debrief with authors two and three, who are experienced midwives, in case he was perturbed by listening to or witnessing difficult clinical practice situations.

6.1. Data analysis

In line with GT methodology, data collection and analysis were conducted concurrently. The first interview was transcribed verbatim and open-coded. This involved the breaking down of the raw data into words and short phrases, which were then labelled (coded) to depict what was going on for the participant (Glaser, 1978). Each additional interview was conducted and analysed considering the data previously collected and the codes that had already emerged from the data. As new data were analysed the codes that emanated from them were constantly compared with previously developed codes or categories. Constant comparison involves comparing discovered codes, incidents, and categories with each other and with emerging ones to continually refine the emerging theory (Birks & Mills, 2015). When data collection and analysis progressed to a saturation point when no new codes or categories were emerging, it became necessary to employ theoretical sampling to find out the dimensions of the categories and sub-categories and their relationships. To do this, participants who could provide data related to the emerging theory were recruited, namely, a social worker, a pharmacist, a National Health Insurance Scheme manager, and a GHS management staff. Seven previously interviewed midwives were also invited to be interviewed again to obtain clarification on the findings.

Theoretical coding was used to develop the relationship between the categories and the subcategories and to refine the emerging theory (Birks & Mills, 2015). Theoretical coding was aided by the six Cs coding family that was developed by Glaser (Glaser, 1978). The six Cs refer to the following six factors beginning with the letter 'C' that help to explain participants' experience: the cause(s) of the experience, the

consequences of it, the conditions necessary for it to occur, the contingency factors (chance), the covariant factors that may affect the experience, and the impact of the context in which it occurs.

6.2. Data management

All audio recorded interviews and transcribed interviews were stored in password-protected computer files. Memos, fieldnotes, and consent forms were securely kept. The research and data produced were managed according to the Human Research Ethics Committee guidelines.

6.3. Trustworthiness

Qualitative research has been criticised especially by researchers who embrace the quantitative paradigm as lacking rigour (Bowen, 2009; Glaser & Strauss, 1967). To refute this criticism, qualitative researchers prove the trustworthiness of their findings by demonstrating credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). As indicated by Glaser and Strauss (1967), these criteria are inherent in the GT methodology. The first 45% of the interviews were coded and categorised by at least two members of the research team to ensure analytical consistency and objectivity (Dependability). Dependability was also ensured by comparing the data acquired from the midwives with those gathered through interviewing the other workers whose work contributed to the effective functioning of the midwives. In Glaserian GT, researchers are encouraged to gather data from different groups to acquire a variety of slices of data that enables constant comparison (Glaser & Strauss, 1967; Glaser 2007). This is similar to triangulation (Given 2015). The data that were acquired from these individuals illuminated the dimensions and the relationships of the categories. Further, the categories and subcategories and the resulting theory were always discussed and agreed upon by all the authors (confirmability).

During theoretical coding, a negative case was sought by interviewing a midwife who worked at a private hospital. Data from this interview proved a totally contrasting experience and thus helped solidify the categories and the properties that had been defined. When the authors developed the substantive theory, its applicability was also tested using constant comparison. The theory along with the contributing categories, and sub-categories were presented to a group of Ghanaian midwives from an adjoining region (Eastern Region) during a regional meeting of their association, for critical review, feedback, or revision to confirm the theory's fit, generality, and understandability (confirmability and dependability).

7. Summary of the study findings

Using the 'six Cs' coding family developed by Glaser (1978), the categories and sub-categories that emerged from the data were brought together to conceptualise a middle range Grounded Theory titled "Doing magic with very little". All but one of the factors that are delineated by the 'six Cs coding family were evident in the data. The theory elucidates the nature, extent, severity, and consequences of the professional economic and organisational barriers that affect the midwives' ability to provide quality care, whilst also delineating the contextual factor within which they exist. The coping strategies that midwives adopted to be able to carry on with their work were also identified.

The causes constituted five categories, each depicting a barrier to the midwives' ability to provide quality care namely: 'not having essential equipment and supplies', 'working within constraining infrastructure', 'working with an insufficient workforce', 'inability to timely refer clients' and 'not getting the needed compliance from clients' (Ismaila, Bayes, & Geraghty, 2020).

These barriers were found to have consequences for the midwives as well as the quality of the care that they provide. The consequences of the

barriers that midwives faced were captured in one major category labelled 'I go off track', under which are three sub-categories, namely: 'It's exhausting and fatiguing; it stresses me out', 'It is frustrating, it makes us angry, and we go off track', and 'It affects my household, my friendships and my community standing' (Ismaila, Bayes, & Geraghty, 2020). These categories captured the physiological, psychological, and socioeconomic consequences that the midwives' barriers had on them. Under the category 'it is exhausting and fatiguing it stresses me out', the physiological consequences of the barriers to the midwives' ability to provide quality care namely, exhaustion and fatigue, back pain, and medical conditions were identified.

The category 'it is frustrating, it makes us angry, and we go off track' depicts the psychological consequences of the barriers in the midwives' work such as anxiety, frustration, anger, demotivation, and mental stress. The category 'It affects my household, my friendships and my community standing' presented the socioeconomic consequences of the barriers to the midwives' ability to provide quality care. This category indicated that, because of the midwives' exhaustion due to their heavy workload, they were not able to complete their household chores. They were also not able to spend quality time with their families thereby affecting their mothering duties and their marriages. Other consequences included isolation from their extended families and their communities. The barriers to the midwives' ability to provide quality care were found to have financial consequences on them. They used their own money to acquire food and care items for women and neonates. They also had to pay for the services of house helps and nannies due to their inability to complete their household chores or take care of their children on their own due to their heavy workloads.

'Inadequate support from facility management' as a category was identified as a contingent factor, which negatively affected the midwives' motivation and exacerbated the midwives' barriers, as well as the consequences of those barriers (Ismaila, Bayes, & Geraghty, 2020). A more supportive management would have had the potential of reducing the midwives' barriers by boosting their motivation and providing the physical resources that precipitated barriers such as infrastructure, equipment, and supplies. A management that is more supportive would have also effected a change in the poor financial context that health facilities operate in by advocating for early payment of insurance claims and using internally generated funds prudently to be able to provide the resources of care. However, the midwives reported that facility managements were not able to adequately do any of the above, thereby compounding the factors that precipitated their barriers and the consequences of those barriers. The context constitutes the poor financial environment that midwives operate in, both at facility and national level.

Covariance was captured by one main category, 'being motivated'. This category had three sub-categories namely, 'improvising', 'being one step ahead' and 'maintaining a support network' (Ismaila et al., 2021). These factors were identified to have an ameliorating effect on the barriers that midwives faced as well as the consequences of the barriers on the midwives, thereby enabling them to cope with the barriers. The midwives' motivation was identified as a vital factor that affected their ability to continue their work despite their barriers. The midwives' strong desire to save the lives of women and neonates and the strong affection that they had for the midwifery profession were found to be the factors that underpinned their motivation. The midwives' motivation was identified to precipitate other actions that enabled them to cope in their profession.

Because of the midwives' motivation, they were found to be improvising by sharing and borrowing equipment and using other equipment and items to get positive results when they are faced with equipment deficit or deficiencies. The respondents also coped with the barriers that they face in their work by employing close cautious monitoring of the women and neonates in their care, as well as their work environment. This was depicted by the sub-category 'being one step ahead'. Midwives' ability to maintain a support network was

another coping strategy that was identified. The midwives support networks had two main benefits. Through their networks they were able to call on their colleagues for help when they face challenging cases. Their family as a support network also helped them negotiate the consequences of barriers that they face at work such as stress, anxiety, demotivation, frustration, and anger by providing a listening ear and through advice. They also relied on their divine connection with God.

8. Strengths

GT has been viewed by some researchers as a rigid methodology without a clear 'how to', however, it was not found to be the case in this study. To the contrary, the methodology proved to be very flexible in line with Charmaz (2008)'s assertion that GT allows for systematic analysis through the combination of explicitness and flexibility. The use of Glaserian GT in this study allowed for the theorisation of the contextual factors, causes, consequences, covariance as well as context and contingent factors that affected the midwives' ability to provide quality care to women and neonates. This is indicative of the methodology's ability to theorise and explain ongoing behaviours of participants and the way they solve their issues of concern when its tenets are systematically followed.

The process of discerning and purging preconceived ideas as much as possible at the beginning of the study allowed the first author who collected all the data and led the analysis, to keep theoretical sensitivity as low as possible at the inception of the study to enable the research to be truly inductive. The generation of slices of data from other workers in the midwives' work environment, the gathering of data from a negative case and the presentation of the emerged theory to midwives from an adjoining region to enhance constant comparison is similar to method and data source triangulation (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014) and allowed for a valid conceptualisation of the data.

The opportunity for midwives to discuss the barriers that they faced in their workplace through interviews (sometimes more than once) served a therapeutic purpose, because this process gave the midwives an opportunity to reflect on the factors that affected their ability to provide optimum care to women and neonates. At the inception of the study, it was envisaged that the possibility of narrating negative care experiences could cause the midwives distress, but this was not the case. Although a psychologist was available to provide help in case the participants felt distressed by narrating difficult practice situations, he was not utilised because none of the participants required the service. The participants indicated that discussing the factors that affected their ability to provide quality care was relieving and that they were motivated to participate because the study's findings could contribute to policy discourse on the improvement of their working environments.

Due to the socio-political environment in Ghana, some of the midwives were wary about discussing their work because of the fear of being victimised. Although they were assured that the interviews were for an academic research purpose, they were apprehensive that when they disclose their challenges that are related to infrastructure, equipment, and other vital resources, it may end up in the media and they will be perceived as betrayers by their superiors and other health system duty bearers. There was also a hesitation on the part of the participants that voicing out their inability to carry out their work with the resources at their disposal may be perceived as being weak. However, through the strategies of non-participant observation, and reinterviewing, the researcher established a good rapport with the participants and was able to gain their trust. Therefore, they were able to discuss their experiences in an open and candid manner.

9. Limitations

Most of the interviews with midwives were conducted after they had completed their shifts, or before they began their shifts, with the remainder occurring during their shifts when the wards/birth

environments were less busy. Those interviews that were conducted during participants' shifts were because some midwives working in the metropolitan areas were reluctant to stay behind after their morning shifts for one more hour to be interviewed; they preferred to leave the facility immediately after their shifts so that they could avoid the traffic congestion during the evening rush hour. Similarly, some midwives on the afternoon shift also found it difficult to arrive at the facility one hour prior to the start of their shifts for interviews because of traffic congestion. In order not to negatively affect the care giving process, interviews conducted during the shifts of participants were paused when the midwives' attention was needed by their colleagues or their clients.

As pertains in GT, it was sometimes necessary to reinterview participants to obtain more information on emerging categories or the theory. Reinterviewing of midwives was a challenge because the midwives were used to other research studies whereby one-off interviews are conducted. Further, some of the barriers that affected the midwives' ability to provide quality care also served as constraints during this study. The infrastructure challenges in the maternities affected non-participant observations. Due to inadequate space in the maternities, the researcher had to put in extra effort to conduct the non-participant observations in a subtle way. This involved being proactive in his movements within the work environment of the midwives. By so doing he was able to position himself in such a way that he was not in the way of the midwives, as they went about their duties. Further, due to inadequate human resources midwives had very busy schedules. This made finding time to fit in interviews difficult. Also, due to midwives' heavy workloads, they were always exhausted after their shifts. This affected the midwives' ability to accept invitations for interviews.

10. Conclusion

Glaserian GT was successfully employed to systematically collect and analyse data to discover a theory on the barriers to Ghanaian midwives' ability to provide quality care to women and neonates. Non-participant observation, concurrent data collection and analysis and the reinterviewing of midwives encouraged the development of rapport between the researcher and the participants, and as such helped accurate conceptualisation of the phenomenon of interest. Glaserian GT methodology has inherent methods similar to data and method triangulations, bracketing, and member checking that are used in other qualitative methods which enhances a study's rigour. The use of Glaserian GT methodology in this study was not without challenges, however, we assert that its use in this study has proven the methodology's effectiveness for the investigation of what is happening, why, the effects and ways of coping with regards to the work of midwives in Ghanaian maternity services. This study will be beneficial for researchers who are able and willing to adapt this approach for investigating similar phenomena.

11. Relevance of the study

The current study represents a unique contribution to science in that it is the first full GT study (that is, that followed the methodological process in full through to the discovery of a new middle range grounded theory) set in Ghana. The use of Glaserian GT methodology in this study proved the capacity to use the methodology to investigate the ongoing behaviour of participants and the way they solve their issues of concern. The findings of the study will be of value to policy makers, maternity service leaders, and educators of midwives.

12. The contributions of the paper

What is already known

Grounded Theory has been acknowledged as an effective methodology for investigating health phenomena because it provides a way to explain ongoing behaviours of participants and the way they solve their

issues of concern.

Researchers studying health phenomena in Ghana have increasingly used interpretive-naturalist methodologies including Grounded Theory.

Studies that have used Grounded Theory in the Ghanaian setting have not applied the methodology in full.

What this paper adds

This study supports Grounded Theory's effectiveness for studying health phenomena in the Ghanaian setting by identifying what is happening and why, with regards to the work of midwives.

The paper adds to existing knowledge as it provides insights into what researchers who are able and willing to adapt this approach for investigating similar phenomena must consider.

CRediT authorship contribution statement

Yakubu Ismaila: Conceptualization, Methodology, Validation, Formal analysis, Investigation, Data curation, Writing – original draft, Writing – review & editing, Visualization, Supervision, Project administration. **Sara Bayes:** Conceptualization, Methodology, Formal analysis, Writing – review & editing, Supervision, Project administration. **Sadie Geraghty:** Conceptualization, Methodology, Formal analysis, Writing – review & editing, Supervision, Project administration.

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.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ijans.2021.100374>.

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