DETAILED RESEARCH PROTOCOL

Full project title

Exploring the relationship between communication, experience and outcome for Black pregnant women receiving midwifery antenatal care: a conversation analytic study.

1. Summary of research (abstract)

This study aims to explore the relationship between communication, experience, and outcome for Black pregnant women receiving midwifery antenatal care. Racial health inequality in UK maternity care is stark. Black women have a 3.8x higher, and Asian women a 1.8x higher maternal mortality rate than white women, and disparities between various minority ethnic groups and their white peers are evidenced across multiple neonatal outcomes including stillbirth and neonatal death. Evidence also points to racial disparity in and/or differential assessment of, experiences of maternity care, with global majority women reporting feeling unheard, disbelieved, disrespected, dehumanized, and facing discrimination.

Effective communication is a core component of the World Health Organization's quality of care framework for maternal and newborn care and has been shown to be key to positive experiences for women. Global majority women report lower satisfaction with communication in English maternity services and failures of communication are repeatedly implicated in qualitative research into the experiences of women with minority ethnicities. Despite this, communication has never been the primary focus of research concerned with racial inequality in UK maternity services. This is a significant and urgent research gap.

This study will use conversation analysis to inductively explore communication in this setting as it relates to the treatment outcomes and experiences of pregnant women. The research aims to video/audio record 20-30 antenatal appointments between Black pregnant women and white midwives for analysis. Observational data will be complemented by additional self-reported data sets to capture the subjective experiences of pregnant women. Findings will be used to inform midwifery training materials, and to make policy recommendations.

2. Background/rationale

2.1. Racial inequality in UK[1] maternity care

Racial inequality in UK maternity care is stark and well evidenced. In England, Black women have a 3.8x higher, and Asian women a 1.8x higher maternal mortality rate than white women (Knight et. al, 2023). A small selection of the other differential health outcomes include: a more than twofold stillbirth rate for Black African mothers compared to white mothers and a more than twofold neonatal death rate for babies born from Pakistani mothers than those born to white mothers (Draper et. al, 2022). Racial disparity is also prevalent in treatment outcomes. Compared with white British women, Pakistani women are 47% less likely, Bangladeshi women 56% less likely and Black Caribbean women 38% less likely to report having had a six-week postnatal check of their own health (Henderson, Gao & Redshaw, 2013). In some studies, women with minority ethnicities have been evidenced as less likely to receive their chosen pain relief in labour compared with white British women (Raleigh et. al, 2010) or be asked about their mental health postnatally compared with white women (Redshaw and Henderson, 2016).

Evidence also points to differential experiences of maternity care. Racial bias and stereotyping results in disrespectful care (Lyons, 2007; Birthrights, 2022), poor care (Chitongo et. al, 2022) or discrimination (MacLellan et. al, 2022). Often the role that race plays is more oblique. Black African and Asian women more likely to report being left alone and worried in labour than white women (Henderson, Gao & Redshaw, 2013) and women report feeling processed rather than cared for (Beake et. al., 2013; MacLellan et al, 2022). Qualitative evidence repeatedly reports women feeling unheard or disbelieved during maternity care (e.g., Jomeen and Redshaw, 2013, Birthrights, 2022; Barnett et. al, 2022), and women with minority ethnicities are more likely than white women to report negative experiences with communication and decision making (Henderson, Gao & Redshaw, 2013).

2.2. Why focus on communication?

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[1] There is heterogeneity in the regional focus of the evidence referenced in this section, with the UK being the widest focus. Data on maternal mortality and severe maternal morbidity is collected and analysed at a UK-wide level by Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK (MBRRACE-UK), however as the relevant denominator data is only available for England, the comparative racial data relates to England only. Surveys of experiences of maternity care are regularly conducted, or have been conducted, at country level at differing intervals, by The National Perinatal Epidemiology Unit (NPEU) in England, by the NPEU and School of Nursing and Midwifery at Queen's University Belfast in Northern Ireland, The Health Inspectorate Wales in Wales, and the Scottish Government in Scotland. Given the differences in ethnic diversity rates across the UK's four countries, most of the evidence discussed relating to experiences of women with minority ethnicities is from English based studies. However, where appropriate, data from similar wealthy white-dominant countries has been referenced.

The ubiquity of implicit or explicit failings of communication evidenced in quantitative and qualitative research in this field deserves particular attention given that effective communication is one of the eight components in the World Health Organization's framework for the quality of maternal and newborn health care (World Health Organization, 2016) and is associated with positive experiences of care (Heys et. al, 2021). Communication skills have been evidenced to make the greatest contribution to being a 'good midwife' (Nicholls and Webb, 2006). Despite its centrality, communication has not been the exploratory focus of any research into raced experiences in a UK maternity care setting, except in the case of migrant women with no English-language proficiency (Binder et. al, 2012).

Communication is implicated in various ways. Failures of information-giving, sometimes based on knowledge assumption, can leave women fending for themselves and feeling isolated (Ali, 2004; MacLellan et. al 2022), with absence of crucial information, such as choices related to birthing (Birthrights, 2022) impacting women's decision making, and undermining NHS England's Better Births vision for personalised care based on a pregnant woman's decisions (Cumberlege, 2016). Absence of information-giving is sometimes linked to racial typification (Puthussery et. al, 2008) and ineffective information giving, i.e., not being communicated to in a way that resulted in understanding, is more commonly reported by women with minority ethnicities (Henderson, Gao and Redshaw, 2013). Feeling heard is associated with control and safety and security (Barkensjö et. al, 2018; Birthrights, 2022), but failures of information-receiving or listening, are most often expressed by women in terms of feeling unheard and disbelieved (e.g., Jomeen and Redshaw, 2013, MacLellan et. al, 2022). When women experienced resistance to expressed preferences it led to both non-preferred treatment outcomes and distress (McCourt and Pearce, 2000; Birthrights, 2022). Failures of information exchange have serious implications for consent for procedures (Birthrights 2022; Chitongo et. al, 2022) and women with minority ethnicities are less likely to report involvement in decision making (Henderson, Gao and Redshaw, 2013). Qualitative evidence given by women describes personal knowledge of their own bodies being ignored or negated (Jomeen and Redshaw, 2013), or of pain or serious medical concerns being dismissed or minimised (Birthrights, 2022).

This literature suggests a complex and multidirectional relationship between communication, outcome and experience within a maternity care setting which is supported by wider evidence. For example, midwives may use language to direct new mothers towards midwives' preferred decisions about baby feeding (Furber and Thompson, 2010), and when patients feel liked they are more likely to participate and provide information in healthcare encounters (van Ryn and Burke, 2000). Interactional research has also shown that, despite a policy of shared decision-making in UK maternity services (Cumberlege, 2016), the majority of decisions in childbirth are initiated by midwives in formats that do not invite participation beyond consent (Annandale et. al, 2022). No link was found between midwives' decisions initiating format and satisfaction ratings, however the same research discovered that women who have to *pursue* decisions, in particular regarding pain relief, reported lower satisfaction with care (ibid). While the relationship between communication, outcome and experience would hold for all women, it is likely that a number of disrupting factors may differentiate or intensify the experience of this relationship for global majority women in UK maternity care. For example, racial stereotypes can bias how information is received and interpreted, particularly in the face of ambiguity (van Ryn and Burke, 2000), and racial discordance in patient-physician encounters has been shown to impact patient participation, leading to a reduction in information-giving (Gordon et. al, 2016).

2.3. Why midwives?

Much of the supporting literature explores the experiences of pregnant women in maternity care generally, which includes but is not limited to experiences of midwifery care. While there is a good rationale to empirically investigate communication between pregnant women and all maternity care providers, this research will focus specifically on communication between pregnant women and midwives for both pragmatic and substantive reasons. Given the limited time and resources associated with PhD study, it was considered pragmatic to focus on one aspect of antenatal care, and communication with midwives was selected owing to their centrality to maternity care. There is a greater likelihood that pregnant women (PW) will see a midwife than any other professional, and as the Royal College of Midwives (RCM) note "the principle that 'all women need a midwife and some need a doctor too' is widely accepted" (RCM, ca. 2023). The normal trajectory of antenatal care is for PW to begin their care with a midwife. The percentage of women self-referring to midwifery services for antenatal care in England, as opposed to visiting their GP in the first instance, rose to 63% in 2022, from 51% in 2017 and <50% pre-2017 (Care Quality Commission, 2023) demonstrating that PW strongly associate antenatal care with midwifery. It is also the case that good communication and interpersonal skills are considered key to good midwifery practice (e.g., Nicholls and Webb, 2006; Hunter et. al, 2008), but that there is a paucity of research into midwives' communication skills (Rowe et. al, 2001; Hunter et. al, 2008) providing further justification for a midwifery focus.

2.4. Why an observational study design?

The existing literature is predominately based on self-reported data. While this data captures how participants feel or think about communication and allows links to be made between communication and experience, or communication and outcome, gaining observational data is considered imperative to fully understand the communicative encounter. This is partly because the self-reporting of language use is notoriously unreliable (Wray & Bloomer, 2006), but also because it does not allow for capture of the granular interactional detail. For example, while the existing literature tells us that many global majority women feel unheard or disbelieved during their maternity care, it does not tell us anything about the interactional practices that result in this feeling, i.e., *how* women feel unheard or disbelieved, and what has preceded this feeling. Similarly, research suggests that racial bias, stereotyping, and typification contribute to experience and outcomes, but this research's observational study design, when combined with subjective self-reported data, has the potential to identify how and when these become interactionally relevant for the pregnant women participants (should they appear in the data). It is considered by the researcher that identifying such interactional practices is an important step towards improving communication for women from minority ethnic groups, by providing concrete examples for use in future midwifery training.

2.5. A note on terminology

Throughout this research protocol, the terms 'pregnant woman/women' and 'expectant mother/mothers' are used frequently to describe one participant group. The researcher acknowledges that not all birthing people will identify as mothers and/or women. Trans or non-binary birthing people are considered eligible to participate in this study and at key points in the documentation, particularly around inclusion criteria, gender-additive language is used. In participant-facing documentation, both gendered terms, e.g., 'women', and gender-neutral terms are used at different points.

3. Research objectives

Primary research objective

- To use conversation analysis to inductively explore the relationship between communication, experience and outcome for Black women receiving midwifery antenatal care.

Secondary research objectives

- To conduct micro-analyses of interactional practices observed in antenatal appointments, for example practices related to information exchange, decision-making, listening and membership categorisation.

- To contextualise observational findings within self-report data designed to capture pregnant women's subjective experience of antenatal appointments.

- To provide bottom up, interactional data for use in midwifery training materials.

- To make policy recommendations regarding communication practice in UK maternity services and the care of minority ethnic women in UK maternity services.

- As part of the analytic strategy, specific research questions will be developed, determined by the data. Indicative research questions are offered here.
    - How do Black women experience being heard or unheard in antenatal midwife appointments?
    - By what mechanisms does bias manifest, if any, and what role does it play?
    - How is the balance of instrumental, relational, and affective communication managed by pregnant women and midwives?

4. Research methods

4.1. Overview

The what - The existing literature strongly suggests that communication failures are implicated in the racial inequality observed in UK maternity services, and that there is a relationship between communication, experience, and outcome for women with minority ethnicities. *The why* – Certain factors may result in the relationship between communication, experience and outcome being disrupted for, or differentially experienced by, women with minority ethnicities. These include institutional normativity (Birthrights, 2022), typification of global majority women resulting in resistance to preferences (e.g., Mahase, 2021), the operation of more overt racial bias and stereotyping leading to women being disbelieved (e.g., Saluja and Bryant, 2021), or racial discordance with healthcare professionals adversely impacting information transfer (Gordon et.al, 2006). *The how* – with the what and the why established to varying degrees, this research is primarily interested in *the how*. How do the interactional practices of language-in-use contribute to differential experiences and outcomes and how can unconscious practices be brought into consciousness? Adopting a conversation analysis approach will allow specific and observable interactional practices to be identified, creating opportunities for tangible change via training and policy recommendations grounded in empirical evidence. The observation of both best practice and less effectual practice can contribute to this change.

4.2. Sampling

A purposive strategy

Pure CA projects, being entirely emic in their approach, are not concerned with traditional sampling strategies and sample sizes (Lester and O'Reilly, 2019). Neither are representative samples considered important, as participant demographics are not considered relevant unless they are orientated to in the data. However, as an interdisciplinary, applied CA project, this research *is* concerned with demographic data and will adopt a purposive sampling strategy seeking to recruit Black pregnant women and white midwives in interracial antenatal appointments. However, the researcher is not attempting to gain a representative sample mirroring the heterogeneity of Black women.

Why Black pregnant women?

Research within the NHS has not always clearly differentiated between or properly conceptualised race, ethnicity, and culture (Gerrish, 2000) and increasingly there are urgent calls to recognise and methodologically engage with the heterogeneity of a Black, Asian, and Minority Ethnic (BAME) population (Henderson, Gao and Redshaw, 2013). This study seeks to partially disaggregate the increasingly discredited BAME identifier and selects Black pregnant women[2] as one participant group for several reasons.

NHS ethnicity data collection practices are based on raced ethnic categories as used on national census surveys (e.g., In England these include Black or Black British and White Irish) and much previous quantitative research in this field uses these raced ethnic categories in its analysis. As such, maternal mortality rates are analysed and presented by the National Perinatal Epidemiology Unit, University of Oxford using raced ethnic categories, subsequently identifying the racial disparity in maternal morbidity rates (Knight et. al, 2022). It has been argued that racial definitions and concepts in research can be appropriate when racial bias is a focus (Ahmad and Sheldon, 1991), and that it is often racism, rather than race itself, which is the root cause of racial disparity (van Daalen et. al, 2022). As such a racial sample criterion is considered appropriate in this case, as the potential operation of institutional racism via interpersonal communication is of substantive interest to the research. Black pregnant women were selected over other racially defined groups, due to their higher maternal mortality rate, and in recognition of the significant activism work in the UK, self-organised under a Black identity, e.g., Five X More and The Motherhood Group.

Why white midwives?

This emic research design is interested in empirically observing what is happening in antenatal care for Black pregnant women, and in identifying patterns of communication that may relate to either positive or negative experiences. However, the rationale for this research is partly the evidence provided by both midwives (Chitongo et. al, 2022) and recent mothers (e.g., Birthrights, 2022), that problems with communication, such as women feeling unheard and disbelieved, is related to racial stereotyping. The researcher does not discount the possibility that institutional bias, normativity or typification may play out interpersonally between

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[2] It is recognised that 'Black pregnant women' are a heterogeneous group, and intersectionality may impact their experiences of UK maternity care.

midwives with minority ethnicities and pregnant women with minority ethnicities. Within the scope of the PhD project however, the midwife participant group is limited to white midwives for four main reasons. Firstly, the possibility that midwives with minority races may enact institutional roles shaped by white normativity is a complex research subject in its own right and is worthy of an isolated focus elsewhere. Secondly, wider health communication literature from the U.S.A. suggests that racial discordance can negatively impact communication between healthcare professionals and patients (Gordon et. al, 2006; Shen et. al, 2018) making racial discordance in a UK maternity care setting is a valid starting point. Thirdly, the literature suggests some of the communication problems being experienced by pregnant women with minority ethnicities may relate to a lack of cultural competency or the presence of unconscious racial bias (e.g., Jomeen and Redshaw, 2013; Chitongo et. al, 2022; Birthrights, 2022) and the researcher considers that these may be more likely to surface in interracial interactions (N.b., *to best answer the research aim, it would be useful to capture a breadth of communication, including less effectual communication related to cultural competency or bias).* Lastly, given my positionality as a white researcher, it is considered more ethically appropriate to focus the research on the professional interactions of other white practitioners.

Why antenatal care?

Antenatal care has been selected over other temporal elements of perinatal care for both substantive and pragmatic reasons. The diversity of appointment type during the antenatal period, means there is diversity in the communicative practices which will occur. For example, the 8+ week booking appointment is important for information exchange between midwife and PW, and later pregnancy appointments are likely to involve discussion and decision making about labour and birth. This project aims to capture a breadth of these appointments to create a snapshot of the pregnancy journey. On a pragmatic level, while some postnatal midwife appointments occur in the home, antenatal appointments usually take place in an institutional setting (community/children’s centre, GP surgery, hospital), allowing consolidation of research resources in fewer locations. While a conversation analytic study of interaction between Black PW and maternity care providers during labour and birth would be invaluable for a better understanding of the negotiation of pain relief for this group, this would be an extremely complex study ethically and practically and was not considered possible within the scope of a PhD project.

Sample size

While an approximation of sample size is provided for planning purposes, the sample size remains dynamic and must be re-evaluated during the research process (Malterud et. al, 2016). There is some tension between the sample sizes that might normally be required for the different data streams in this project. While a standalone thematic analysis of interview data might require a larger sample size to reach theoretical saturation (Glaser and Strauss, 1967), larger sample sizes can preclude detailed analysis, particularly when the design is using microanalysis of observational data, as in CA (Sandelowski, 1996). The sample size for this study is based on the requirements of the primary data analysis method – conversation analysis – with the other data analyses acting as complementary analyses.

In CA studies, it is the phenomena in the conversational material, rather than the speakers per se, that is considered the sample (Lester and O'Reilly, 2019). While an applied CA project such as this has a purposeful approach to sampling of participants, it is maximum phenomenal variation that is desired, rather than a representative sample. As a micro-analysis, CA does not require a huge amount of data, and anything upwards of 20 hours of conversational data is considered a large sample (Lester and O'Reilly, 2019). This study aims to record approximately 20-30 antenatal appointments, which is likely to provide somewhere between 6.6 and 10 hours of conversational data. This would mean recruiting approximately 20-30 pregnant women participants. The sample size of midwives must be large enough to mitigate issues of personal style, and professional anonymity threat, but be small enough to manage logistically within the constraints of a low resource PhD project. A minimum of 4 midwife participants is proposed, with a maximum of 10 which is advised by the trust's Clinical Research Team to be an achievable maximum based on the number of eligible midwives working in the trust.

4.3. Inclusion / exclusion criteria

There are two distinct participant groups: pregnant women and midwife participants.

<u>Pregnant women participants</u>

Inclusion criteria for this group are that participants must be Black pregnant women or birthing people receiving antenatal care at a participating site. Black identity will be determined by self-identification as any of the following racially characterised ethnicities on their NHS England ethnicity data, as indicated on the consent form: Black or Black British - African, Black, or Black British - Caribbean, Black or Black British – Any other Black background, Mixed - White and Black Caribbean, Mixed – White and Black African. PW must be attending a routine antenatal appointment from the 8+ week booking appointment, up to the 40-week appointment. The lower criterium is intended to reduce the possibility of participant discovering pregnancy loss at an appointment[3].

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[3] Tommy's, the UK pregnancy and baby loss research charity, advises that most miscarriages occur in the first 12 weeks of pregnancy but that there is little research reliably tracking the risk of miscarriage by gestational period in more detail (Tommy's, 2023). However, they refer to one Australian study which has suggested that for asymptomatic pregnant women the risk of miscarriage falls rapidly once pregnancy progresses past 6 completed gestational weeks (Tong et. al, 2008).

This participant group could arguably be classed as inherently vulnerable, due to both pregnancy and minority ethnic status . However, exclusions based on classing minority groups or pregnant women as vulnerable can lead to marginalisation and lack of specificity in research (Rogers and Lange, 2013; Lyerly et. al, 2008). Indeed, this aligns with the hypervisibility / invisibility paradox experienced by women with minority ethnicity in UK maternity services (Birthrights, 2022). There are a number of exclusion criteria for this group. Expectant mothers who require a formal or informal interpreter during their appointment are excluded from participation. While the barriers to UK maternity care for women and birthing people from the deaf community or with low/ no English-language proficiency are a valid research concern (see, Binder et. al, 2012) they are not the focus of this study, which is concerned with the more nuanced challenges and benefits of communication between pregnant women and midwives where there is no issue with intelligibility. PW who require support to access antenatal care and to make decisions about their care, will be considered to have impaired capacity to consent, and will be excluded. Given the immediacy required in recruitment and consent procedures (see recruitment and consent section), pregnant people under the age of 18 will also be excluded, as there will not be time to seek parental consent. PW attending a non-routine appointment, i.e., have requested or been invited to appointment due to an arising concern, will not be invited to take part.

Midwife participants

Inclusion criteria for this group are that participants are white midwives delivering antenatal care at a participating site. White identity will be determined by self-identification as White - British, White - Irish or White – any other White background, as indicated on the consent form. Other than not meeting the inclusion criteria, there are no additional exclusion criteria for this group.

Other inclusion/exclusion criteria considered.

Midwives' communication skills may differ based on their years of clinical practice both within midwifery generally, and within the provision of antenatal care specifically. Skills may be shaped by greater/lesser clinical experience, or by different training practices over time. As a PW may be assigned any midwife during their care, excluding any midwives based on length or specificity of service would fail to capture the breadth of a Black PW's experience.

The researcher acknowledges that there may be communicative differences between primiparous women and midwives, and multiparous women and midwives. Parity's influence on communication may be bidirectional. Evidence suggests that multiparous women are less likely to be asked about their emotional and mental health antenatally (Redshaw and Henderson, 2016) and history taking will also differ for primiparous and multiparous women.

Parity may also influence PW's participation in antenatal care. First time pregnant women may have less knowledge of pregnancy and what to expect (Barnett et. al, 2022) and prefer more structured prompting antenatally as they are unsure what to discuss or ask (Proctor, 1998). Multiparous pregnant women may have greater expectations of their epistemic rights being respected, due to their lived experience of pregnancy and birth.

In recognition that certain demographic information may become relevant to the discussion of findings, midwife consent forms will ask about years of service and age, and PW consent forms will ask about age, parity, and pregnancy stage. There are no minimum or maximum requirements for these factors (excepting that all participants must be 18+), as this is not a comparative study, and these factors are not considered variables per se. Rather this information will be used to contribute to thick description of data and provide contextual information for analysis.

The research team are reluctant to exclude women from participation on the basis of pregnancy risk factors (e.g., pre-eclampsia), poor mental health, or other co-morbidities, as the effective delivery of antenatal care to these women is arguably most important. Exclusion on the basis of vulnerability can make certain groups, or certain conditions, invisible and prevent beneficial research focus. Indeed, this has often been the case with pregnancy/pregnant women (Schofield, 2013).

More specifically, communication practices for categorising pregnancy risk, and/or for enquiring about a pregnant woman's mental health, may be of substantial interest to this project. Research has shown Black women to be at higher risk of pre-eclampsia than white women (Arechvo et. al, 2022), while secondary analysis of National Maternity Survey data between 2014 and 2020 found that women with minority ethnicities were less likely to report being asked about their mental health in the perinatal period (Harrison et. al, 2023).

However, it is noted that it is a researchers' responsibility to "avoid or minimize risks specifically attributable to the [research] intervention" (Lange et. al, 2013) and pregnancy risk factors, poor mental health or other co-morbidities may increase the risk of participation.

For the observational appointment recording, there is no additional burden on pregnant women participants beyond their routine attendance at their antenatal appointment. As such it is considered this data stream presents no additional risk for women with pregnancy risk factors or physical co-morbidities.

Pregnancy can be considered an inherently vulnerable time, and up to 20% of women develop a mental health problem during pregnancy or in the year post-partum (Russell, 2017) Participants experiencing some types of poor mental health, such as anxiety, may feel participation in the observational appointment recording would exacerbate this. To militate against this risk participant information sheets, make clear that participation is entirely voluntary, and that processes are in place for withdrawal from participation after agreement. This will be reinforced during initial approach and informed consent discussions and will also be reiterated to any women who display signs of mental distress or anxiety about participation at any point.

We note however, that women with pregnancy risk factors, other co-morbidities, or poor mental health, may feel a greater burden of participating in exit-questionnaires or follow up interviews than healthy, low risk women, or be exposed to risks specific to the research (i.e., additional physical or mental exertion). To mitigate this, letters of invitation include the sentence “Please be advised that if you want to participate by having an antenatal appointment recorded, you can do so without agreeing to the exit questionnaire or follow up interview. We recognise this might be preferable for some women experiencing health issues alongside their pregnancy.” This will be reiterated in informed consent discussions. Further, for those women who do wish to consent to interview, when agreeing a format and location, the researcher will ask women to strongly consider online or phone interviews if they have additional health issues, to reduce exertion.

4.4. Recruitment and consent

Midwife participants

Potential midwife participants will be identified by the Clinical Research Midwifery Team, and initial approach will be made by the team via email. The team will share the participant information sheet, consent form and a cover letter from the researcher. It will be made clear to midwives working in participating trusts that their participation is entirely voluntary. The researcher’s email address and project-specific mobile number will be provided, and one-to-one Microsoft Teams or Zoom sessions can be held on request to discuss any participant questions. The researcher will be able to describe in detail video and audio anonymisation techniques. Participating midwives will be required to sign and return a digital copy of the consent form. A hard copy of the consent form will be made available to midwives unable or unwilling to complete and return the digital version. The consent form will inform midwife participants of the right to withdraw within one month.

Pregnant women participants

The first direct approach to potential pregnant women participants will be made via a phone call from the Clinical Research Midwifery Team. The team will provide an introduction to the project and inform women of the consent procedures, including the requirement for consent from or on behalf of accompanying adults and children respectively. This will be followed by the emailing or posting of the relevant PIS and consent forms. Interested parties will be invited to contact the researcher directly if they wish to arrange a phone or online conferencing call to discuss the project or ask any questions.

Participants will be asked to sign and return digital copies of the consent form in advance to the researcher or complete paper copies with the researcher on the day, prior to their appointment. A list of pregnant women participants will be provided to participating midwives in advance, and they will be asked to conduct a verbal check at the beginning of the appointment, that pregnant women are still happy to continue.

Partial consent

While it is preferred that participating pregnant women consent to all three data collection streams, it will be possible to consent to the recording of the antenatal appointment only. This will help minimise the burden on women, while collecting sufficient data to build collections of linguistic phenomena for conversation analysis. It is considered that complementary analysis of these phenomena can be conducted using interview data from only some of the participants.

On letters of invitation and during informed consent procedures, the option to consent to the observation of the antenatal appointment only will be highlighted to women, and in particular, it will be acknowledged that this might be preferable for some women experiencing health issues alongside their pregnancy.

'Friends and family' or 'accompanying child' consent.

In the event that a PW attends an antenatal appointment with a third-party adult or adults, these third parties will be required to complete a consent form to allow audio or audio-visual recording. This requirement will have been explained to pregnant women participants in advance and they will have been provided with participant information sheets and consent forms to share with these accompanying adults. If adults know in advance that they will be accompanying a pregnant woman to her appointment, they will be invited to contact the researcher in advance with any questions and can complete and return the consent form digitally in advance. Alternatively, third parties who accompany the adult on the day will be invited to speak to the researcher to review the PIS and ask any questions before completing and signing the consent form. Participating midwives will be asked to conduct a verbal check that accompanying adults have signed and returned a consent form to the researcher and are still happy to take part.

In the event that a PW attends an antenatal appointment with a child or children, they must complete an 'accompanying child' consent form. This requirement will have been explained to pregnant participants in advance. The form will explain that while it is possible the child/children will be captured on the recording, they will not be considered participants. This will mean that no child's/children's speech will be transcribed or included in analysis. Where possible, the researcher will set up the video camera so that there is an area of the consultation room, aside from the physical examination area, that is off camera. Children's books and/or activities (e.g., puzzles/colouring materials) will be placed here for children's entertainment, in an attempt to limit the appearance of accompanying children on the video recording. However, where children do appear on audio or video recordings, before any transcription work begins, software packages will be used to mute child's/children's speech and a blur filter will be placed over the child/children in any video clips. Accompanying child consent forms can be signed and returned digitally in advance or completed in hard copy with the researcher on the day, prior to appointment. In the event that the PW is not the parent/legal guardian of the child, the consent form should be completed by the parent/legal guardian. Participating midwives will be asked to conduct a verbal check that a consent form has been signed and returned for the accompanying child.

Right to withdraw

Participant information sheets for all participant groups will inform participants of the right to withdraw consent within one month and of the rationale for this time limit, that it is not possible to de-integrate data once analysis has begun. In the event that a participant makes contact after one month asking to withdraw, partial withdrawal will be considered on a case-by-case basis. While the individuals' data would be kept in the analysis, with small extracts of data published/presented in written format, partial withdrawal could be allowed to prevent the use of any audio or audio-visual clips.

4.5. Data collection methods

Project preparation

Preparation phase will include a review of trust-specific training arrangements for midwives regarding communication and/or cultural competency training. This is in acknowledgement that differences in training programmes between trusts may inform communication in practice and will be used to create a thick description of study site(s). Training on how to operate recording devices (GoPro video camera (or similar) and Sony ICA-UX570 Digital Voice Recorder (or similar)) will be given to midwife participants. The researcher will scope the research site(s) to identify (an) appropriate location(s) for meeting with participants.

A protocol sheet will be provided to midwife participants in advance covering protocols in the event of various scenarios which may arise during antenatal appointments. This will include protocols; to stop recording in the event of a diagnosis of intrauterine death or other serious pregnancy complication, as judged by the midwife; to pause recording when asking pregnant women about exposure to domestic abuse so women feel safe to speak; to ensure the video camera is not capturing vaginal examinations; to pause recording on the request of the pregnant women at any point in the appointment. Opportunities for one-to-one online discussion of protocols with the researcher will be made available prior to data collection. The protocol sheet can be found in the supporting documentation.

There will be a single point of contact for participants across recruitment and all data collection streams.

Data collection 1 – Observational data

The researcher aims to video or audio record 20-30 antenatal appointments between Black pregnant women and white midwives collecting observational data for conversation analysis. Video recording is preferable to capture non-verbal communication, which is known to be a commonly used channel for affective behaviours, or displaying emotion (Ruusuvuori, 2012). However, pregnant women who do not wish to consent to video recording, could consent to audio recording as an alternative.

The researcher will be on site to set up recording equipment at the beginning of the day. A small GoPro camera (or similar) on a tripod will be used to record appointments. A remote control will be available to allow for discreet pausing and restarting of recording if required in line with protocols. Location of the camera in the room will be as discreet as possible to obtain a good picture. In the event that a participant agrees to audio, but not video recording, an unobtrusive Sony ICA-UX570 Digital Voice Recorder or similar will be used.

Data collection 2 – Short questionnaire

Immediately post appointment, pregnant women will be asked to complete a short (maximum 15 question) Likert scale questionnaire probing their experience of communication, wider experience, assessment of outcomes, and assessment of the salience of the race of either midwife or pregnant woman during the appointment. A draft copy can be found in this application's supplementary documentation. This data source will not be used for standalone quantitative analysis, but as a complementary source to contextualise findings from data stream one. The researcher will liaise with the participant to arrange a time for a follow up qualitative interview (data stream 3).

Data collection 3 – Semi structured qualitative interviews

After a period of a minimum of 24 hours following appointment, pregnant women participants who have consented will take part in a qualitative interview. This will allow for a period of reflection and may uncover different subjective truths to those captured in the contemporaneous data (Williamson et. al, 2015). The interviews will probe the same subject areas as the short questionnaire but be semi-structured to allow space for participants to explore their own independent thoughts and observations in recognition that the interview itself can be an opportunity for reflexivity (Perera, 2020). To mitigate the possibility that an intervening complication has arisen with the pregnancy making the interview inappropriate, the researcher will make no more than two attempts to contact the participant at the agreed time. On the second time a message will be sent advising the participant to contact the researcher if they wish to rearrange the interview, but that no further contact will be made by the researcher.

To reduce the burden on participants, and to secure as many interviews as possible, multiple options will be available for interview. Participants can choose for their interview to take place via Microsoft Teams or Zoom, on the telephone, or in person. It is preferable for interviews to take place away from NHS sites, to make a distinct break with that specific institution, while acknowledging that discussion with a PhD student is still an institutional encounter for participants. Allowing the participant to select the location can mitigate identity-based power dynamics between mother and researcher (Elwood and Martin, 2000).

To mitigate concerns around confidentiality and lone working, there will be a stepped approach to discussions between researcher and participant about interview format/location.

In the first instance, the researcher will ask if participants are happy to be interviewed over the phone or via video conferencing. This places the least burden on PW participants, and as such, it is expected that the majority of participants will opt for one of these choices. When arranging interviews, the researcher will ask participants to strongly consider these remote options if they are experiencing additional health issues alongside their pregnancy. For any interviews conducted in this remote format, the researcher will ensure participant confidentiality by joining the call from a private location such as their home office, a private room in field accommodation, or a private room on the university campus.

If participants express a preference to meeting in person, the researcher will ask if they are happy to meet in a private hire room located either at a community centre or a shared workspace. The researcher has identified two such spaces close to The Whittington Hospital: the Whittington Park Community Association and Bespoke Spaces. However, if participants do not live in close proximity / easily accessible to these venues, alternative community or shared workspaces will be researched closer to participants' homes.

As a last option, the researcher would like to retain the possibility for PW to be interviewed in their own home. This option could accommodate participants with a preference for an in-person interview, but who are heavily pregnant, are experiencing health issues alongside their pregnancy, or who have caring responsibilities.

For any in person interviews, either in a private hire room or a participant home, the lone worker policy will be enacted.

The researcher will enact a distress protocol in the event that a participant becomes upset or anxious, and a list of supportive organisations will be provided. This is considered of particular importance given the sensitive nature of some of the research themes and, that pregnancy can be a vulnerable time for expectant mothers.

If a participant displays signs of physical or mental ill health during an interview, the researcher will contact the Principal Investigator and/or Clinical Research Midwifery Team at the trust to report this and ask for them to follow up with the participant. In the event of an emergency, the researcher will call 999.

4.6. Data analysis

Why CA?

The primary analytic method for this research is conversation analysis. CA is a bottom-up empirical, qualitative field of study focused on talk-in-interaction. CA recognises talk as *action* – i.e., part of, not a reflection of the social world – and conversation as founded on a turn taking system where utterances derive their meaning from the conversational context (Bryman, 2016). Adopting a CA approach will allow a qualitative micro-analysis of what observably happens in the antenatal appointments via language-in-use. This will differ from existing literature on racial inequality in UK maternity services, which tends to implicate communication through self-reported data, which can be unreliable in elucidating specifics of language use (Wray & Bloomer, 2006). It will also differ from most research into the effects of race and racial discordance on communication in healthcare settings, which tends to use quantitative data analysis methods which decontextualise language use (e.g., Gordon et. al, 2006). CA has its roots in institutional settings and has been used extensively in healthcare research, e.g., advice giving by health visitors (Heritage and Sefi, 1992), nurse handovers (Abraham et al, 2015), and more recently decision-making in labour (Annandale et. al, 2022).

Primary analysis overview

The researcher will first conduct extensive micro-analysis of the observational data using detailed and sequential methods of CA. CA is an inductive approach by which the researcher identifies recurring and significant patterns in conversational data. Analysis focuses on what people do interactionally with their talk and how they achieve this, including the words they use, intonation, tone, the timing and taking of turns, and non-verbal embodiment, with an emphasis on both *how* and *when* things are said (ten Have, 2011). CA relies heavily on the analysis that speakers themselves make during encounters, and a researcher's analysis is grounded in this observable conduct (Schegloff, 1996). Collections of conversational phenomena of interest will be built from the data to strengthen the validity of findings.

Complementary analyses overview

Questionnaire data will be used as triangulation data for the conversation analysis. As the sample size is determined by the primary analytical aim, there would not be a large enough sample to conduct a standalone quantitative analysis of questionnaire data. This data set will be used solely as complementary data to support, challenge or provide context for analytic CA claims.

The interview data is also regarded a complementary data source to the observational data, and the analytic strategy will be finalised following CA analysis. It is envisaged that this will be a qualitative content analysis, with a combination of inductive and deductive research question(s) determined by the CA analysis, with an aim of contextualising the micro-analysis within the pregnant women participants' subjective, reflective assessments of the encounters, and subsequently position it within the existing literature on racial health inequality in UK maternity services.

4.7. Project limitations

This project has some known limitations. The study does not claim to have a representative sample of either participant group, which is a barrier to generalisability of findings. However, as an emic qualitative study, a thick description of the phenomenon is the goal, rather than generalisability in the more positivist tradition (Carminati, 2018). Neither is this a comparative study, i.e., does not seek to compare and contrast the communication, experiences, and outcomes of Black and white women, and therefore there will be limitations on determining objective correlations or causality between race and communication. Only this observational, bottom-up, qualitative approach however, can show what is actually happening in antenatal appointments, which can then be contextualised within subjective experiences of participants, and the wider literature. It might be possible at a later date to test some of the findings in a future research study with a comparative design.

As an ethnomethodological field that relies on participant analysis rather researcher analysis, CA has been criticised for being sociologically neutral (Billig, 1999) or focusing on the mundane at the expense of the socio-political (Wetherell, 1998). Feminist CA scholars however have argued that CA can make abstract concepts empirically concrete by revealing themselves in the data (Kitzinger, 2000). This research design further mitigates CA's potential limitation, by collecting complementary self-report data, which will explicitly ask pregnant women participants about their experiences, and whether they felt race was salient in the encounter. This design is in keeping with Drew's suggestion that future applications of CA may in be in conjunction with other forms of subjective data (Drew et. al, 2001).

As an observational study in which participants have been through a fully informed consent process, it will not be possible to entirely remove the potential for the Hawthorne Effect, i.e., participant behavioural change brought about by knowing themselves to be in a study environment (Berkhout et. al, 2022). It is noted that if and where Hawthorne Effect exists within a healthcare setting it 'is highly contingent on task and context' (McCambridge et. al, 2014). Given the nature of the setting for the observational data collection, i.e., a naturalistic clinical setting, it is envisaged that the primary objective of the encounter, to provide / receive antenatal care within a busy clinical workload, will be the primary focus for participants. It is also considered unlikely that participants could maintain non-naturalistic communication practices across a full appointment as the broad research aim, emic approach, and lack of consensus on what constitutes 'good communication', would make performing to social desirability bias (see Bryman, 2016) extremely complex. However, mitigations are in place to further reduce the Hawthorne Effect. The researcher will not be present in the room and the audio or video recording equipment will be small and unobtrusive. The researcher will aim to place the recording equipment out of the direct eye line of participants. A quantitative U.S. study based on self-report data found audio recording to have no significant effect on six measures of patient-clinician interaction (Henry et. al, 2015) and while no similar evidence was found relating to video recording, a mixed methods secondary quantitative and conversation analytic study comparing explicit talk of recording equipment against the rest of talk in an observational study, concluded there to be no Hawthorne effect 'with pervasive, habituated behaviours in natural settings' (LeBlanc, 2016, p78). Even with mitigations in place, discussion of findings will still need to acknowledge the potential of a Hawthorne effect to introduce social desirability bias, which may include a conscious effort on the part of midwife participants to listen and respond to PW concerns, and to not defer to racial biases. Some definitions of the Hawthorne Effect also include selection bias (Berkhout et. at, 2022), i.e., that certain types of participants would agree or refuse to be recorded. Discussion of findings will also acknowledge this.

4.8. Ethics (positionality)

Research can be culturally imperialistic (Baker et. al, 2004) and exploitative (Papoulias & Callard, 2022), and research by dominant outsiders has been argued to be less impactful due to reduced urgency for change (Ibn Alkalimat, 1969) and a tendency to pathologize groups with minority identities, rather than focus on mainstream structures (Barn, 1994; Baker et. al, 2004). The researcher acknowledges that their positionality as a white researcher researching racial inequality carries ethical implications, and methodological steps have been taken to mitigate this. Firstly, CA's deference to participant-orientation (Sidnell and Stivers, 2013) has benefits both for internal validity and epistemic justice (Kitzinger, 2000), and, alongside subjective qualitative interview data, will militate against cultural imperialism. Secondly, by focusing on institutional communication, and its interpersonal, interracial delivery, this research aims to focus on the role of mainstream structures. Lastly, mitigations have been put in place to reduce the burden on participants, minimising exploitative practices (see Data Collection Methods).

5. Dissemination

Dissemination of research findings is planned across academic, policy and public activities. The resultant PhD will be submitted to Ulster University library and to the British Library's E-Theses Online Service. Academic papers will be written and submitted to social policy and linguistics/social interaction/health communication journals, and oral and poster presentation opportunities will be sought at conferences and symposiums, including maternal health conferences such as The National Maternity Safety Conference. The researcher will seek to establish connections with professional bodies (such as the Royal College of Midwives or the World Health Organisation) and charity sector and activist groups (e.g., Birthrights, Five X More, The Motherhood Group) to collaborate on further opportunities for dissemination of findings. Findings will also be used in policy engagement activities such as the creation of short research updates, policy briefing documents, and for submissions to relevant government enquiries or select committees.

6. Ethics and regulatory approach

6.1. Regulatory approach

The study will require approval from an NHS Research Ethics Committee (REC) and permissions from the Research and Governance Boards of each participating Trust. This process will be completed in partnership with Research and Development in the Lead Trust.

6.2. Risks and burdens

6.2.1. Risks

Threat to anonymity

The most significant potential risk to midwife participants is the risk of threat to professional anonymity and any resultant threat to professional reputation. While there is a small risk of professional identification, due to the research's narrow regional and professional focus (e.g., Walford, 2005), a number of measures will be in place to militate against this. All observational data will be anonymised using video and/or audio manipulation software, such as Shotcut and/or Audacity to create sketch filters, mask identifiable features such as faces, change the pitch of speech, and mask identifiable words such as names and places. This anonymisation process will be clearly explained on the PIS and can be discussed and demonstrated during informed consent procedures, to instil confidence in participants. Names of people, organisations and local places and any other identifying information will also be removed from recordings and never included in transcripts. Dissemination will only ever include short extracts from any encounter, which will further militate against anonymity threat. As a final measure, the researcher aims to recruit as many midwife participants as possible, across a number of sites. There is a much smaller risk to pregnant women anonymity, however, the same stringent mitigations for voice distortion and anonymity will be in place.

Disruption to appointment

There is minimal risk that the recording will be a disruption to the antenatal appointment. This will be mitigated by the researcher setting up recording equipment in advance of appointments. As it will only be required to be turned on and off at the beginning and end of appointment, this should not disrupt or lengthen the appointment The researcher will not be present in the room during the appointment/recording.

Risk to pregnant woman-midwife relationship

Racial inequality in outcome and experiences in UK maternity services is well publicised and is unlikely to be new information to any expectant Black mother. However, drawing attention to any of the barriers to antenatal care for Black women introduces a potential risk to the mother-midwife relationship. To mitigate this, all sections of the PIS will be neutrally or positively framed, e.g., will emphasise the interest in best practice as well as less effective communication.

Anxiety/ distress risk to expectant mothers

Drawing attention to inequalities in a given setting, has the potential to cause anxiety for participants (Homan, 1991). As above, it is highly likely that pregnant Black women will already be aware of differential outcomes and experiences, and so may already be anxious about their antenatal care journey. Again, this will be mitigated by the neutral or positive framing of the research. Additionally, external, academic interest in their care has potential to alleviate some of this anxiety. During qualitative interviews, a distress protocol will be enacted in the event that a participant becomes stressed or anxious. The researcher will offer rest time and reiterate the participant's right to stop the interview or withdraw from the interview or wider study. The researcher will also be able to provide a list of organisations that will be able to offer support.

Risks for researcher

This is a low-risk study for the researcher. It is anticipated that the majority of data collection will take place on NHS trust sites, by video conferencing or by telephone. Personal safety measures will be taken for all activities in line with Ulster University's lone worker guidance, and in particular for in person interviews, including keeping the study's Chief Investigator informed about times and locations of appointments, reporting my arrival and departure, and being positioned close to an exit at all times. If the researcher is upset or distressed by the content of any interviews, they can access free and anonymous counselling services at Ulster University.

6.2.2. Burdens

Midwife participants

The study is designed so the burden on midwife participants is low. Clinical midwife participants have no responsibility for recruitment of pregnant women participants. An FAQ list will be provided to midwives in case pregnant women participants ask them questions about the research during the appointment, but midwives may also direct pregnant women to the researcher on site. Midwives will be asked to check consent forms have been completed and signed and which form of recording has been consented to. Data collection will occur during the course of the midwives' usual working day. Midwives will be asked to turn the recording equipment on and off at the beginning and end of appointments, and training in this will be provided to them on site by the researcher.

Pregnant women participants

The burden for pregnant women participants is not extensive. Collection of observational data will take place while antenatal appointments proceed as usual and therefore pose no burden to pregnant women participants. Pregnant women participants will also be asked to provide their subjective, self-reported experience of the appointment by answering a short questionnaire and taking part in a semi-structured interview. It is estimated that both of these activities together will take somewhere between 22 and 70 minutes. However, to offer a reduction in burden to pregnant women, they have the option to consent to only selected activities. Several options for interview will be offered – telephone, video conferencing or in person - to reduce the burden of interview by making it most convenient for the pregnant women participants.

6.3. Anonymity and confidentiality

For both observational and interview data, every effort will be made to remove all identifying information from both transcripts, and in the case of observational data, from the anonymised video files. This will include the removal of all names, dates, place names or other identifying references such as details of the Trust. As outlined in the risks section, with a small geographical and professional focus there is always a small possibility of anonymity threat for midwife participants, but this will be outlined in the PIS, along with information about how this threat will be mitigated. For audio/video-recorded observational data, software Audacity, Shotcut or similar will be used to create noises in the place of any personal identifiers, and to disguise voices through pitch adjustment. Video recordings will be further anonymised using Shortcut or similar, by adding a sketch filter (converting to animation) and/or masking identifying features such as faces. All data will be coded, and data logs will be managed and stored separately in a Microsoft Excel spreadsheet stored in password protected files only accessible by the researcher and CI. In the event that a raw sound file must be played, it will be done by the researcher using headphones. Only anonymised audio-visual or audio files, in short extracts, will be broadcast to audiences for academic or training purposes.

6.4. Data storage and protection

In line with Ulster University GDPR policy, raw data and personal information / codes of anonymised data will be kept in separate password protected locations.

For observational data – Raw recordings will be transferred onto a password protected portable hard-drive and deleted from the digital audio and video recorders. This hard drive will be stored in a lockable cupboard on Ulster University premises at all times. Recordings will be transferred as password protected files onto Microsoft SharePoint, for transcription, digital editing and anonymisation by the researcher. The micro-analytic nature of conversation analysis means that raw data is required for analysis and transcription. Raw video/ audio recordings will only ever be played by the researcher using earphones. To ensure participant confidentiality when data analysis and transcription take place in the researcher's home, this will be in a private home office. When analysis and transcription work with raw data is conducted on the university campus, the researcher will book a private room and again will use headphones. Transcriptions will not contain any identifying information. Microsoft SharePoint files and the portable hard drive will only be accessible by the CI, supervision team and researcher.

For questionnaires – All information in a paper format will be scanned into electronic files and paper copies disposed of as confidential waste. Electronic copies of all the questionnaires will be transferred to a password protected file on Microsoft SharePoint which will not be accessible to anyone else except the CI and researcher.

For interview data: All interviews will be transcribed by the researcher. Transcripts will not include any identifying information and audio recordings will be destroyed once transcription is complete. Transcriptions will be stored in a password protected file on Microsoft SharePoint which will not be accessible to anyone else except the CI and researcher.

The laptop used by the researcher is a private laptop only accessible by the researcher. To access the laptop, a passcode or a fingerprint is required. For additional security, data files will be stored in a specifically created Microsoft SharePoint site. To access this site, the researcher needs to log on to their university Microsoft 365 account with a username and password. Access to the Microsoft SharePoint site is authorised by permissions. Only the researcher and the supervisory team will have permission to access the site, and the documents stored within it.

Personal information, including contact information, and raw interview and questionnaire data will be destroyed at the end of the project. Anonymised interview and questionnaire data will be kept for a minimum period of 10 years after the end of the study in line with university's Code of Practice for Professional Integrity in the Conduct of Research. Due to the micro-analytic nature of conversation analysis, permission is requested to retain both the raw and anonymised observational data indefinitely, in line with CA tradition. After the end of the project, data would be held on a portable hard drive in a locked cabinet on university premises, only accessible by the CI and researcher.

7. Project management, expertise, and timeline

The project will be managed on a day-to-day basis by Catherine Turner, PhD Researcher at Ulster University, under the supervision of Chief Investigator Dr. Catrin Rhys (Senior Lecturer in Linguistics and Head of School of Communications and Media) and Professor Ann Marie Gray (Professor of Social Policy and Policy Director at ARK).

Dr. Catrin Rhys, Chief Investigator (*Senior Lecturer in Linguistics and Head of School of Communications and Media)* – Catrin is a widely published Conversation Analyst and currently PI on the NIHR funded project: Enhancing the patient complaints journey: harnessing the power of language to transform the experience of complaining. An important contribution of this project is the development of an innovative interdisciplinary, applied CA methodology similar to that proposed for this project. Dr Rhys has a strong track record of engagement and impact. She was a co-founder of UcoM (Ulster Centre on Multilingualism) and is a key member of the Language Made Fun project: a National Lottery Funded 5-year collaboration between Barnardo's and UcoM. She has supervised several PhD researchers to successful completion and is currently supervisor to three further PhD projects (two due to complete this year).

Professor Ann Marie Gray (*Professor of Social Policy and Policy Director at ARK*) – Professor Gray has a track record in research with vulnerable populations, access to health and social care, teenage parents, unpaid carers, women accessing abortion and marginalised young people. Between 2015 and 2019 she worked on an ESRC funded study on abortion in NI which involved assessing public attitudes in NI to reform of abortion law. This work has had significant policy impact including being cited as a significant evidence base in parliamentary committee proceeding and Westminster debates underpinning the reform of abortion law in NI. Most of Professor Gray's research has been conducted in partnership with voluntary/statutory organisations and/or policy makers and have had a high degree of policy impact. For example, the ESRC abortion funded research and disseminations with doctors and midwives had direct impact on the development of abortion services. The research provided clinicians in with the information and the confidence to develop ad hoc Early Medical Abortion services across the region, despite the Department of Health refusing to commission or fund services.

Catherine Turner (PhD Researcher) – Catherine has a strong academic background with a proven track-record of first-class awards in research-based assignments and demonstrable experience in both the linguistics and social policy fields, within specific experience in collecting and analysing conversational data. This PhD research project was awarded funding by the Arts and Humanities Research Council (AHRC), through the prestigious Northern Bridge Consortium doctoral training programme.

Timeline

Project phase	**Indicative activities**	**Estimated timings**
Phase 1: Ethics and governance	• Secure ethical approval from NHS Regulatory Ethics committee • Review of research protocol with relevant NHS Trust governance bodies, including amendments as necessary	April – May 2024
Phase 2: Project preparation	• Review of training materials at participating trust • Publishing of marketing materials for study • Recruitment of midwife participants[4] • Recruitment of pregnant women participants	June – November 2024
Phase 3: Data collection	• 3-4 (estimated) observational data collection rounds at participating sites (at least 1 per site) • Follow up interviews with pregnant women participants.	June – November 2024
Phase 4: Data analysis	• Development of verbatim transcripts of observational and interview data • Development of Jeffersonian transcriptions of select observational data in preparation for conversation analysis • Micro-analysis of observational data using conversation analytical practices • Development of data-led research questions and analytic strategy for interview data • Analysis of interview data	June 2024 – June 2025

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[4] No recruitment activities to take place before ethical approval has been granted.

	• Cross-referencing / triangulation across data streams	
Phase 5: Write up and dissemination	• Write up of research into a PhD thesis • Writing and submission of research papers • Undertaking of speaking opportunities at relevant academic and public events • Development of professional and user engagement partnership activities • Policy engagement activities, e.g., short research updates, policy briefing, submission to government enquiries / select committee reports	May 2025 – March 2026

End of study definition

For the purposes of communicating with participants and for the research team, ‘end of study’ is defined as completion of the researcher’s PhD including submission of thesis, and completion of amendments to thesis following viva examination. It is estimated that this will be in or around March 2026.

For the purposes of the NHS Trust, the ‘end of study activities’ as indicated on the NHS’s Organisation Information Document (OID) is defined as the end of data collection activities. It is estimated that this will be on or before 29/11/2024.

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