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INCLUSION OF MARGINALISED COMMUNITIES DURING POST-DISASTER CONTEXT IN SRI LANKA: WHAT METHODOLOGY?

A.P.K.D. Mendis¹, M. Thayaparan² and Y. Kaluarachchi³

ABSTRACT

Research methodology is a general research strategy that defines how research should be carried out. It includes a system of beliefs and philosophical assumptions that shape the understanding of the research questions and underpins the choice of research methods. Additionally, research methodology is an integral part of any research and helps to ensure consistency between chosen tools, techniques, and underlying philosophy. Therefore, this article shows the perspectives to choose the most effective methodology to increase the inclusion of marginalised communities during the post-disaster phase in Sri Lanka. A systematic literature review comprising of 61 articles adopted as the best-suited methodology for this research. The philosophical position of this research is interpretivism, whereas the abductive approach is utilised for theory development. Hence, more than one qualitative data collection method is used, and this research adopts a multi-method qualitative approach. Furthermore, case study and survey strategies are chosen as the most suitable strategies for this research. Two Grama Niladhari divisions affected by natural disasters in Sri Lanka are selected as the cases. Data collection techniques adopted in this research are literature review, structured interviews, desk study, stakeholder interviews, key informant interviews, focus group discussions, and expert validation interviews. Data analysis techniques are literature synthesis, relative importance index, stakeholder analysis, and code-based content analysis. Furthermore, the article discusses how researchers achieve the reliability and validity of research findings and ethical considerations.

Keywords: *Inclusivity; Marginalised Communities; Methodology; Post-disaster Phases.*

1. INTRODUCTION

It is increasingly recognised that disasters have disproportionate consequences for affected populations and that the most marginalised tend to impact disasters significantly (Sharma, 2014). Marginalisation is usually characterised by a lack of opportunity and the right of individuals and communities to use choices available to others, often due to

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economic inequality, social exclusion and lack of control over political processes. In each mainstream community, certain categories of persons are identified as vulnerable. It was argued that most of these people were not necessarily marginalised, even though women, older people, persons with disabilities and children were often marginalised because of widespread prejudice and vulnerability. In the face of natural disasters, these communities are often affected by multi-layered marginalisation and are less resilient to risk aversion in the global and local contexts. Inclusivity promotes equity and rights in post-disaster management strategies, making everybody less vulnerable (Mendis et al., 2022, 2023). Therefore, marginalised communities should be explicitly considered in preparing policies for post-disaster management (Kammerbauer & Wamsler, 2017). Without consideration, these groups will often expand higher rates of deaths, injuries, and economic losses and take longer to recover. Using data, communication, strategy, policy-based review and comprehensive decisions, marginalised communities can assist in disasters (Mendis et al., 2022). Furthermore, while focussing on what limits people's ability to reduce their risk, the policymakers' objectives for reducing disaster risk should be to emphasise understanding people's capacity to resist and recover from disasters, as well as to improve the overall resilience of people, society and systems (Maurya, 2019).

However, while the international community has adopted the ideals of resilience and inclusion, marginalised communities are usually overlooked in post-disaster management (Sharma, 2014). According to Wickramasinghe (2014), the breadth of the current community protection system is very limited, and the existing system needs to adapt more adequately to the real needs of marginalised communities in the post-disaster context in Sri Lanka. There is a dearth of literature on the participation of marginalised communities during the post-disaster phase in Sri Lanka. Furthermore, policies to support marginalised communities need to be reviewed to explore how such policies are implemented to benefit disadvantaged groups in a post-disaster situation. Thus, this research aims to enhance the inclusion of marginalised communities during the post-disaster phase in Sri Lanka. The objectives of the research are:

01. To critically review the challenges marginalised communities face in the post-disaster context.
02. To develop a stakeholder mapping to understand stakeholder engagement with marginalised communities to improve inclusivity during the post-disaster context in Sri Lanka.
03. To investigate policies related to marginalised communities in terms of their level of significance to improve inclusivity during the post-disaster phase in Sri Lanka.
04. To determine barriers to policy implementation regarding the inclusion of marginalised communities during the post-disaster phase in Sri Lanka.
05. To propose strategies to improve the inclusion of marginalised communities during the post-disaster phase in Sri Lanka.

An appropriate research methodology is critical to attaining these objectives while providing the most out of the research. Therefore, this paper aims to design the research methodology to enhance the inclusion of marginalised communities during the post-disaster phase in Sri Lanka. The continued exploration and application of this methodology will contribute to the ongoing and future efforts to promote the rights and well-being of marginalised communities.

2. RESEARCH METHODOLOGY

Research methodology is a general research strategy defining how research should be carried out (Kumar, 2011). It includes a system of beliefs and philosophical assumptions that shape the understanding of research questions and underpins research methods (Melnikovas, 2018). Initially, the authors referred to 61 research articles (consisting of empirical findings) obtained through a systematic review of the literature within the scope of the study (Mendis et al., 2023) to identify different methodologies, data collection, and analysis tools to adopt the best-suited methodology for this research. Accordingly, the following section discusses the methodological design employed to achieve the aim of this research with proper justifications.

2.1 RESEARCH DESIGN

Researchers have developed different forms of methodological models that can be adapted to establish the research procedure for a particular research following a systematic investigation. The two most prominent research design models are the nested model developed by Kagioglou et al. (2000) and the research onion model developed by Saunders et al. (2019). Social science researchers widely use the research onion model to develop the theoretical framework. The research onion provides an effective progression through which a research methodology can be designed (Bryman, 2008). As a result, the Saunders research onion model is followed to design the methodology. Figure 1 depicts a graphical representation of the research process followed throughout the research adhering to Saunders research onion model.

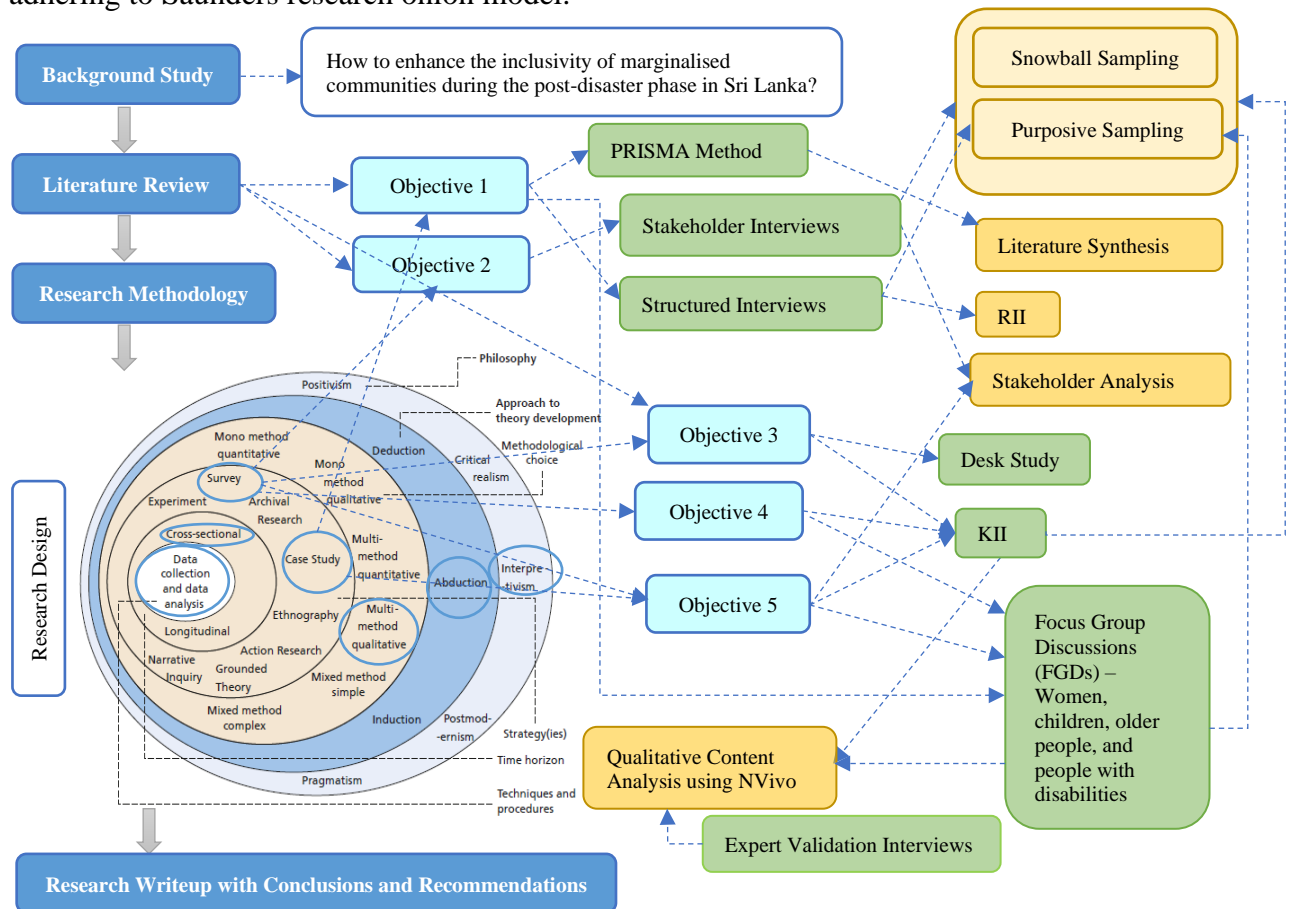


Figure 1: Graphical representation of the research process

Figure 1 shows six layers of Research Onion; philosophy, approach to theory development, methodological choice, strategies, time horizon, and techniques and procedures. To understand the next layer, the researcher must unravel each layer, beginning with the outermost layer. Consequently, the following subsections discuss the methodology adopted on each layer.

2.1.1 Research Philosophy

Research philosophy refers to the set of beliefs, assumptions, and principles that guide and influence the researcher's approach to conducting research. The Saunders research onion explains three philosophies: ontology, epistemology, and axiology. Each research philosophy has different views attached. The most significant are positivism, critical realism, interpretivism, postmodernism, and pragmatism, which influence how the researcher thinks about the research process (Saunders et al., 2019).

Ontology mainly concerns the nature of reality and its characteristics (Saunders et al., 2019). The two leading ends of ontology can be identified as realism and idealism. According to Amaratunga et al. (2015), in realism, the researcher is regarded as being born into a living, social environment with the reality that exists out there. Idealism assumes that reality begins with ideas or thoughts based on different perspectives of people. **Epistemology** concerns assumptions about proper and valid knowledge and how knowledge is communicated to others (Burrell & Morgan, 2017). There are also two extremes in the epistemology assumption. One extreme suggests that knowledge is observable, evidence-based, and objective. This extreme encourages quantifiable observations and statistical analysis. The other extreme, on the other hand, relies on knowledge based on people and their opinions, where subjectivity is encouraged (Saunders et al., 2019). **Axiology** is a set of values and ethics researchers use throughout the research process to ask how they deal with their values and ethics, as well as the values and ethics of the research participants (Saunders et al., 2019). A study can be value-laden or value-free. In a value-free study, the choice of what and how to study is determined by objective criteria, while in value-laden research, the choice is based on human values and experiences (Easterby-Smith et al., 2018).

As set out in the aim and objectives, the study expects to identify the different views of respondents regarding the challenges faced by the marginalised communities in the post-disaster phases and the stakeholder engagement with marginalised communities to improve inclusivity during post-disaster phases. Moreover, the study needs to investigate the policies related to disaster management and marginalised communities in terms of their significance level to improve inclusion, determine the gaps between policies and practises, and propose strategies to improve the inclusion of marginalised communities during the post-disaster phase in Sri Lanka. Different people can perceive marginalisation differently, as it is a subjective and intangible phenomenon. Thus, the study valued and encouraged the free flow of ideas, opinions, and perceptions of people based on their experience within the research environment and considered human interaction as the main driver of the study as in interpretivism philosophy. Hence, the study takes the ontological assumption that reality is not predetermined but is constructed socially by individuals together, the epistemological assumption that knowledge is gathered by examining the opinions and interpretations of people, and the axiological assumption that the subjective values, intuition, and biases of the researcher are essential.

2.1.2 Approaches to Theory Development

According to Saunders et al. (2019) in the Research Onion, the research approach is the second layer after the research philosophy. It relates to how the theory is developed and designed concerning being inductive, deductive, or abductive. According to Soiferman (2010), the inductive approach, or "bottom-up," begins with data collection to explore a phenomenon and allow a theory to emerge. In contrast, the deductive approach, known as the "top-down," begins with theory and then develops an empirical observation to test the theory (Park, 2020; Saunders et al., 2019). Under the abductive approach, it generates a new theory or modifies an existing one, which is tested for validity through additional data collection (Saunders et al., 2019). This research initially considered some pre-established theories or knowledge concerning marginalisation, inclusivity, stakeholder engagement, marginalised communities, disaster management, and its policy perspectives. Besides, further investigation is required through primary data collection to identify the context-specific challenges that the marginalised communities face, the stakeholders' positions, and strategies to enhance the inclusion of marginalised communities through post-disaster development programmes via required policy refinements and practical policy implementation. Hence, the abductive approach is the most suitable approach for this research.

2.1.3 Methodological Choice

The third exterior layer of the Research Onion, methodological choice, essentially entails choosing between qualitative, quantitative, and mixed methods for research (Melnikovas, 2018). Creswell (2003) mentioned that the quantitative approach mainly focuses on statistical procedures. The quantitative study would be more appropriate for the research, which initiates the research question with 'what', 'who', 'where', 'how much' and 'how many' (Smith et al., 2002). The qualitative research approach is most appropriate for cases evaluating social, attitudinal, and exploratory behaviours and beliefs (Naoum, 2007). Ritchie et al. (2014) stated that the qualitative approach is more suitable when the research question starts with 'how', 'what' and 'why'. The mixed approach is not a substitute for the qualitative or quantitative approaches but a combination of both approaches, which avoids the negative points of the two approaches (Johnson & Onwuegbuzie, 2004).

This research intends to enhance the inclusion of marginalised communities during the post-disaster phase by identifying the challenges faced by marginalised communities, improving stakeholder engagement, removing the policy gaps and barriers in policy implementation, and finally proposing strategies to enhance the inclusion of marginalised communities during the post-disaster phase in Sri Lanka. According to Riger and Sigurvinsdottir (2016), the qualitative approach is primarily concerned with understanding, explaining, exploring, discovering and clarifying a group of people's situations, feelings, perceptions, attitudes, beliefs, and experiences, which best suits this research. Although quantitative research may also capture the responses of those who have been marginalised, qualitative methods allow more unfettered communication.

2.1.4 Research Strategies

The fourth outer layer of the Research Onion model is the research strategy. Research strategies include experiments, surveys, case studies, ethnography, action research, grounded theory, narrative enquiry, and archival research (Saunders et al., 2019). As Sexton (2003) stated, the appropriate research strategies should be selected according to the philosophical position of the research. Based on the predominantly interpretivism

view of the research, with the available theoretical prepositions and empirical studies, case study and survey strategies are chosen as the most suitable strategies for this research.

Case Study Strategy: A case study is an in-depth investigation into a matter or phenomenon within its real-life background (Yin, 2017). It is especially suitable to undertake case studies as a strategy when the research problem consists of "why" or "how" questions because of the need for an in-depth investigation. The selection of cases could be single cases or multiple cases. Yin (2017) states that a single case study suits a 'critical, unusual, common, revelatory, or longitudinal case'. Multiple case studies can be chosen if the result could be replicated across the cases or could be predicted the variation of results in cases due to a different contextual factor. Respectively, Yin (2017) terms these as literal and theoretical replication.

Consequently, for this research, multiple holistic case studies are used to identify the challenges marginalised communities face and propose strategies to improve the inclusion of marginalised communities during the post-disaster phase in Sri Lanka. A deep understanding of the study area is critical to accomplishing these research objectives. In addition, multiple cases are selected to apply replication in answering the research question since a single case study will not provide that provision. Two Grama Niladhari (GN) divisions affected by natural disasters in Sri Lanka are selected as cases. According to Yin (2017), the boundary of the cases concerns the period covered by the case studies, relevant social groups, organisations, or geographic areas where the type of evidence is to be collected. The case study boundary for this research is the GN divisions affected by natural disasters in Sri Lanka. The unit of analysis leads the research design to identify the data to be collected by defining the logic linking the data to the propositions and the criteria to interpret the findings (Yin, 2017). 'Inclusivity of Marginalised communities' is the unit of analysis of the research. As a result, we chose women, children, people with disabilities, and older adults impacted by natural disasters in Sri Lanka purposefully from each of the two case studies, Panangala North and Paragoda West GN divisions.

Survey Strategy: A survey can collect information from a sample of individuals through their responses to the questions (Check & Schutt, 2012). The significance of the survey strategy is that it allows the researchers to benefit from different data collection techniques, including both quantitative and qualitative such as questionnaires, interviews, and focus group discussions (Singleton & Straits, 2009). According to Jansen (2010), the survey technique generally includes quantitative features that depict numerical distributions of variables in the sample or population. However, as the author further indicated, a qualitative aspect of identifying and exploring variances in the population can also be identified within the survey strategy. Essentially, qualitative surveys do not seek to establish any numerical distribution, instead focusing on determining the diversity of a phenomenon within a given population. Furthermore, the depth provided by qualitative surveys is maintained while a reasonably large number of respondents are given voice (Davey et al., 2019; Richardson, 2004; Saraceno et al., 2007). Fink (2002) also recommended the qualitative survey method to explore in-depth opinions, perceptions, and experiences of respondents in a population regarding a particular subject matter. Consequently, the qualitative survey strategy is suitable for this research to investigate the policies related to marginalised communities and disaster management, to develop a stakeholder mapping to understand the stakeholder engagement with

marginalised communities, to determine the policy gaps and barriers to policy implementation, and to propose policy-wise strategies to improve the inclusion of marginalised communities during the post-disaster phase in Sri Lanka, as this research intends to capture the experiences and opinions of policymakers and policy implementers who are involved in disaster management initiatives.

Yin (2017) states that the findings obtained under the survey strategy can be generalised to a larger population. In contrast, the case study strategy focuses on an in-depth analysis of a single case or a small number of cases to provide detailed insights and understanding of specific phenomena or contexts. Accordingly, both strategies are essential to this research to enhance the comprehensiveness and validity of research findings (Gable, 1994).

2.1.5 Time Horizon

The fifth outer layer of the research onion model describes the time frame the project is expected to be completed (Saunders et al., 2019). Two types of time horizons are specified within the research onion; cross-sectional and longitudinal (Bryman, 2008). A longitudinal study analyses a phenomenon over time to compare data (Caruana et al., 2015). A cross-sectional study is a 'snapshot' study in which the phenomenon is investigated at a specific time (Setia, 2016). This research intends to study the present situation of the inclusion of marginalised communities during the post-disaster phase in Sri Lanka. Hence, regarding time horizons, this research is a cross-sectional study.

2.1.6 Techniques and Procedures: Data Collection and Analysis

Primary data and secondary data are the two basic forms of data. Primary data can be gathered from first-hand experience and are not changed or altered (Salkind, 2010). Secondary data refer mainly to previously published sources (Smith, 2008). Data collection procedures generally give a systematic method of acquiring information to answer the research question. Data analysis compacts a significant amount of collected data to produce meaningful interpretations. Data analysis depends on the researcher's empirical thinking and interpretation style (Creswell & Poth, 2019). This study employs several data collection and analysis techniques under case study and survey research strategies to achieve research objectives. As the initial step of this research, a background study was conducted to identify the research gap and formulate the research problem, aim, and objectives.

Apart from the narrative literature review, a systematic literature synthesis is conducted by adopting Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) mainly to explore the 01st objective; challenges faced by marginalised communities in the post-disaster phases in Sri Lanka (Mendis et al., 2023). This objective is further strengthened during the primary data collection process through structured interviews and Focus Group Discussions (FGDs) under the two selected case studies. Data collected from the structured interviews with Likert scale factors are analysed using the Relative Importance Index (RII). Semi-structured interviews with key stakeholders involved with disaster management are conducted under the survey strategy to address the 02nd objective. Stakeholder Analysis (SA) is used to analyse the data collected through interviews to develop the stakeholder mapping to understand stakeholder engagement with marginalised communities to improve inclusivity during the post-disaster phase in Sri Lanka. A desk study of existing policies is carried out to get information about the policies related to marginalised communities in terms of their importance in improving

inclusivity during the post-disaster phase in Sri Lanka (Mendis et al., 2022). Key Informant Interviews (KII) under the survey strategy are conducted using semi-structured interviews to achieve the 03rd objective with fundamental stakeholders to understand the level of significance of the policies identified through the desk study and to achieve the 04th objective to determine the barriers to policy implementation in the context of inclusion of marginalised communities in the post-disaster phase. To achieve 05, to propose strategies to improve the inclusion of marginalised communities during the post-disaster phase, primary data is collected from FGDs, KII, and stakeholder interviews. FGDs are conducted as the leading data collection technique within the case studies. Four FGDs are conducted, representing each marginalised community category in each case study. The data collected through the KIIs and FGDs are analysed using the qualitative content analysis method using NVivo software. Finally, five expert interviews for data validation are conducted with policymakers and experts in the disaster management sector to confirm the strategies proposed through the research. Since more than one qualitative data collection technique and the corresponding analytical procedure are adopted in this research, according to Saunders et al. (2019), this research can be recognised as a multi-method qualitative study under the methodological choice.

3. RELIABILITY AND VALIDITY OF RESEARCH FINDINGS

The scientific rigour of qualitative research, which is linked to the reliability and validity criteria used in its development, is frequently questioned due to its underpinning characteristics (Golafshani, 2015). According to Yin (2011), it is possible to use methodological strategies to ensure validity and reliability in qualitative research.

3.1 RELIABILITY PERSPECTIVES AND PROCEDURES

According to Saunders et al. (2019), reliability refers to whether your data collection techniques and analytic procedures would produce consistent findings if repeated on another occasion or if a different researcher replicated them. Table 1 presents the strategies used by the researcher to achieve reliability.

Table 1: Strategies used to achieve reliability

Strategies	Methods used to implement strategies
Multiple sources of data	Literature review (both narrative and systematic review of literature adhering to PRISMA guidelines), Desk study on policies, structured interviews, stakeholder interviews, Key Informant Interviews (KII), Focus Group Discussions (FGD), and Expert validation interviews
Creating a database	Storing all literature sources used in the research in the Mendeley database. Maintaining a handwritten journal on the research Keeping word-processed documents on research data and findings. Maintaining a database with the contact details of interviewees. Audio taping of the interviews and FGDs with the consent of participants Maintaining interview transcripts

Maintaining a chain of evidence	Tabulating the data collected using MS Excel and NVivo software Creating links between the interview questions, the data collected (from secondary and primary sources mentioned under multiple data sources), and the conclusions drawn.
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Table 1 shows **multiple data sources** used when asking the same question from different respondents to increase triangulation. According to Flick et al. (2014), a line of enquiry can be converged by using multiple data sources. Triangulation can improve the research's validity and reliability (Given, 2008; Santos et al., 2020). **Creating a database** assists the researcher in organising and documenting the data collected. Therefore, a comprehensive database is created using the strategies stated in Table 1. As Yin (2009) claimed, such documentation should be prepared so the researcher and other researchers can retrieve it efficiently later. Therefore, creating a database can increase the reliability of the entire research. Moreover, **a chain of evidence** can also achieve the reliability of the study findings. A chain of evidence explicitly links the questions asked, the data collected, and the conclusions drawn.

According to Saunders et al. (2019), reliability aims to minimise errors and biases in a study. Reliability is a crucial characteristic of research quality; however, whilst it is necessary, more is needed to ensure good-quality research. Therefore, various forms of validity have also been identified to ensure the quality of research, as discussed in the next section.

3.2 VALIDATION STRATEGIES

'Validation' in qualitative research is considered an attempt to evaluate the 'accuracy' of the findings, as best described by the researcher, the participants and the readers. Furthermore, validation is viewed as a distinct strength of qualitative research in that the account made through extensive time spent in the field, the thick, detailed description and the closeness of the researcher to the participants in the study all add to the value or precision of a study (Elo et al., 2014). Creswell and Poth (2019) recommend using multiple validation strategies regardless of the type of qualitative approach. In addition, they recognise that qualitative research has many types of validation, and the authors must choose the types and terms that are comfortable with them. Table 2 shows nine strategies frequently used by qualitative researchers during the validation process adapted from the work of Creswell and Poth (2019). Strategies are not presented in any specific order of importance. However, they are organised into three groups by lens the strategy represents the researcher's lens, the participant's lens, and the reader's or reviewer's lens (Creswell, 2016).

Table 2: Strategies used to achieve validity

Categories of lens	Strategies for validation	Methods used to implement strategies
Researcher's Lens	Corroborating evidence through triangulation of multiple data sources (Given, 2008; Glesne, 2016; Patton, 2002, 2015;	Use of multiple and different data collection techniques; Literature review (both narrative and systematic literature review adhering to PRISMA guidelines), Desk study on policies, structured interviews, Stakeholder interviews, Key Informant

	Santos et al., 2020; Yin, 2014)	Interviews (KII), Focus Group Discussions (FGD), Expert validation interviews
	Discovering negative case analysis or disconfirming evidence (Patton, 2015; Yin, 2014)	Reveal both positive and negative analysis (within primary data analysis, secondary data analysis, and both primary and secondary data analysis [i.e., discussion section] while providing a realistic assessment of the phenomenon under study)
	Clarifying researcher bias or engaging in reflexivity (Hammersley & Atkinson, 1995; Merriam & Tisdell, 2015)	Disclose the understanding of the biases, values, and experiences that we bring to the study from the outset so that the reader understands the position from which we, as the researchers, undertake the inquiry.
Participant's Lens	Member checking or seeking participant feedback (Glesne, 2016; Merriam & Tisdell, 2015)	Solicit the participants' opinions on the credibility of the findings and interpretations through validation interviews.
	Prolonged engagement and persistent observation in the field (Glesne, 2016; Merriam & Tisdell, 2015)	-
	Collaborating with participants throughout the research process (Patton, 2015)	-
Reader's Lens	Enabling external audits (Merriam & Tisdell, 2015)	-
	Generating a rich and thick description (Creswell & Poth, 2019; Merriam & Tisdell, 2015)	Provide details when describing a case or when writing about a theme (codes) Create links between principal codes and semi-codes Provides direct quotes
	Having a peer review or debriefing of the data and research process (Creswell & Poth, 2019)	Get the involvement of specialists Submit articles to get feedback from peer reviewers

When examining the nine procedures, Creswell and Poth (2019) recommend that qualitative researchers use at least two validation strategies in any given study. Therefore, among these nine strategies, we engage in six strategies to improve the validation of this research. The methods we use to implement each strategy are depicted in Table 2.

4. ETHICAL CONSIDERATIONS

When dealing with human participants, research projects should rigorously follow ethical considerations (Alshenqeti, 2014; Brinkmann & Kvale, 2005). As a result, human participation in this research is very high. Before collecting data, we received ethical approval from the University Ethics Committee (UERC) (Ethics Declaration /Clearance Number: ERN/2022/003). Therefore, we initially introduced research to participants

through a 'participation information sheet'. Furthermore, we informed them that participation in the research was on an entirely voluntary basis. If someone wishes not to participate in the whole or part of the data collection process, he/she will be allowed to leave the process at any time, as there is no obligation for them to be part of it. The participants are coming entirely of their free will, and there is complete freedom for them to skip the questions they are uncomfortable answering. Those who agreed to participate received the 'informed consent form' (separate consent forms [two-part consent structure] were generated for children and parent/guardian) before conducting the data collection process. All guidelines and forms were translated into Sinhala where necessary.

5. CONCLUSIONS

In this paper, the authors have tried to develop an appropriate methodology suited to enhance the inclusion of marginalised communities during the post-disaster context in Sri Lanka. The adopted methodology played a crucial role in uncovering valuable insights and recommendations, shedding light on the challenges faced by marginalised communities and offering potential strategies to address their needs effectively. This methodology helps this research effectively involve marginalised communities as active participants to ensure their voices and perspectives are accurately represented. Furthermore, it allows for a comprehensive exploration of their unique experiences, needs, and challenges, providing valuable insights to improve their inclusion. At present, this research is progressing in the analysis of primary data collection under this methodology. Further exploration and application of this methodology will contribute to ongoing efforts to promote the rights and well-being of marginalised communities.

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