Selection of Study Sites and Participants for Research into Nepal's Federal Health System

Abstract

Introduction: This article offers insights into the process of selecting representative study sites and participants in a longitudinal study in Nepal. As part of the research design process, the selection of representative areas in a large-scale study requires both intellectual and practical considerations. **Methods:** We briefly introduce our study into the impact of federalization on Nepal's health system before outlining the criteria considered for the identification of fieldwork sites and the most appropriate study participants for the qualitative interviews and participatory components of this research. **Findings:** The selected areas are presented with an overview of the areas selected and their justification. The study sites and participants should consider a broader coverage with diverse participants' backgrounds. Several factors can influence the identification and recruitment of the right participants, including the use of appropriate gatekeepers, gaining access to recruit participants, logistical challenges, and participant follow-up. **Conclusion:** We conclude that longitudinal qualitative research requires a carefully selected diverse set of study sites and participants to assess the complexities and dynamics of the health system and service provision to ensure that longitudinal research is representative and effective in addressing the research question(s) being investigated.

Keywords: *Federalization, longitudinal study, Nepal, qualitative research, site and participant selection*

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Access this article online

Website: https://www.who-seajph.org

DOI: 10.4103/WHO-SEAJPH.WHO-SEAJPH_169_22

Quick Response Code:

Introduction

Primary research is typically conducted in a specific "field site" or setting, the selection of which requires careful planning and identification of representative areas, especially in large-scale, national, or longitudinal studies. Site selection is a critical step in research as it impacts the quality and generalizability of the findings. In longitudinal studies, researchers follow participants over an extended period, which requires a stable and accessible site to ensure data quality and participant follow-up.[1] In the process of agreeing on a study site, the first consideration should be the formulation of the selection criteria. If we want the study site to be "representative," we need to ask ourselves: "What exactly do we want these areas to be representative of?" In our study, for example, we are interested in ensuring the representation of the three different tiers of government (federal, provincial, and local). However, we might also be interested in representativeness of other kinds. For example, are we looking for representativeness in terms of health profiles (i.e., areas with generally better or poorer health)? Or do we desire social-cultural diversity or geographical representation (i.e., urban/rural or in Nepal: mountain/hill/terai regions and provinces)? Or even areas representing different stages of implementation along the federalization process? Greater clarity in our selection criteria can help determine the types of study sites to be approached at the design stage.

Once the study sites are agreed on, the next step is to ensure that relevant (types of) people are invited to participate in the study so that, if they agree, the right mix of respondents is included in the data collection. This aspect also needs to be addressed rigorously and is fundamental to the validity of qualitative research findings.[2] While consideration for fieldwork sites in qualitative studies is around representativeness,[3] in terms of study participants, it is either situational representation or representation based on diverse participant characteristics such as demographics, years of work experience, or job role.[4] In longitudinal studies, time is also a key consideration[5] as one would want to consider changes over time: in our

How to cite this article: Wasti SP, van Teijlingen E, Simkhada P, Rushton S, Balen J, Subedi M, *et al*. Selection of study sites and participants for research into Nepal's federal health system. WHO South-East Asia J Public Health 2023;12:116-9.

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Submitted: 07-Oct-2022 **Revised:** 10-Apr-2023 **Accepted:** 27-Sep-2023 **Published:** 19-Jan-2024

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case, changes in the health system as the implementation of federalism progresses.

Federalized Health Systems Research Project in Nepal

Our 3-year (2020–2023) collaborative project is the first of its kind, aiming to examine the effects of federalization on the health system of Nepal.[6,7] It is a longitudinal study exploring changes to Nepal's health system following the devolution of power and authority in the country. The project is funded by a research grant from the United Kingdom (UK) under the Health Systems Research Initiative (representing the Medical Research Council, the Economic and Social Research Council, the Wellcome Trust, and the UK Foreign, Commonwealth and Development Office).

One of the key strengths of this project is that it is conducted by a team of international (Nepal and the UK), interdisciplinary researchers from different fields, including Public Health, Anthropology, Sociology, Political Science, Law, Health Economics, and Medicine, among others, with expertise in health system research, mixed-methods research, and participatory approaches. Given the broad and interdisciplinary nature of the study, a multi-methods approach involving routine health services data, qualitative interviews with key informants, and participatory policy analysis was used to explore developments in Nepal's federalized health system throughout the project period. As such, our study aimed to cover and include all three levels of government, and to represent all three of the main geographical areas of Nepal (hill, terai, and mountain), including both urban and rural areas of the country. Drawing on the study design and selection criteria, data were gathered from the federal level, three provinces, five districts, and nine local municipalities (local government areas). The diversity of Nepal made the question of selecting the subnational sites a tricky one, given the country's huge differences in geography (from high mountains to the lowland terai areas bordering India), connectivity (in terms of both road access and technological coverage), health facility coverage, and ethnicity and culture (Nepal has over 125 caste and ethnic groups with different social norms and values that may determine health-seeking behavior and utilization of health services[8]). In addition, our study specifically sought to include some of the more marginalized minority communities where access to and utilization of health services remains an issue of concern.[9]

The Identification and Selection of Study Sites

To reflect this diversity, and to appropriately address the study objectives, the following selection criteria were created when considering the selection of study sites:

i. Coverage of the three ecological belts of Nepal (mountain; hill; terai) as well as coverage of both urban and rural municipalities. In line with this, we purposively selected three out of seven provinces to cover the three ecological belts in Nepal while also being mindful of and drawing on preexisting relationships in each selected province
ii. Representation of a metropolitan city (Kathmandu, the capital city) as well as smaller urban and more rural areas of the country
iii. Within the selected provinces, we ensured that the selected municipalities were representative of a diversity of health facilities, from specialist central referral hospitals to local health facilities (primary health-care centers and health posts) at the ward level
iv. We also ensured that the areas selected varied in terms of connectivity, from the well-connected Nawalparasi West district on the Indian border to very remote hill areas with limited access to roads (Mugu and Sindhupalchok districts).

Recruitment of Study Participants

Within each study site, participants were recruited from diverse backgrounds using both random and purposive sampling,[2] to generate a representative and high-quality data set. A total of 145 participants were recruited from the Federal and Provincial governments (policy level), local elected members (municipality level), health service providers, and female community health volunteers (FCHVs) (facility/ward level), as well as academic researchers and representatives of development partners. In addition, the design of our study, which utilized the framework of the WHO's "health system building blocks," meant that we needed to pay particular attention to ensuring that we selected participants in a way that would ensure coverage of all six building blocks.[10]

At the local level, we used randomization to select from the large cohorts of health service providers and FCHVs, while purposively sampling local elected members and development partner representatives.[2] We used quota sampling:[2] first, we established a long list of potential study participants and set a quota for gender and years

of professional experience, randomly selecting men and women and more and less experienced people in particular positions.

Issues in Recruiting Participants

Several factors can influence the identification and recruitment of the right participants. The key issues we faced in our study were:

Gatekeepers

Using "gatekeepers" helped us with the identification and recruitment of potential participants as well as in understanding the personal and professional situations of potential participants that may affect their willingness to engage with the study (such as the busy schedule of government staff and the need to plan for the multiple follow-up visits to complete interviews). At the same time, the use of gatekeepers in some cases created challenges: including over the negotiation of who should be selected to participate – with gatekeepers sometimes attempting to exert control over who was invited to take part.

Gaining access to the participants

Notwithstanding the use of gatekeepers in many study sites, gaining access to the participants required building respectful, open, and trusting partnerships. Our project used native Nepali-speaking researchers who have extensive experience at both policy level and locally, which helped in the trust-building process. Researchers approached the study participants through direct contact (personal meeting, email, or phone) at the federal and provincial levels. At the local level, participants such as health workers, FCHVs, and elected members were recruited with the support of the gatekeepers who provided the contact details of health staff and FCHVs. They were then directly approached by members of the research team.

Logistical aspects

We had to give serious consideration to participants' other commitments, such as their work, family life, lack of time, and transport availability – all of which were frequent obstacles to participation. Policy-level participant interviews also faced challenges, including interviews being frequently interrupted by people needing official signatures or phone calls. Researchers must identify the logistical barriers and discuss potential solutions to mitigate such barriers, before commencing the study – as well as ensure flexibility in the data collection arrangements once the study begins.

Follow-up selection

The recruitment of participants was not a one-off process, as our longitudinal study was designed around annual follow-up interviews with participants. We found that some people who participated in the first round were not available at follow-up, usually because they had changed jobs between the first and the second rounds of data collection. This meant we had to decide whether to interview them again as former holders of a particular role (and get insights into their "old" job) and/or invite the new person in that post to be part of the follow-up. Where possible, we did both.

Conclusions

Participants are critical to longitudinal health systems research because they have a significant impact on the quality and generalizability of study findings. Rather than focussing on convenience, researchers should consider a variety of factors in selecting first study sites, and second individual participants. These include (i) representing a variety of geographical, social, ethnic, and cultural areas, as well as paying attention to characteristics of locally available health services; (ii) the specific needs of the study design (in our case, for example, this included ensuring the representation of all three tiers of government, as well as coverage of all six WHO health system building blocks); (iii) within study sites, including a diversity of participants including both policymakers/implementers and staff involved in health service delivery – as well as other relevant stakeholders. Where there are large numbers of potential participants, a sampling methodology may be required.

Researchers also need to be aware of potential challenges of managing fieldwork and the availability of participants, and plan and take steps to mitigate those challenges to ensure their effective involvement.

Authors' contribution

EvT and SR conceptualized the manuscript. SPW wrote the first draft. EvT, PS, MS, SR, JB, SP, BB, SG, AV, SS, JK, PA, and SM critically reviewed and further revised the manuscript. All authors reviewed and approved the final version.

Acknowledgments

The authors would like to thank the Nepal Federal Health System Project's Nepal-based staff who provided field-related information.

Financial support and sponsorship

This study is funded by the Health System Research Initiative in the UK (Round 6): Grant Reference No.: MR/T023554/1.

Conflicts of interest

There are no conflicts of interest.

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