Reflexivity Conducting Mixed Methods Research on Indigenous Women’s Health in Lower and Middle-Income Countries - An Example From Bangladesh

Shahinoor Akter1,2,3,4,5 ©, Jane Louise Rich1,6, Kate Davies7, and Kerry Jill Inder2,3,8

Abstract
Indigenous women’s health in low and middle-income countries continues to experience exclusions from the mainstream context and has remained underrepresented in health research, including qualitative research. Based on mixed methods research (comprising qualitative and quantitative methods) into Indigenous women in Bangladesh, this article addresses the reflexivity of a non-Indigenous researcher studying Indigenous women’s health issues in the Chittagong Hill Tracts of Bangladesh. As reflexivity is a crucial strategy to ensure rigor in qualitative research, understanding how the characteristics and experiences of the study may influence the research process is of paramount importance. For non-Indigenous researchers working in an Indigenous context, the imperative to understand one’s impact and position within the research becomes even more critical. Unfortunately, non-Indigenous researchers often avoid providing appropriate detail on reflexivity aspects in conducting research, particularly mixed-method research, among Indigenous communities in low- and middle-income countries like Bangladesh. In this reflexive evaluation, the researchers of this mixed method study evaluate the introspective reflexivity; reflect on the pre-research stage in developing collaborative and negotiated design and reflect on positionality during fieldwork and data analysis to consider interpersonal and collective dynamics during the research process. Strategies are offered to harvest the benefits of the researcher’s familiarity with the subject and limit any unfavorable consequences. Directions for future research include integration of research methods, using qualified Indigenous researchers, engaging Indigenous community leaders, and collecting data using native language to respect and value the culture and voice of Indigenous communities.

Keywords
mixed methods, observational research, qualitative evaluation, methods in qualitative inquiry, ethical inquiry

Introduction
The concept of reflexivity is rooted in the empirical nature of qualitative research. Reflexivity is important in acknowledging the influence of subjectivity, and in so doing enhancing the transparency, rigor and robustness of the research (Houghton et al., 2013; Jootun et al., 2009). Reflexivity is a continuous and systematic process whereby the researcher clearly describes the degree of influence they practice, intentionally or unintentionally, during data collection and analysis (Darawsheh, 2014; Patton, 2015). We, the qualitative researchers, see reflexivity as the “interpretation of interpretation” where the researcher launches a critical self-exploration of their own interpretations with consideration of the perceptual, cognitive, theoretical, linguistic, political

1School of Medicine and Public Health, College of Health, Medicine and Wellbeing, University of Newcastle, Callaghan, NSW, Australia
2Priority Research Centre for Generational Health and Ageing, University of Newcastle, Callaghan, NSW, Australia
3Hunter Medical Research Institute, New Lambton, NSW, Australia
4Department of Anthropology, Jagannath University, Dhaka, Bangladesh
5Centre for Health Equity, School of Population and Global Health, University of Melbourne, Melbourne, VIC, Australia
6Centre for Brain and Mental Health Research, University of Newcastle, Callaghan, NSW, Australia
7School of Humanities and Social Science, College of Human and Social Futures, University of Newcastle, Callaghan, NSW, Australia
8School of Nursing and Midwifery, College of Health, Medicine and Wellbeing, University of Newcastle, Callaghan, NSW, Australia

Corresponding Author:
Shahinoor Akter, School of Medicine and Public Health, The University of Newcastle, University Dr, Callaghan, NSW 2308, Australia.
Email: shahinoor.akter@uon.edu.au

Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (https://creativecommons.org/licenses/by-nc/4.0/) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access pages (https://us.sagepub.com/en-us/nam/open-access-at-sage).
and cultural circumstances to form the setting and complete the interpretation” (Alvesson & Sköldberg, 2009, p. 9).

A qualitative researcher is intimately involved and engaged throughout the entire research process, and reflexivity helps the researcher to be self-critical and self-aware during this process (Berger, 2015). This self-reflection encourages us, the qualitative researchers, to critically monitor our own hypotheses, or pre-conceived ideas that may influence our perspectives and understandings. Detailing the process of such mindfulness can reduce personal and theoretical bias (Kleinsasser, 2000; Patton, 2015). Houghton et al. (2013) considered reflexivity to be a strategy to attain rigor in qualitative research. Because of a perceived philosophical dichotomy between qualitative and quantitative research methods, quantitative researchers do not usually apply reflexivity in their studies (Walker et al., 2013). Quantitative data collection and analysis techniques have been presupposed to be less prone to bias given the tools available to control the research environment and opportunities for randomisation and generalisability (Bernard, 2011). While claims of objectivity and reduced bias in quantitative research are contested, its methods can mean that the relationship between the researcher and the respondent is likely to be less intimate in comparison to qualitative research (Elliot, 2005; Patton, 2015).

Examining a given problem by distinct qualitative or quantitative methods may offer a partial picture of the problem. Methodologists have advocated to combine qualitative and quantitative approaches via mixed methods research (Creswell & Clark, 2007; Scott, 2016). The triangulation of qualitative and quantitative study findings can either be mutually exclusive or diversified (Doyle et al., 2016). The convergence of findings from quantitative and qualitative methods can increase the validity of findings and provide a more complete insight into a given research topic or phenomenon (Creswell & Clark, 2007; Patton, 2015). As a vital aspect of the mixed-methods approach is to seek holistic knowledge, the researcher’s reflexivity is important for the transparent translation of a multifaceted understanding of social phenomena (Creswell, 2013; Scott, 2016).

In this article, we will reflect on how I, the first author (SA), as a doctoral researcher, conducted a mixed-methods study in Indigenous communities in the Chittagong Hill Tracts (CHT) of Bangladesh. My doctoral project examined access to maternal health care (MHC) services among Indigenous women in the CHT, one of the most marginalized and vulnerable population groups residing in the remote hilly region of Bangladesh (Badiuzzaman et al., 2018; Barkat et al., 2009).

I, a non-Indigenous Bengali female researcher, conducted a mixed-methods study, comprising a cross-sectional survey followed by ethnographic interviews, with Indigenous women in the Khagrachhari district to facilitate Indigenous women in voicing their own truths, experiences, and opinions about existing MHC services in the CHT. Before conducting this study, I performed a systematic literature search of previous studies published on CHT Indigenous women’s health (Ahmed, 2001; Badiuzzaman et al., 2018; Barkat et al., 2009; Biswas et al., 2010; Islam, 2016; Islam & Odland, 2011; Kamal & Hassan, 2013; Uddin et al., 2013) and found that none of them reported reflexive issues due to the nature of observational studies where reflexivity is not taken into account (Lakew, 2017). To formulate a new model for intercultural research, non-Indigenous researchers need to apply the reflexive approach to examine their impact and position within Indigenous research (Russell-Mundine, 2012). In this paper, we acknowledge the importance of reporting reflexivity in the context of CHT Indigenous communities in order to understand the researcher’s worldview, including aspects such as gender, culture, and socio-economic status. This paper, therefore, outlines reflexive practices undertaken by the researcher while engaging in this research with Indigenous communities, including Indigenous women. The researcher posited reflexivity as an introspective process by which the researcher became aware of subjective influences in the research process with continuous support from her doctoral supervisors (co-authors); therefore, becoming more transparent when reporting.

The following section will focus on CHT Indigenous women’s health status. I will describe my direct perspectives to reflect on how this project was developed and I will provide insight into my attachment to this topic (Finlay, 2002).

**Chittagong Hill Tracts Profile**

Chittagong Hill Tracts (CHT) is a unique part of Bangladesh where eleven Indigenous minority groups reside, mostly in the rural and remote hilly areas (see Figure 1). These Indigenous groups share distinct cultural characteristics compared to the majority Bengali population (Barkat et al., 2009). The estimated Indigenous population is between two and five million (International Work Group for Indigenous Affairs (IWGIA), 2021). Furthermore, the Indigenous population is invisible in any national reports and databases, and they have received limited attention in the policy and research (Akter et al., 2019; Roy & Promila, 2014). These groups are deprived of enjoying equal human rights, the main goal for Sustainable Development Goals 2030 (International Work Group for Indigenous Affairs, 2015).

Historically, the CHT was isolated, starting from the Colonial period (since 1900) until after the independence of Bangladesh in 1971. During this period, this area was subject to political unrest and demographic engineering (including surveillance, massacre, and land grabbing) used by the state system to outnumber or displace Indigenous people. After being ravaged for over 25 years with civil turmoil in the soil of an independent country, a Peace Accord was signed between the Government of Bangladesh and the United People’s Party of the Chittagong Hill Tracts known as Parbattya Chattogram Jana Samhati Samiti (PCJSS). The Accord was made with the intention of bringing the Indigenous population under the
capacity building development process to bring a full stop to the unrest (Roy & Chakma, 2015).

The State-led violence has continued after the Peace Accord. Along with displacement and other forms of political violence, Indigenous women have been the victims of sexual, physical, and mental abuse as modes of repression. This form of repression has not been addressed and none of the alleged perpetrators of such cases have been brought to justice. In 2017, at least 56 Indigenous women and girls (under 18 years old) were victims of physical and sexual assaults in the CHT (IWGIA, 2018). Reportedly, the victims of such cases faced enormous challenges accessing legal justice and medical treatment due to remoteness and lack of cooperation of the responsible civil administration and law enforcement agencies. Evidence also suggests that many victims were unable to file their complaints and cases remain underreported.

According to Connerton (2017), people who have lived through a long history of exploitation and injustices usually do not forget the oppression, injustice and exploitation of their past. Without making efforts to rectify past injustices, building trustful relationships between Indigenous and non-Indigenous communities, particularly women, is difficult (Connerton, 2017). Therefore, reaching Indigenous women and researching their health issues, particularly during reproductive years, presents profound, complex interpersonal and historical challenges. Despite the Peace Accord, the CHT is still an area of unrest, and it is considered risky for a Bengali female researcher to conduct independent research in this area. Given the ongoing tension and associated trauma and trust issues, it was important to prepare and reflect deeply before, during and after research. I needed to reflect on how I formed relationships and developed trust with Indigenous communities, mainly with women, regarding sensitive topics such as pregnancy and childbirth.

**Positioning the Self as a Researcher: Introspective Reflexivity**

Every social research project is unique; therefore, research needs to be conducted in ways that are compatible with the specific research and social or cultural contexts. The researcher must use their own tangible knowledge to figure out each step of the project based on the available resources to support any critical situations encountered in the research journey (Billo & Hiemstra, 2013; Creswell, 2013). The socio-political context in the CHT is complex and complicated (Uddin, 2016), and as a Bangladeshi female researcher, my position in the project can be identified as an insider, or outsider, or both, or neither (Gilbert, 1994). While conducting this project, I simultaneously felt that I was an ‘insider’ as a part of the Indigenous society in the CHT and an ‘outsider’ because of the privilege of my ethnic identity and educational background (Lal, 2018). In the following section, I reflect on...
the uncertainty, tensions, and instability of the subjective positions that I was mindful about in planning and implementing the research activity. I reflected regularly on my positionality during my fieldwork.

**Reflection on Pre-Research Stage**

I am from the Bengali community, born and raised in Matiranga, one of the sub-districts in Khagrachari located in the southeast part of the country (BBS, 2013). Like other hill districts, this district is the residence of many ethnic minority groups of which Chakma, Marma and Tripura communities are predominant (BBS, 2013). I grew up surrounded by peers from different cultural (ethnic and religious) backgrounds, however, I was unintentionally unaware of the cultural differences and naive to this greater understanding. I didn’t experience an ‘us’ and ‘them’ reality.

While studying anthropology during my undergraduate and postgraduate degrees, I started to recognize how the socio-political structure had impacted my childhood. I became aware of the implicit ‘othering’ that shaped these relationships - my childhood friends were not culturally and politically like ‘us’ - the majority Bengali. I considered the long history of discrimination reflected in the reality of Indigenous communities being identified with derogatory terms such as “Upajati” (sub-nation) or “Pahari” (hilly people) to recognize them as ‘primitive’ or ‘uncivilized’ due to their distinctive cultures (Barkat et al., 2009; Schendel & Bal, 1997; Tripura, 2014). I became interested to understand how young Indigenous people in the CHT experience their cultural identities during their formative years and conducted my undergraduate dissertation on this topic. The findings of my undergraduate dissertation revealed that ethnic minority groups, including my childhood friends, faced difficulties fitting within the complex social system at an individual level (am I a Chakma or Bangladeshi Chakma?) and at a collective level (Adwasi? Pahari? Jumma? Khuda jati (ethnic minorities)). Young Indigenous people mostly preferred to be identified in a way where both cultural and national identities are identified (Akter, 2015).

As part of my postgraduate degree in public health in Australia, I conducted a qualitative study on staff perspectives of non-attendance in a regional primary healthcare setting in Australia (Akter et al., 2014). While conducting the research, I learned about ‘culturally friendly’ health services, particularly services designed with and by Aboriginal Australian communities. My background in anthropology and health research led me to conduct secondary research on Indigenous maternal health issues. I conducted a systematic literature search and found Indigenous peoples’ health needs, including maternal health of the ethnic minority groups, remained unaddressed, despite reports that they have the worst health record in Bangladesh (Integrated Regional Information Networks, 2011; UNICEF, 2015). These experiences compelled me to explore CHT Indigenous women’s experiences accessing MHC services.

As a local person, fortunate enough to have obtained a high level of education and some research experience, I felt a responsibility and opportunity to contribute to the improvement of Indigenous people’s health status in Bangladesh. I sought to use my knowledge to contribute to the design of a culturally-friendly health care system, particularly for Indigenous women in the CHT. This study had a social justice aim that was informed by my own subjective experiences. As such, within the research process, I managed my own biases while designing and implementing research methods that were rigorous and transparent.

**Reflection on Positionality: Reflexivity When Studying the Familiar**

In this section, I describe my positionality in relation to this study. To describe this introspective reflexivity, I will follow the three-phase process of bracketing prescribed by Dowling (2006). These are: i) Bracketing ‘pre’ action; ii) Bracketing ‘in’ action; and iii) Bracketing ‘on’ action. Bracketing in qualitative research refers to the process whereby a researcher sets aside personal interests, experiences, biases and assumptions about the research topic that could influence how he or she views the study’s data (Dowling, 2006; Fischer, 2009).

**Bracketing ‘pre’ action**
The researcher identifies certain personal attitudes and characteristics in advance, that can influence data collection and thus appropriately prepare to address them (Dowling, 2006; Patnaik, 2013). Although I spent my entire childhood and adolescence in Matiranga, I could not claim to be an insider to the Indigenous community. However, my connection to the locality and my ability to understand local languages and culture made me a trusted ally. This relationship helped me interact easily and freely with people of diverse ethnicities. Furthermore, as an ex-student of the local primary and secondary schools, I had insights into the cultural norms and values of various ethnic groups. The active communication through phone calls and emails with my Indigenous networks helped me design and refine my research methodology to conduct my doctoral research on Indigenous women’s health. I was also mindful about wording interview questions for data collection so that study participants felt unthreatened and safe to discuss their maternal health needs. To ensure this, interview questions, participant information statements and consent forms were reviewed by an independent researcher who spoke both Bangla and English languages and had substantial knowledge on gender and women’s health topics and Indigenous health. Furthermore, my doctoral research supervisors, who were Australian, reviewed all study related documents and provided feedback. The relevant human research ethics committees approved the study protocol.
Bracketing ‘in’ action

The researcher’s subjectivity and openness during fieldwork are two essential criteria in order to allow the study population to feel comfortable in sharing their personal experiences (Darawsheh, 2014; Houghton et al., 2013). In the process of data collection, the researcher should be vigorously reflective in their entire process (Finlay, 2002; Wertz, 1984). Another key consideration for data collection is the power imbalance between researchers and participants. One strategy for addressing this imbalance is rapport building. Successful rapport building creates a trustful environment and supports meaningful and authentic relationships between the researcher and research participants. Qualitative experts and scholars have suggested creating “a feeling of empathy for informants” that enables them “[to] open up about their feelings about the settings and others” (Taylor et al., 2015, p. 58). Building rapport also helps researchers to produce meaningful research findings (Finlay, 2002; Karnieli-Miller et al., 2009) where study participants’ voice their needs. Ideally, rapport building can also empower women and communities as they are able to be heard and inform change. There can be a shared goal and mutual benefit for the researcher and community.

Bearing these issues in mind, I recruited three Indigenous female field assistants, one from each Indigenous community. We collected survey data as a research team. Given the long history of exploitation, particularly violence against Indigenous women by the previous governments, active engagement of Indigenous people in the research team to build initial trust with the communities was important (Guillemin et al., 2016; Roy & Promila, 2014). Having Indigenous female field assistants in the research team facilitated women’s voluntary participation in the study because they felt safe and understood (Guillemin et al., 2016). Prior to each interview, we explained the study objectives to the participants and outlined their ethical rights in Bangla. We assumed that Indigenous community members were able to speak and understand the mainstream language (Barkat et al., 2009). However, we found many Indigenous women in the most remote hilly areas were not fluent in speaking Bangla. On those occasions, the female field assistants explained the study objectives in the local dialect, which provided the participants who were not fluent in Bangla with the opportunity to communicate easily and to be heard. Language became a key barrier during in-depth interviews as sometimes the study participants could not find appropriate Bangla terms to express their experiences and feelings. In this sense, an “insider” - an Indigenous qualitative researcher – may have been better placed to conduct the interviews.

I continually and intentionally noted cultural differences between the study participants and myself. To minimise the effect of these differences on data collection, I tried to pay attention to what we had in common (Taylor et al., 2015). I was aware of my body language, clothing and the language I used to communicate with the study participants. My socio-cultural identity as a Bengali and my professional identity as a lecturer at one of the renowned public universities could have potentially influenced the mutual relationship between us. Interestingly, while contacting Headmen and Karbari (local village heads) of different paras (villages), I found that some of them were close relatives of old school friends and as such, getting approval for accessing the paras became much easier for my team. My childhood identity was more valuable than my professional identity in this instance. After accessing the paras, the research team used the local dialect to communicate with the study population. Using the local dialect and referring to my childhood connection with the locality were two important tools for me to be able to build rapport quickly and gain the trust of the study population.

I paid careful attention to issues of clothing. Indigenous women tend to wear clothes that are different to the Bengali community. Young women wear two or three pieces of clothing, called Salwar-Kamij-Orna (tunic-trousers-scarf). I avoided any clothing that might be considered expensive or offensive to the community, and the research team chose simple, hand-woven clothing that helped us look like other young women from the locality.

My field assistants, who were from the local communities, had studied at the same school as me and this connection helped us building a friendly relationship with each other. Immediately, I became their “Didi” (big sister). This new identity facilitated access and acceptance in every para I visited. There were times when my other identities (Bengali and/or university lecturer) received less attention, and I rarely felt treated as an “outsider”. However, to some extent, my affiliation to a foreign country (as a PhD student at an overseas university) created a mixed impression among people, as a few over-enthusiastic people, including Indigenous politically involved people, portrayed me as a “powerful” personality to the participants and they confused people by saying that I had strong connections to national and international donor agencies, which was not correct. This potentially affected my data quality, as some participants seemed to over-emphasise difficulties they faced while accessing services because they wanted me to help them get a hospital in their area. Research is innately political and power dynamics are at play, even though my research did not set out to be so. To minimize confusion, I clarified my position as a researcher, and in a few cases, the Headman and Karbari had to intervene on my behalf and make my position clear to the participants.

As a research team, my field assistants and I used common modes of transportation such as public buses, motorcycles and auto-rickshaws where possible. To ensure safety and security, we used reliable sources to hire transport and drivers whom we knew. This was important to allow us to reach the paras in a timely manner. Sometimes we offered lifts to older people or women with small children, particularly if we found them climbing steep hills or if their destination was far away. As the drivers knew the communities, these people were not complete strangers to our team. These relatively minor actions...
contributed in developing an initial trustful relationship with the study population. These older people or mothers introduced us to the Karbari or Headman of the paras when we could not reach them through common connections. Being flexible with timing, routes, and ways of doing research were critical to my research relationships with communities. I found that these simple but important gestures were culturally appropriate, accepted by the women I worked with and helped each of us feel valued, respected, and empowered, equally contributing to research outcomes.

Bangladesh is a Muslim majority country, and at the time of fieldwork, I was a young single-Muslim female researcher. Although female involvement in the job market has increased significantly, single Bengali Muslim women still enjoy less freedom, particularly in rural areas (Kabeer et al., 2011). However, this was of less importance to the Indigenous communities who took part in this study, as Indigenous women tended to work both inside and outside the home and enjoy greater social freedom compared to single Bengali Muslim women (Kabeer et al., 2011; Mallick & Rafi, 2010). Therefore, the traditional cultural and religious views of the majority Bengali community on gender did not influence the relationship in this instance.

Gender is influential in all research methods since socio-cultural norms evoke certain expectations from researchers and participants in terms of gender (Patton, 2015). Sharing the same gender identity with the study population during interviews has been considered to ease tensions between the interviewer and respondent (Ahmed et al., 2011). However, this is not guaranteed, particularly if the researcher and respondents do not share the same culture (Ahmed et al., 2011; Lee, 1997). Language is a vital part of forming connections and I constantly reflected on my use of language. The Indigenous women did not understand certain medical terms for various complications; rather they used their own terms to describe those complications. Therefore, using a medical or Bangla term to refer to a certain health problem did not make sense to women who had limited formal education and who had never been to health facilities for pregnancy-related issues. I asked the community-based Indigenous health workers about certain terms related to complications; however, often I had to use leading questions to make it understandable to the participants. For example, a traditional birth attendant in Bangla language is “Dai/Dhaatri”. They are known as “Ojha” in Chakma, ‘Sraa-maa’ in Marma and ‘O-chai-chongma’ in Kokborok (Tripura) languages.

During the fieldwork, I found that the Indigenous people I met had a sense of collectiveness. People in the same para tended to know each other, and sometimes people even shared the same courtyard. A joint family structure (one kitchen) was the most common, but even those nuclear families with separate kitchens had relatives living nearby. Therefore, relatives of the respondents were often present during interviews. On some occasions, I conducted interviews in front of all family members as the respondents chose the location of the interview inside a shared space in the house. This was also because they felt uncomfortable talking to a stranger, given the long history of exploitation by the dominant ethnic group (Badiuzzaman et al., 2018). Whenever any of the relatives attempted to add their opinions, I first listened to them and then without offending them, referred them to the research objectives. My field assistants and I would thank family members, tell them that we would hear from the mother first and that we would talk to them after this. In doing so we met people interested in sharing their opinions, and these opinions were noted separately.

Bracketing “on” action

The final stage of reflexivity is where the researcher makes decisions regarding what and how to report information collected. The balance between description and interpretation (Finlay, 2002; Patton, 2015) was important. However, as researchers may be preoccupied with their own emotions and experiences and hold a particular worldview, the interpretation can be skewed (Finlay, 2002; Patton, 2015). This is because the researcher controls the data to be presented and as such can (unknowingly) manipulate the participants’ voices (Finlay, 2002; Patton, 2015).

I conducted the interviews in the local dialect and then directly transcribed them into English. All participants were offered the opportunity to review their transcript, but none expressed interest in doing so. This might be another limitation of my study, and to minimise any possible errors, all transcriptions were naturalized transcription – detailed without filtration (Mero-Jaffe, 2011) and the independent researcher (mentioned earlier) randomly checked three interview audio recordings and the English transcripts for validity and quality of the transcripts. One of my supervisors randomly selected and checked five translated interview transcriptions. I applied thematic data analysis following the six steps prescribed by Braun and Clarke (Braun & Clarke, 2006). To minimise the chances of data manipulation, verbatim transcription were used when reporting the data. To date, we have published five peer-reviewed qualitative and quantitative articles based on the study data (Akter et al., 2019, 2020a, 2020b, 2020c, 2021)

Directions for future research

Further research is required to improve maternal health outcomes for Indigenous women in low and middle-income countries such as Bangladesh. Previous studies on Indigenous women’s health in Bangladesh were predominantly observational studies (Ahmed, 2001; Badiuzzaman et al., 2018; Barkat et al., 2009; Biswas et al., 2010; Islam, 2016; Islam & Odland, 2011; Kamal & Hassan, 2013; Uddin et al., 2013). A few of these studies used mixed-method approaches (Islam & Odland, 2011) where researchers’ reflexivity was not reported. As such, little is known about how subjective and
objective limitations influenced the research process in these contexts. Reflexivity presents the opportunity to enable a deeper understanding of phenomena for both qualitative and quantitative research – an opportunity that has not been embraced in previous studies (Finlay, 2002; Patnaik, 2013). Therefore, we propose that future research on Indigenous women’s health in low and middle-income countries should attempt, discuss and illustrate reflexive integration of both qualitative and quantitative research by reporting the research process in detail from proposal development to dissemination of findings (Cain et al., 2019). Future research on Indigenous women’s health should include qualified Indigenous female researchers. Indigenous researchers should be trained in techniques to acknowledge and mitigate biases that may occur conducting ‘insider’ research in their own communities. Having Indigenous researchers also enables the use of native languages for data collection, reducing language barriers that can limit Indigenous women’s voices on their health needs. Future research should build on the interests of Indigenous women by valuing their preferences on what services they want and how they want to access those services.

Furthermore, engaging Indigenous community leaders and other key people are crucial when designing research projects that target Indigenous communities. Ethical approvals in such contexts need to go well beyond institutional academic processes and consider each particular Indigenous community’s ethical frameworks, decision-making processes, and values. The authors of this paper recommend a large scale mixed-method research project involving multi-disciplinary teams to better understand Indigenous women’s health in LMICs by providing integration throughout the research process, including reflexivity among group research teams.

**Conclusion**

In this paper we discussed the reflexivity approaches we applied during data collection, analysis, and interpretation stages, while reflecting critically on limitations. Being mindful of the researcher’s own positionality and being respectful to the Indigenous culture and history are the key qualities for a researcher to develop a trustworthy and meaningful relationship with Indigenous communities. Reflexivity is crucial and must be always maintained. To pay attention to positionality, reflexivity, the production and interpretation of knowledge and integral power relations in the research process to undertake ethical research in Indigenous communities is critical. In this paper, we have reflected on potential personal, socio-cultural, political, and emotional reflexivity issues that might affect the research process in CHT Indigenous communities—pre-research stage to data interpretation stage and offered explanations for how they were treated to provide a transparent and more insightful analysis of this mixed-methods research. Importantly, this paper explored how the role of the researcher and their ability to reflect, re-position and remain flexible were critical to three stages of research. This is important in all research, however, especially so, when drawing on the voices of women from minority Indigenous groups where issues of trust, historical trauma and socio-economic inequities are present. To be able to engage and to co-create data to best inform policy using strategies employed in this experience in the CHT, Bangladesh, goes a little way in giving women the voice they deserve in international research.

**Acknowledgments**

The authors are grateful to all the Indigenous women who took time to participate and graciously shared their information for this research, and local community leaders and community people for their priceless support. We would like to thank the field workers involved in the data collection. Finally, we also thank the University of Newcastle, Australia for funding the scholarship and Jagannath University, Bangladesh for its support to conduct this research.

**Declaration of Conflicting Interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**Funding**

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was supported by an Australian Government Research Training Program Scholarship and an International Postgraduate Research Scholarship from the University of Newcastle, Australia.

**Ethical Approval**

Ethical approval was obtained from the Human Research Ethics Committee of the University of Newcastle, Australia (H-2017-0204) and the Ethics Committee of the Department of Anthropology at Jagannath University.

**ORCID iD**

Shahinoor Akter https://orcid.org/0000-0002-5236-3597

**References**

Ahmed, D. A. A., Hundt, G. L., & Blackburn, C. (2011). Issues of gender, reflexivity and positionality in the field of disability: Researching visual impairment in an Arab society. *Qualitative Social Work, 10*(4), 467–484. https://doi.org/10.1177/1473325010370188

Ahmed, S. M. (2001). Differing health and health-seeking behaviour: Ethnic minorities of the Chittagong hill tracts, Bangladesh. *Asia-Pacific Journal of Public Health, 13*(2), 100–108. http://aph.sagepub.com/content/13/2/100.full.pdf

Akter, S. (2015). Identity crisis among the ethnic communities in the Chittagong Hill Tracts (CHT), Bangladesh. *Anthropos India : An International Journal of the Science of Man, Society, Economy, Culture, and Religion, 1*(2), 145–155.
Akter, S., Davies, K., Rich, J. L., & Inder, K. J. (2020a). Barriers to accessing maternal health care services in the Chittagong hill tracts, Bangladesh: A qualitative descriptive study of indigenous women’s experiences. *PLoS One, 15*(8), Article e0237002. https://doi.org/10.1371/journal.pone.0237002

Akter, S., Davies, K., Rich, J. L., & Inder, K. J. (2020b). Community perspectives of barriers Indigenous women face in accessing maternal health care services in the Chittagong Hill Tracts, Bangladesh. *Ethnicity & Health*, Advanced online publication. 1–19. https://doi.org/10.1080/13557858.2020.1862766

Akter, S., Doran, F., Avila, C., & Nancarrow, S. (2014). A qualitative study of staff perspectives of patient non-attendance in a regional primary healthcare setting. *The Australasian Medical Journal, 7*(5), 218–226. https://doi.org/10.4066/amj.2014.2056

Akter, S., Rich, J. L., Davies, K., & Inder, K. J. (2019). Access to maternal health care services among indigenous women in the Chittagong hill tracts, Bangladesh: A cross-sectional study. *BMJ Open, 9*(10), Article e033224. https://doi.org/10.1136/bmjopen-2019-033224

Akter, S., Rich, J. L., Davies, K., & Inder, K. J. (2020c). Prevalence and factors associated with knowledge and access to delivery services at primary health care facilities among indigenous women in Khagrachhari district Bangladesh–A cross-sectional study. *Midwifery, 90*, article 102798. https://doi.org/10.1016/j.midw.2020.102798

Akter, S., Rich, J. L., Davies, K., & Inder, K. J. (2021). Prevalence and factors associated with antenatal care service access among indigenous women in the Chittagong hill tracts, Bangladesh: A cross-sectional study. *PLoS One, 15*(12), Article e0244640. https://doi.org/10.1371/journal.pone.0244640

Alvesson, M., & Sköldberg, K. (2009). *Reflexive methodology: New vistas for qualitative research* (2nd ed.). SAGE.

Baduuzzaman, M., Murshed, S. M., & Rieger, M. (2018). Improving maternal health care in a post conflict setting: Evidence from Chittagong hill tracts of Bangladesh. *The Journal of Development Studies, 56*(2), 1–17. https://doi.org/10.1080/002202388.2018.1554211

Barkat, A., Halim, S., Poddar, A., Baduuzzaman, M., Osman, A., Khan, M., Rahman, M., Majid, M., Mohiyuddin, G., & Chakma, S. (2009). Socio-economic baseline survey of Chittagong hill Tracts. CHTDF-UNDP. https://pdfs.semanticscholar.org/3cbe/c3e855c3f68e196c44a0ecf165f678d24728c.pdf?_ga=2.202508118.658963650.1583525572-1156128939.1560553380

BBS (2013). *District statistics 2011 - Khagrachhari*. B. B. o. S. (BBS).

Berger, R. (2015). Now I see it, now I don’t: Researcher’s position and reflexivity in qualitative research. *Qualitative Research, 15*(2), 219–234. https://doi.org/10.1177/1468794114684875

Bernard, H. R. (2011). *Research methods in anthropology: Qualitative and quantitative approaches*. Rowman Altamira.

Billo, E., & Hiemstra, N. (2013). Mediating messiness: Expanding ideas of flexibility, reflexivity, and embodiment in fieldwork. *Gender, Place & Culture, 20*(3), 313–328. https://doi.org/10.1080/0966369x.2012.674929

Biswas, A., Bari, M., Roy, M., & Bhadra, S. (2010). Inherited folk pharmaceutical knowledge of tribal people in the Chittagong hill tracts, Bangladesh. *Indian Journal of Traditional Knowledge, 9*(1), 77–89. http://nopr.niscpr.res.in/handle/123456789/7159

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Cain, L. K., MacDonald, A, MacDonald, A. L., Coker, J. M., Velasco, J. C., & West, G. D. (2019). Ethics and reflexivity in mixed methods research: An examination of current practices and a call for further discussion. *International Journal of Multiple Research Approaches, 11*(2), 144–155. https://doi.org/10.29034/ijmra.v11n2a2

Connerton, P. (2017). Seven types of forgetting *The present word culture, society and the site of literature* (pp. 150–165). Routledge. https://doi.org/10.4324/9781351191999-14

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Creswell, J. W., & Clark, P. V. L. (2007). *Designing and conducting mixed methods research* (1st ed.). Thousand Oaks, CA: Sage Publications.

Darawsheh, W. (2014). Reflexivity in research: Promoting rigour, reliability and validity in qualitative research. *International Journal of Therapy and Rehabilitation, 21*(12), 560–568. https://doi.org/10.12968/iitr.2014.21.12.560

Dowlings, M. (2006). Approaches to reflexivity in qualitative research. *Nurse Researcher, 13*(3), 7–21. https://doi.org/10.7748/nrr2006.04.13.3.7.c5975

Doyle, L., Brady, A-M., & Byrne, G. (2016). An overview of mixed methods research–revisited. *Journal of Research in Nursing, 21*(8), 623–635. https://doi.org/10.1177/1744987116674257

Elliot, J. (2005). Narrative and identity: Constructions of the subject in qualitative and quantitative research Using narrative in social research (p. 119). Sage Publications.

Finlay, L. (2002). Outing the researcher: The provenance, process, and practice of reflexivity. *Qual Health Res, 12*(4), 531–545. https://doi.org/10.1177/104973202129120052

Fischer, C. T. (2009). Bracketing in qualitative research: Conceptual and practical matters [Article]. *Psychotherapy Research, 19*(4/5), 583–590. https://doi.org/10.1080/1050330902798375

Gilbert, M. R. (1994). The politics of location: Doing feminist research at “home”. *The Professional Geographer, 46*(1), 90–96. https://doi.org/10.1111/j.0033-0124.1994.00090.x

Guillemin, M., Gilliam, L., Bamard, E., Stewart, P., Walker, H., & Rosenthal, D. (2016). We’re checking them out”: Indigenous and non-Indigenous research participants’ accounts of deciding to be involved in research. *Int J Equity Health, 15*(1), 1–10. https://equityhealthj.biomedcentral.com/track/pdf/10.1186/s12939-016-0301-4.pdf

Houghton, C., Casey, D., Shaw, D., & Murphy, K. (2013). Rigour in qualitative case-study research. *Nurse Researcher, 20*(4), 12–17. https://doi.org/10.7748/nrr2013.03.20.4.12.c326

Integrated Regional Information Networks. (2011, 14 July). *Health indicators lag in Chittagong hill Tracts*. Integrated Regional information Networks (IRIN). http://www.irinnews.org/feature/2011/07/14/health-indicators-lag-chittagong-hill-tracts
International Work Group for Indigenous Affairs (2015). Indigenous peoples major group position paper on proposed SDG indicators. IWGIA. http://www.iwgia.org/iwgia_publications_files/0724_SDG_Indicators_Final_eb.pdf

International Work Group for Indigenous Affairs (IWGIA) (2021). Bangladesh. https://www.iwgia.org/en/bangladesh.html

Islam, M. R., & Odland, J. O. (2011). Determinants of antenatal and postnatal care visits among indigenous people in Bangladesh: A study of the mru community [research support, non-U.S. Gov’]. Rural & Remote Health, 11(2), 1672. https://doi.org/10.1080/03630242.2016.1153020

Islam, R. M. (2016). Utilization of maternal health care services among indigenous women in Bangladesh: A study on the mru tribe. Women & Health, 57(1), 108–118. https://doi.org/10.1080/03630242.2016.1153020

IWGIA (2018). Indigenous women target of rape in land-related conflicts in Bangladesh. https://www.iwgia.org/en/bangladesh/3235-indigenous-women-target-of-rape-in-land-related-conflicts-in-bangladesh.html

Jootun, D., McGhee, G., & Marland, G. R. (2009). Reflexivity: Promoting rigour in qualitative research. Nursing Standard (Through), 23(23), 42–46. https://doi.org/10.7748/ns2009.02.23.23.42.c6800

Kabeer, N., Mahmud, S., & Tasneem, S. (2011). Does paid work provide a pathway to women’s empowerment? Empirical findings from Bangladesh. GSDRC. http://hdl.handle.net/10361/2598

Kamal, S. M., & Hassan, C. H. (2013). Socioeconomic correlates of contraceptive use among the ethnic tribal women of Bangladesh: Does sex preference matter? Journal of Family & Reproductive Health, 7(2), 73–86. PMC4064774.

Karniel-Miller, O., Stier, R., & Pessach, L. (2009). Power relations in qualitative research. Qual Health Res, 19(2), 279–289. https://doi.org/10.1177/1049732008329036

Kleinsasser, A. M. (2000). Researchers, reflexivity, and good data: Writing to unlearn. Theory Into Practice, 39(3), 155–162. https://doi.org/10.1207/s15430421tip3903_6

Lakew, Y. (2017). In Simone Tosoni, Nico Carpentier, Maria Francesca Murr, Richard Kilborn, Leif Kramp, Risto Kunelius, & Anthony McNicholas (Eds), Statistical Tales: Bringing in reflexivity to make sense of quantitative data (p. 225).

Lal, J. (2018). Situating locations: The politics of self, identity, and “other” in living and writing the text Feminist dilemmas in fieldwork (pp. 185–214). Routledge.

Lee, D. (1997). Interviewing men: Vulnerabilities and dilemmas. Women’s Studies International Forum.

Mallick, D., & Rafi, M. (2010). Are female-headed households more food insecure? Evidence from Bangladesh. World Development, 38(4), 593–605. https://doi.org/10.1016/j.worlddev.2009.11.004

Mero-Jaffe, I. (2011). ‘Is that what I said?’ interview transcript approval by participants: An aspect of ethics in qualitative research. International Journal of Qualitative Methods, 10(3), 231–247. https://doi.org/10.1177/16094069110000304

Patnaik, E. (2013). Reflexivity: Situating the researcher in qualitative research. Humanities and Social Sciences Studies, 2(2), 98-106. https://www.researchgate.net/publication/263916084.

Patton, M. (2015). Qualitative research & evaluation methods: Integrating theory and practice: The definitive text of qualitative inquiry frameworks and options. Thousand Oaks, California: SAGE Publications, Inc.

Roy, P., & Promila, M. (2014). Quest for security, equality, equity and integration: Locus of Indigenous women in Bangladesh. Asia Indigenous Peoples Pact (AIPP) and Kapaeeng Foundation.

Roy, R. D., & Chakma, M. K. (2015, 10 December). Chittagong hill Tracts national Seminar on Indigenous peoples in Bangladesh: Human rights and Sustainable development goals. UNPO. http://unpo.org/article/18794

Russell-Mundine, G. (2012). Reflexivity in Indigenous research: Reframing and decolonising research? Journal of Hospitality and Tourism Management, 19(1), 85–90. https://doi.org/10.1017/jht.2012.8

Schendel, W. V., & Bal, E. (1997). Beyond the “tribal” mind-set: Studying non-Bengali peoples in Bangladesh and West Bengal. In B. B. Chaudhuri, R. D. Gupta, S. Dasgupta, & P. Tripura (Eds), Contemporary society: Concept of tribal society (5, pp. 121–138). Concept Publishing Company.

Scott, P. J. (2016). Mixed methods: A paradigm for holistic evaluation of health IT. In E. Ammenwerth, & M. Rigby (Eds), Evidence-based health informatics (p. 102). https://doi.org/10.3233/978-1-61499-635-4-102

Taylor, S. J., Bogdan, R., & DeVault, M. (2015). Introduction to qualitative research methods: A guidebook and resource. John Wiley & Sons.

Tripura, P. (2014). Indigenous peoples under the legal and policy frameworks of Bangladesh. Asia Indigenous Peoples Pact (AIPP) and Kapaeeng Foundation.

Uddin, A. (2016). Dynamics of strategies for survival of the indigenous people in southeastern Bangladesh. Ethnopolitics, 15(3), 319–338. https://doi.org/10.1080/17449057.2015.1037060

Uddin, J., Hassin, M. Z, Mahbub, F., & Hassain, M. Z. (2013). Healthcare-seeking behavior among the Chakma ethnic group in Bangladesh: Can accessibility and cultural beliefs shape healthcare utilization? International Quarterly of Community Health Education, 33(4), 375–389. https://doi.org/10.2190/IQ.33.4.e

UNICEF (2015). Chittagong hill Tracts. UNICEF. Retrieved 27 Sep 2018 from http://www.unicef.org/bangladesh/CHT.pdf

Walker, S., Read, S., & Priest, H. (2013). Use of reflexivity in a mixed-methods study. Nurse Researcher, 20(3), 38–43. https://doi.org/10.7748/nr2013.01.20.3.38.c9496

Wertz, F. J. (1984). Procedures in phenomenological research and the question of validity. Studies in the social Sciences, 23, 29-48. https://psycnet.apa.org/record/1985-13517-001.