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Who should I interview in a household survey? The role of multiple interviews in research on adaptation to environmental change

Jelena Luyts

Department of Geography and Institute of Life, Earth, and Environment (ILEE), University of Namur, Namur, Belgium

ABSTRACT

Data collected in 2022 in rural Senegal on household adaptation to environmental change highlights the benefits of interviewing multiple members of a household. Not only does it enrich the data collected, with each member complementing the interview of the others, but it also provides access to different lived experiences. This is critical to ensuring that policy responses are appropriate for all members of a household and that all lived realities are made visible.

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Introduction

Who is selected to participate in household-level surveys? The short and simple answer is: the head of the household, and only the head of the household. This is particularly true for research conducted in West Africa. In this region, the majority of household heads are men, 77% on average (Box 1), and so women are usually included indirectly, through the responses of their husbands or fathers (Dyck 2005). However, men, women, and more broadly also children, elders, and so on, do not perceive the same things in life and do not respond to the same stimuli, in particular regarding environmental change (Djouidi and Brockhaus 2011). Based on a field study conducted in rural Senegal, and drawing on previous research, it is argued that household-level studies, particularly those examining perceptions and adaptation behaviours in West Africa, should include multiple members of a household.

Box 1. Share of female-headed households in Africa compared to the rest of the world.

As the map in Figure 1 shows, the proportion of female-headed households varies widely across countries and continents. According to the 2017 United Nations Database of Household Size and Composition, on average, 30% of households worldwide are female headed. Countries in Africa and Asia have the lowest average proportions of female heads of household, at 29% and 19%, respectively. However, Figure 1 also shows disparities within continents. In the case of Africa, West Africa is one of the regions with the lowest average percentage of female-headed households at 23%, compared with 32% in East Africa. The reality of female-headed households varies widely across the continents. In more than half of countries in Africa and Asia, at least half of female-headed households are headed by single mothers with children under 15. This contrasts with Europe and North America, where the median figure is around 10%.

CONTACT Jelena Luyts  Jelena.luyts@unamur.be  Department of Geography and Institute of Life, Earth, and Environment (ILEE), University of Namur, Rue de Bruxelles 61, 5000 Namur, Belgium

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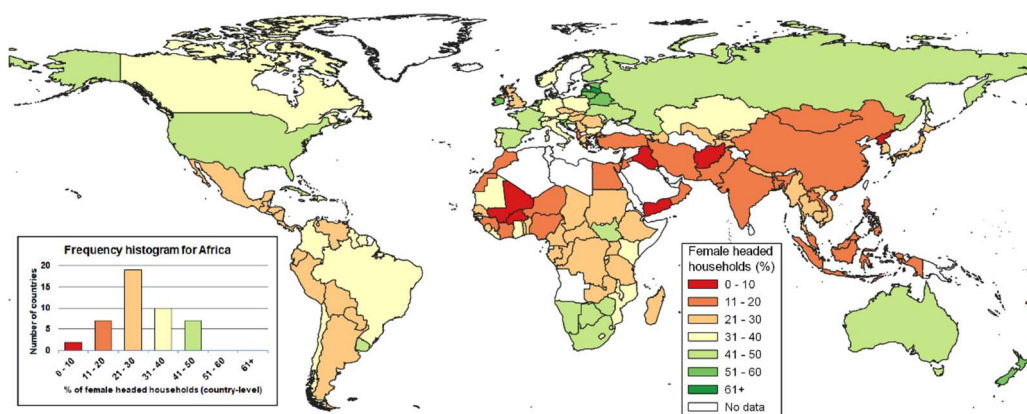


Figure 1. Share of female-headed households in 2017 at the country-level. Author: Jelena Luyts. Data source: 2017 United Nations Database of Household Size and Composition¹.

The overall risk of one spokesperson for the entire household

The root of the problem lies in the fact that most demographic studies interview only one person per household. Four main arguments are used to justify this: (1) the overall response rate is likely to be lower if several household members have to be interviewed; (2) the quality of the interview could be reduced because of possible interactions between the respondents, social desirability, or fear of breach of confidentiality; (3) a likely positive intra-household correlation makes a subsequent interview within the same household less informative than interviewing an individual from a new household; (4) the costs associated with at least doubling the number of interviews to be conducted or the need to reduce the number of households surveyed (O'Muircheartaigh, Smith, and Wong 2019). Considering all these aspects, the majority of studies at the household-level choose to interview only one individual and ask questions about the whole household.

Interviewing only one person is less problematic when objective issues are targeted such as household income or the number of members, i.e. when looking for facts. However, regarding more subjective information such as perceptions, decision-making processes, and lived experiences, information collected through another household member is not reliable (O'Muircheartaigh, Smith, and Wong 2019). The process of interviewing an individual on behalf of the household is called proxy reporting. Proxy reporting contrasts with self-reporting, where an individual respond on his/her own behalf. The knowledge of the intermediary in a proxy report varies from one household member to another, and from one topic to another. However, because individuals have unique perspectives shaped by their lived experiences, interactions, cultural backgrounds, and social contexts, proxy reporting can only provide insights into how individuals perceive and interpret the experiences of others in the household, not direct access to their subjective realities (Schwarz and Wellens 1997). Furthermore, proxy reporting is shaped by the values and beliefs of the proxy respondent (James and Woodsmall 2017), which influence the way information is interpreted and then reported.

In other words, proxy reporting fails to recognise the importance of the unique and equally valid experiences of each individual within the household (Dyck 2005; Reczek 2014). It then overlooks the diverse experiences, perspectives, and realities that coexist. By relying solely on proxy accounts, research risks homogenising these experiences and underestimating the nuanced ways in which gender dynamics, power structures, and individual identities manifest within the household. Recognising the individuality and importance of each household member's perspective is critical to foster a more inclusive and comprehensive understanding of household dynamics in research.

If only one, then (often) a man

An additional problem arises from the fact that it is common practice in demographic studies to interview primarily the head of household, who is often a man. For example, the final report of the 2013 census in Senegal mentions that data collection was based on direct interviews with household heads or their representatives (ANSD 2013). This creates a gender imbalance, as female household members are less likely to be directly interviewed. Issues that are particularly relevant to women, such as maternal health, child care, and gender-based violence, may not be fully captured or accurately reported by male respondents, and therefore decisions based on such data may not address the specific needs and challenges faced by women.

In West Africa, the historical and cultural norms of patriarchal family structures that have long been embedded in the region often give men the role of the primary decision-maker and authority over household affairs. As such, men are seen as the heads of the family, exercising control over family resources and representing the entire household in external interactions. While in most cases it makes sense to interview the head of the household because he is the one who knows the most about the household, this approach may inadvertently overlook the voices, experiences, and perspectives of women and other members of the household. This makes it all the more important to broaden the range of respondents.

Learning from other research fields to include multiple household members

In gender studies, family studies, feminist geography, and related fields, there is a growing awareness of the need to interview more than one person within a household. This is particularly true for studies that examine issues related to gender roles, power dynamics, and individual experiences. The main arguments advanced are: (1) the multiple perspectives, as each household member has unique experiences and perspectives that are of interest; (2) the exposure of power imbalances; (3) the more nuanced and contextually rich data, with access to how household members negotiate their roles and responsibilities; (4) the validation of information as the interviewing of multiple household members can help cross-check information; and (5) the improvement of policies, as multi-person interviews can inform gender-sensitive policies and interventions by providing a more accurate and comprehensive view of how policies may affect different household members (Harden et al. 2010; Reczek 2014). Depending on the research goal and guiding epistemology, one or more of these reasons may be advanced, either to broaden the perspective and seek for a “truth” or to support the idea that all experiences are truthful, even if they contradict each other (Reczek 2014). For the latter, the lived experience is the truth for that person and is therefore important and relevant.

A way forward to collect diverse perceptions and experiences

The primary aim of my research was to gain a better understanding of adaptation to environmental change in rural West Africa. Based on the idea that more transdisciplinary research in both theory and practice is needed in this area (Serrao-Neumann et al. 2021), an adjusted data collection embedded in social science was developed: structured timeline mapping (Luyts et al. 2024). Data collection took place in rural Senegal in 2022 (Box 2). It was decided to interview at least two people in each of the 17 households surveyed, based on the idea that lived realities are specific to each individual and thus multiple perspectives are needed to work at the household level. In all cases, the head of the household was a man, and in all but one case he was interviewed. Since this was rarely done, a secondary objective emerged: to assess the relevance of interviewing multiple people in the same household. The study was able to distinguish between different information domains, as questions were asked about the household’s economic situation, perceived environmental changes, and adaptation measures taken.

Box 2. Data collection in rural Senegal, one region, one village, several people per household.

In 2022 data was collected using an original data collection method inspired by social sciences and adjusted to the study of adaptation to environmental change: structured timeline mapping (Luyts et al. 2024). The aim was to uncover chronologies of adaptation at the household level. Therefore, structured timelines were filled out during an interview. However, to get the most complete picture of the household and to ensure that all realities were covered, several people per household were interviewed whenever possible.

In total, within the 23 households approached in a village in northern Senegal, at least two people were interviewed in 17 cases and three people were interviewed in five cases. Interviews were based on availability and not on targeting specific individuals. As a result, both parents were interviewed in seven households, one parent with a child were interviewed in four households, and both parents and a child were interviewed in five households. The sample included retired people, working people, and young adults still in education.

In the end, the focus was on the 17 households in which at least two members were interviewed, so 39 interviews were considered to assess the importance of multiplying perspectives within households for research (Figure 2).

A key question is: how would the results be different in practice if only the household head had been interviewed? Or, to put it another way, can we say that the household scale is worked on by interviewing only one person? To answer, let's first take a quick look at the results based on all interviews. Four chronologies of adaptation were identified, as shown in Figure 3. A first group of households (in orange) has only recently started to make conscious adaptations, approximately in the last decade, and for several economic activities that take place within the household. A second group of households (in yellow) has been making conscious adaptations throughout the period under study, and always for the same and main economic activity of the household. A third group of households (in blue) made conscious adaptations for their economic activity before changing their economic activity to one that was not dependent on environmental conditions, thus ending the need for economic adaptation to environmental change. The fourth group of households (in purple) made conscious adaptations at the beginning of the period under study, followed by a period of no adaptations, before recently starting to adapt again. The initial adaptations took advantage of the arrival of the dam and made the economic activity more prosperous, temporarily reducing the need to adapt.



Figure 2. Photo taken during an interview as an illustration of the data collection process. (Photo: Author)

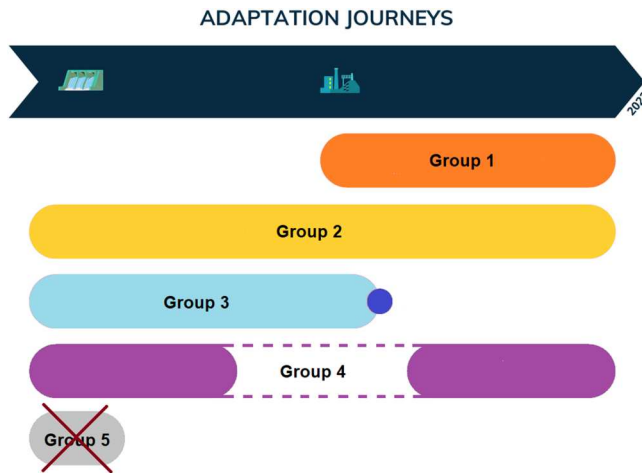


Figure 3. Four (five) types of adaptation chronologies (grey one present if only the interviews with the head of the household are considered) on a time span starting in the 80s (with the construction of a dam) until 2022, passing through the implementation of an agro-industry. The coloured zones represent the periods in which the adaptations took place.

At this stage of the analysis, the results would already have been different. If only the head of the household had been interviewed, a partial view would have been obtained, based only on his subjective reality. What would be different in practice? First, there would be five groups of adaptation chronologies instead of four. The additional group, shown in grey in Figure 3, would have made conscious adaptations only at the very beginning of the period under study and would have stopped without any change in activity or substantial change within their activity, as the most recent adaptations were mentioned by the women. This would concern four households where the women provided additional details on how their husbands adapted economically, providing a more complete understanding of the timeline of adaptation. This clearly illustrates how, at least for these four households, only the lived reality of the head of the household would have been accessed, not the reality of the household. Second, not only would the chronology be affected, but also the types of adaptations considered. In seven cases, the additional adaptations mentioned by the women concerned adaptations within the household, such as sleeping outside due to rising temperatures or working earlier for the same reason. Thus, these aspects would have been overlooked and neglected. Finally, in five cases, the adaptations made by women specifically for their own economic activity would not be known because they were not mentioned by the head of the household. This last point is not surprising since these adaptations are clearly embedded in the women's reality. Thus, in our study, women provide complementary information on the well-being of the household and on their additional contributions to the household economy, even providing complementary information on their husband's economic activities (Dyck 2005), influenced by their role and responsibilities within the household. Thus, interviewing only the household head provides only a partial picture of the household reality, leading to ineffective policies that neglect the different needs and challenges faced by different household members, especially women, youth and the elderly.

Including everyone to promote gender equality in the adaptation process to environmental change

In the specific context of studying adaptation to environmental change in West Africa, the inclusion of multiple members of a household in the data collection process promotes gender equality, regardless of the research goal or guiding epistemology. Indeed, visibility is given not only to the head of the household, often a man, but also to women, younger people, elders, and so on, since

their lived realities can only be accessed through self-reporting. Promoting gender equality in this context is not only a matter of social justice but also a pragmatic approach to building community resilience. To effectively adapt to environmental challenges, it is imperative to recognise that gender intersects with various aspects of vulnerability and resilience. It is clear from our data that adaptation is understood and lived differently depending on who is interviewed in the household. Inclusion should therefore extend to multiple members of the household, ensuring that their voices, needs, and contributions are heard and valued. This approach recognises the different experiences and vulnerabilities of each gender and leverages their unique strengths to create more holistic and sustainable adaptation strategies. Including everyone in the process not only promotes gender equality, but also improves the overall effectiveness and equity of environmental adaptation efforts, ultimately benefiting entire communities and ecosystems.

Finally, interviewing multiple household members is also beneficial in other areas of research. For example, in health studies, collecting perspectives from different household members can reveal differences in health behaviours, access to health services, and adherence to medical advice. This can lead to more effective public health interventions and personalised health care strategies. To illustrate, the study by Betz et al. (2013) highlights the need to survey adolescents and young adults with special healthcare needs themselves to improve their healthcare transitions. Similarly, in sociological research, interviewing multiple members can reveal diverse perspectives on family roles, decision-making processes, and social interactions within the household, providing a richer picture of social structures and relationships. Koenig et al. (2013) confirm this by showing how the decision-making process to move into assisted living is experienced in very different ways by the primary individual and their family members. In economic studies, understanding the financial behaviours and priorities of all household members can provide deeper insights into economic stability, resource allocation, and consumption patterns. Therefore, incorporating the voices of multiple household members increases the validity and reliability of research findings in various fields.

Note

1. Available online in the United Nations digital library (accessed October 19th 2023): <https://digitallibrary.un.org/record/3799696?ln=fr>

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Ethics declaration

The University of the first author ethics committee has been consulted about the steps to be taken to ensure the protection of interviewees. No personal data allowing identification of the individual was collected, and if this was given spontaneously, the recordings and transcriptions were anonymized. In this context, by guaranteeing the anonymity of the participants, no further steps were necessary.

Nevertheless, oral consent was asked and all necessary information about the research and the rights of the participants was communicated before starting the interviews.

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