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Access to outpatient health care services in rural India –
The contribution of health microinsurance

Access to outpatient health care services in rural India - The contribution of health microinsurance

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3ie	International Initiative for Impact Evaluation
ASHA	Accredited Social Health Activist
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy
CASP	Critical Appraisal Skills Programme
CBHI	Community-Based Health Insurance
CHAT	Choosing Healthplans All Together
CHC	Community Health Center
DEval	Deutsches Evaluierungsinstitut der Entwicklungszusammenarbeit
DiD	Difference-in-Differences
DIME	Development Impact Evaluation Initiative
FG	Guinean Franc
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GPS	Global Positioning System
HMF	Health Mutual Fund
HMI	Health Microinsurance
ICA	International Co-operative Alliance
IPA	Innovations for Poverty Action
IOOI	Input-Output-Outcome-Impact
J-PAL	Abdul Latif Jameel Poverty Action Lab
MIA	Micro Insurance Academy
NDAP	Non-Degree Allopathic Practitioner
NGO	Non-Governmental Organization
NRHM	National Rural Health Mission
OOP	Out-of Pocket
PHC	Primary Health Center
PPP	Purchasing Power Parity

PPS	Preferred Provider System
PSM	Propensity Score Matching
RCT	Randomized Controlled Trial
RDD	Regression Discontinuity Design
RSBY	Rashtriya Swasthya Bima Yojna
SHG	Self-Help Group
SHO	Self-Help Organization

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Chapter 1

Introduction

1.1 Health microinsurance in India

It is estimated that around 8 % of Indians are driven into poverty by high health care costs every year (Kumar et al., 2015). The share of private out-of-pocket-payments—i.e. payments to health care providers at the time of service use—borne by Indian households is one of the highest in the world (Dalal, 2017; Chatterjee, 2010). A majority of the Indian population (49 % of the rural and 56 % of the urban population) seeks care in the private sector instead of the public sector, despite much higher costs. Mostly, this is due to a lack of quality in public health care facilities (49 %), but also due to a lack of availability (45 %) and long waiting time (41 %) (MoHFW, 2017). Public investments in health care have not kept up with the high economic growth rates and increases in tax collections experienced by the Indian economy (Kumar et al., 2011). The share of the country's Gross Domestic Product (GDP) spent on health care remains well below the global average (Press Trust of India, January 31, 2017) and below those of countries such as Sri Lanka, Brazil or China (Yadavar, January 14, 2018).

Despite the hardship caused by paying for health care out-of-pocket, financial protection in the form of health insurance coverage remains low at around 25 % among the Indian population (Yadavar, January 14, 2018). Social health insurance schemes are limited to formally employed people (Kumar et al., 2011). The largest governmental initiative to provide social protection in health for the low-income population is Rashtriya Swasthya Bima Yojna (RSBY). This scheme was implemented in 2008 and is open for those living below the poverty line and other unorganized workers (MoHFW, n.d.). It offers protection from hospitalization costs up to 30,000 Indian Rupees per person per year¹. Recent evaluations, however, have found that an impact on the financial burden of hospitalization is questionable (Karan et al., 2017). Private health insurance, on the

¹Approximately 373 Euro as of May 2018, see Europäische Kommission (2018).

other hand, has been too expensive for India's low-income population and often not available in rural areas.

In February 2018, the Indian government announced a new initiative to extend health insurance coverage for inpatient care to more than 500 million Indians (those living below the poverty line and the lower middle class), with a cap of up to 500,000 Indian Rupees² per family per year (Biswas, February 2, 2018; Kazim, February 1, 2018; Ghosh, February 14, 2018). Details on how this scheme would be financed, structured, managed and implemented have not been published yet (Lall, February 6, 2018). As its predecessor, the scheme does not cover outpatient care, which is estimated to have even higher impoverishing effects than inpatient care (Berman et al., 2010; Shahrawat and Rao, 2011).

Because of the discrepancy between the need for and supply of affordable health insurance, Health Microinsurance (HMI) schemes have emerged throughout the country. Their aim is to protect the low-income population from catastrophic health care expenditures and to improve their access to care (Devadasan et al., 2004). They rely on the same principles as regular insurance, but small premiums due to limited and targeted benefit packages make them affordable to the low-income population (Churchill, 2006). Their organizational structures range from large commercial insurance providers partnering with Non-Governmental Organizations (NGOs) over microcredit organizations offering insurance products, health care provider-based schemes and community-based insurance initiatives (Devadasan et al., 2004; Okamoto, 2011). According to an inventory conducted by the Microinsurance Network, there were 35 active HMI products in India in 2013. The majority of these included coverage for inpatient care (33), a much smaller number also included outpatient care (11) (MiN, 2013).

1.2 Research question and basic concepts

Apart from providing protection from catastrophic health care expenditures, HMI are also envisaged to improve access to care by reducing out-of-pocket payments. As mentioned above, private care is generally more expensive than public care in India. Nevertheless, private Non-Degree Allopathic Practitioners (NDAPs) are the most important source of care for acute illness episodes in rural areas (Gautham et al., 2011; Raza et al., 2016b). These health care providers practice allopathy, although they do not have valid qualification in modern medicine. Some do not have any kind of qualification, while others hold degrees from traditional Indian systems of medicine (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy, often summarized under AYUSH) (Rohde and Viswanathan, 1995; Kumar et al., 2007; Viswanathan, 2004; Abraham, 2005;

²Approximately 6,214 Euro as of May 2018, see Europäische Kommission (2018).

Rao, 2005; Sabde et al., 2011).³ Due to the preference of NDAPs among the rural population, the inclusion of NDAPs and their outpatient services into insurance arrangements could be a chance to improve financial access to care. Therefore, in 2010, three newly established HMI schemes in rural northern India integrated NDAPs into their portfolio. According to our knowledge, they were the first HMI scheme in India to have done so, which makes it particularly valuable to study the effect on access to outpatient care. Hence, the present thesis consists of various independent publications which together address the question *whether the inclusion of NDAPs in HMI schemes can improve access to quality outpatient health care in rural India*. I opted for a qualitative research approach to this question as I am interested in how the insured themselves perceive the effect of insurance to access and what facilitators or barriers they experience. This information is important for understanding dynamics in place when insured make or not make use of insurance-related health care services and for improving accessibility of these. Ultimately, the insureds' subjective perception of the impact of being insured is also fundamental for understanding their decision to (re-)enroll into a scheme or not.

I draw on and contribute to concepts from health economics (access to care and the influence of financing mechanisms) and economic sociology (NDAPs and the social embeddedness of their economic activities within their communities and the effect of regulating their previously informal relationships with their patients). In the following, I first clarify the concept of *access* before elaborating on the concept of *social embeddedness* as a basis for the rest of the thesis .

When investigating access to care through HMI schemes, it is necessary to consider that the utilization of health care services is not only subject to financial considerations, but also to other factors. How and when people seek health care has long been a subject to scientific research, investigated by scholars of different disciplines like e.g. health economics, medical sociology and anthropology. A wide range of different concepts were developed along the way, e.g. the notions of *illness behavior*, *health seeking behavior*, *health care seeking behavior*, *health care services utilization* and *access*, which are closely interrelated and partly overlapping. While *illness behavior* refers to the way in which symptoms are perceived, evaluated, and acted upon by a person who recognizes some pain, discomfort or other signs of organic malfunction (Mechanic and Volkart, 1961), *health behavior* is defined as what induces people to take preventive action and to avoid risks to health (Mechanic, 1992). This is close to the understanding of *health seeking behavior* which, besides involving health promoting behavior, also includes the use of medical care and treatment. *Health care seeking behavior* focuses on situations in which an individual experiences an illness event and decides to seek care from a specific source. This could be treatment from formal or informal providers, but also self-treatment (MacKian et al., 2004).

³There have been recent efforts in some Indian states to allow AYUSH doctors to practice allopathy as well (Shivaranjini, July 18, 2012).

How to define *access* is an ongoing debate and definitions can either stress the *potential* to make use of a health care service if needed (Penchansky and Thomas, 1981; Gulliford et al., 2002) or the actual *utilization* of health care services (Aday and Andersen, 1974; Gulliford et al., 2002; Obrist et al., 2007). What most authors agree upon is that access is complex and that different dimensions need to be taken into account when assessing it. Aday and Andersen (1974) are commonly regarded as one of the first researchers to have formulated a theoretical framework for access to health care. They pointed out that access was determined by need and supply factors, i.e. characteristics of the population and the delivery system (Ansari, 2007). One of the most influential frameworks of access was developed by Penchansky and Thomas (1981) and is still widely used (Norris and Aiken, 2006; Ansari, 2007). Penchansky and Thomas define access as “degree of fit” between the clients and the system, measured along five dimensions: availability, accessibility, accommodation, affordability, acceptability (Penchansky and Thomas, 1981). In this framework, they accommodated questions of

- type and volume of services offered (availability),
- physical accessibility and associated direct and indirect costs (accessibility),
- organizational accessibility, e.g. opening hours, appointment systems (accommodation),
- prices of services and client’s insurance coverage, income, ability to pay as well as perceived costs-benefits-ratios (affordability)
- and the potential compatibility of providers’ and clients’ characteristics and attitudes, including cultural and social norms (acceptability).

In their whole framework—despite acknowledging the influence of cultural and social norms on utilization of services—they consider the patient rather as an independent individual, without taking into account its social environment and embeddedness. This does not only hold for their dimension of affordability, for which other noted the role of community and household assets (Obrist et al., 2007) and social networks (Ergler et al., 2011), but also for the acceptability of services. As outlined by MacKian et al. (2004) with regard to health care seeking behavior, individuals act within their social context. Whether it is acceptable to individuals to use certain services or whether the individual perceives certain health care sources as a potential remedy is not only determined by the individual patient herself, but also by the patient’s community and—in the end—society. As a result, I consider the model by Penchansky and Thomas to be a good basis for analysis of our target group’s access to health care. However, it is also necessary to adjust and enhance the framework in order to capture the socio-cultural complexity of factors influencing health care seeking behavior in the context of our study population. This is done in the respective chapters of this thesis whenever necessary.

Based on the definitions of the different concepts given above, it can be summarized that I study the health care seeking behavior of the Indian population for outpatient care, i.e. when and why they decide to make use of specific providers or not, and what factors (according to the different dimensions by Penchansky and Thomas) impede or enable them to do so. Specifically, I study the access to NDAPs and how their inclusion into HMI schemes can improve access to (perceived) quality care for the insured population.

In a review of research on informal health care providers such as NDAPs in developing countries, Cross and MacGregor (2010) found that these providers rather behave as economic actors than as clinical ones in their exchanges with patients. Instead of developing a clinical case history, they respond to direct requests from their patients regarding specific medication. Nevertheless, the authors point out that these economic activities are not detached from social relationships between the providers and the communities they work in. The idea of embeddedness of economic activities in social relationships was first introduced by Granovetter (1985) and is considered today as the unifying concept for all of economic sociology (Hass, 2006). Granovetter described individuals as neither oversocialized actors (following firmly internalized norms and values without questioning these as postulated by Talcott Parsons) nor undersocialized actors (rational actors in the neo-classical sense, completely detached from social structures and relations) (Granovetter, 1985; Krippner, 2002). Instead, he presented a middle course: the idea of embeddedness of economic activities within social structures and relations (Granovetter, 1985). As I will demonstrate in this thesis, the *embeddedness* of NDAPs in their communities is de facto the reason for their popularity. Also, I will discuss how the formalization and regulation of previously informal provider-patient-contacts affects these social relationships and thus access to care.

Previous reviews of different studies examining the effect of HMI schemes on the access to health care have come to mixed results. While some found evidence on positive effects (Mebratie et al., 2013a; Spaan et al., 2012), others did not (Acharya et al., 2013; Ekman, 2007). Most of the past studies have been cross-sectional, comparing insured and non-insured at a specific point of time. Additionally, research has focused on quantitative studies⁴ and only some of these involved qualitative components⁵. Purely or predominantly qualitative studies on access to different services through HMI are lesser in number (Blanchard-Horan, 2006; Criel and Waelkens, 2003; Derriennic et al., 2005; McGuinness, 2011; Ranson and John, 2002; Sinha et al., 2006). Different to quantitative studies, these address the question *how* HMIs contribute or fail to contribute to improve access to care instead of solely identifying *whether or not* there has been an effect. Thus, these studies allow for improving unsuccessful and replicating successful mechanisms.

⁴See for example Alkenbrack and Lindelow (2015); Dror et al. (2005, 2006); Ekman (2007); Franco et al. (2008); Gnawali et al. (2009); James et al. (2008); Jütting (2004); Kagubare (2006); Lei and Lin (2009); Mahal et al. (2013); Mebratie et al. (2013b,a); Mwaura and Pongpanich (2012); Nguyen (2012); Parmar et al. (2014); Robyn et al. (2012); Saksena et al. (2011).

⁵See Alatinga and Fielmua (2011); Atim and Sock (2000); Baza et al. (1993); Jowett (2002); Moneti (2004); Ranson et al. (2006); Sinha et al. (2014a); Twikirize and O'Brien (2012).

The present thesis intends to contribute to this small body of evidence based on data from three HMI schemes from rural northern India. In the following, I present some background information on these schemes and the overarching research project in which I collected the data with my colleagues.

1.3 Details on health microinsurance schemes providing data for this thesis

The data used in this thesis derive from three HMI schemes which formed part of the EU-funded project “Developing Efficient and Responsive Community-based Micro Health Insurance (CBHI)”. Community-Based Health Insurance (CBHI) is a particular form of health microinsurance which implies the involvement of the community to be insured in the design and management of the scheme. The project was a collaboration between Erasmus University of Rotterdam (Netherlands), University of Cologne (Germany) and the Micro Insurance Academy, together with three Indian non-government organizations (NGOs) (BAIF, Nidan and Shramik Bharti). Its aim was to implement three CBHI schemes in three regions in northern India and assess their impact over a five year period (2009-2014). The project’s study sites were all in rural northern India, one in Vaishali district (Mahua block), State of Bihar, one in Pratap Garh district (Shivgarh and Gaura blocks) and one in Kanpur Dehat District (Rasoolabad block), both in Uttar Pradesh State.

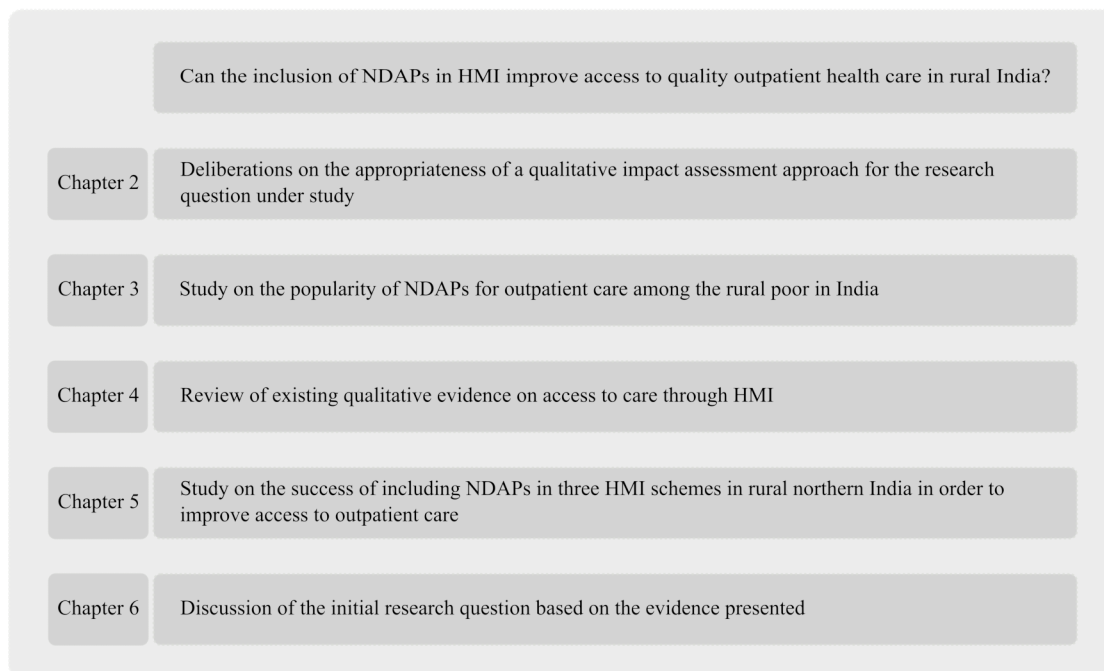
Based on micro-credit self-help groups (SHG) already created by the Indian partner organizations, the HMI schemes were managed and owned by their members with support from the NGOs. The concept of health insurance and the functioning of the specific community-based model was explained to the target groups through extensive awareness campaigns. Different benefit packages were compiled using the data of a census among the target population inquiring diverse information such as income, household expenditures, health care expenditures, household composition and demographic characteristics. SHGs then picked the package they believed most satisfied their needs by using a game-like decision tool called CHAT - Choosing Healthplans All Together. This final package was offered for purchase to the households. Within an experimental setting (three independent Randomized Controlled Trials (RCTs)), quantitative, qualitative and spatial methods were used to identify and measure the impact of HMI. The present thesis focuses on the qualitative data of the impact study. The results of the research project were disseminated in various publications (Doyle et al., 2011; Dixit and Panda, 2013; Panda et al., 2013, 2015a; Raza et al., 2016b,a; Panda et al., 2016), of which two form

part of the present thesis (May et al., 2014; Dror et al., 2014).⁶ Appendix A presents a study conducted by myself and others which sheds more light on the specific form of HMI studied. It illustrates the importance of access to outpatient care for the schemes' target population when it presents the results of the insurance package selection process employed during implementation of the HMI schemes.

1.4 Outline of the thesis and summary of results

In the following, I shortly summarize how the individual chapters of the present thesis contribute to answering the overarching research question, i.e. whether the inclusion of NDAPs in HMI improves access to quality outpatient health care in rural India. Each chapter sheds light on a different aspect which together provide a detailed answer to our research interest (see Figure 1.1).

FIGURE 1.1: Contribution of different chapters to overarching research question.
Source: Own illustration.



⁶The RCTs enabled researchers to compare the situation of subjects before and after the intervention (i.e. the implementation of insurance schemes) and between treatment and control groups. To maintain a control group for the whole duration of the project, the target population was offered insurance coverage step-by-step, giving an additional part of the population access to insurance coverage each year.

The thesis opens with methodological foundations and deliberations for my research question in chapter 2. Chapter 2.1 presents a closer look on the necessity and appropriateness of qualitative impact assessment. It shows that qualitative approaches to impact assessment are especially useful to explore, identify and understand impact in depth and to capture the perceptions of the study group, as necessary for our research question (2.1).⁷ This is followed by a discussion on the appropriateness of exclusively quantitative-oriented RCTs for community-based self-help organizations such as the HMI schemes under study (chapter 2.2). My co-author and I come to the conclusion that a combination of qualitative and quantitative methods would be necessary if one was to mirror the entire complexity of a SHO's effects and their stakeholders' different sets of goals.⁸ For the present thesis, however, an exclusively qualitative approach is more appropriate because it enables us to capture the subjective perceptions of the insured and *why* and *how* they make use of their outpatient service options the way they do. I do not intend to capture the entirety of the insurance's effect; instead, I focus on access to outpatient care through NDAPs and the factors enabling or impeding it. Here, an exploratory approach is preferable to a quantitative-oriented one to describe and understand both the initial situation and the changes as perceived by the (insured) population itself.

Chapter 3 gives an overview of past qualitative research on the effect of HMI on access to health care by describing the results of a systematic review and thematic synthesis of relevant literature.⁹ It shows that there are a variety of factors—rooted either within in the health system in which the HMI operates or within the design of the insurance itself—which might hamper a positive impact on the insured's access to care through HMI. For example, a lack of availability of health care providers or a lack of trust in them. It becomes clear that efforts such as the establishment of HMI schemes need to be accompanied by improvements in the surrounding health care system itself if they are to unfold their full potential. At the same time, the schemes need to be designed carefully. Otherwise, they run the risk of compromising access to care even further.

After these introductory chapters, I turn to my original data in chapter 4 and together with my co-authors describe and explain the initial situation of health care seeking behavior for acute illness episodes among the HMI's target population and the popularity

⁷The chapter is a collaborative effort by myself (under my maiden name Christina May), as well as Tara Sinha (Self Employed Women's Association, Ahmedabad, Gujarat, India) and Jeremy Holland (Associate Consultant, Oxford Policy Management). It is an excerpt of the chapter "Qualitative designs", published in "A Practical Guide to Impact Assessments in Microinsurance", edited by Ralf Radermacher and Katja Roth, 2014, p. 131-171. I had the lead in the parts on justification, epistemological background and quality criteria published here, while TS had the lead in the parts on qualitative tools not included in this thesis. JH provided complementary input. All authors read and approved the final manuscript.

⁸The chapter is a collaborative effort of myself (under my maiden name Christina May) with Katja Roth. We both contributed to the chapter in equal parts and drafted, read and approved the final manuscript. It was published in German in "Kölner Beiträge zum Internationalen Jahr der Genossenschaften 2012", edited by Hans Jürgen Rösner and Frank Schulz-Nieswandt, Berlin LIT Verlag, 2013, p. 127-146.

⁹This chapter is a study conceptualized and conducted in my sole responsibility.

of NDAPs.¹⁰ We find that because of their proximity, flexible payment options and familiarity with patients' belief systems, among other things, local NDAPs are physically, financially and culturally accessible. They have a high degree of fit with their patients. Usually, they are the first contact points for patients before turning to qualified practitioners, and treat minor illnesses, provide first relief, refer patients to other providers and administer formally prescribed treatments.

In chapter 5, I show together with my co-authors what effect on access to outpatient care is perceived by the HMI-clients under study, how they utilize the services offered and what factors facilitate or hamper their access to services.¹¹ We find that households appreciate to have immediate access to outpatient care from NDAPs without co-payment. Perceived low quality of care and limited physical access are important barriers experienced by the insured. Both factors are partly caused by how HMI-associated NDAPs are integrated into the insurance schemes. While some households do not consult them due to the barriers perceived, others integrate them and their services into their health care seeking behavior or even use them exclusively. We conclude that the integration of NDAPs into the schemes under study to improve access to outpatient care was to a degree successful, but that it is necessary to organize it more carefully to not compromise existing access to care.

Based on the evidence presented, I answer the overarching research question in chapter 6. I argue that HMI has the potential to improve access to quality outpatient care services in India from the point of view of the insured by including popular providers such as NDAPs into their portfolio. However, their inclusion needs to be designed cautiously to not restrict already existing access as it had happened in some cases in the insurance scheme under study. At the same time, it is necessary to also implement measures within the health care system itself, mainly addressing the quality of health care provision by NDAPs through qualification and formalization efforts by the Indian government.

¹⁰The chapter is based on a study conducted by myself (under my maiden name Christina May), together with Katja Roth (University of Cologne) and Pradeep Panda (Micro Insurance Academy, New Delhi). I analyzed the the data and drafted the final manuscript. KR participated in initial steps of data analysis. KR and PP helped in drafting the manuscript. PP managed the data collection and provided oversight for study implementation. All authors participated in the design of the study and read and approved the final manuscript. It was published in BMC Health Services Research 2014, 14:182, doi:10.1186/1472-6963-14-182.

¹¹The chapter is based on a study conducted by myself together with Pradeep Panda (Micro Insurance Academy, New Delhi), Katja Roth (University of Cologne) and Sudeshna Ghosh (Micro Insurance Academy, New Delhi). I analyzed the data and drafted the manuscript. KR and SG participated in initial steps of data analysis. PP, KR and SG helped in drafting the manuscript. PP managed the data collection and provided oversight for study implementation. All authors contributed to the design of the study and read and approved the final manuscript.

Chapter 2

Methodological considerations

The present thesis uses qualitative methods to assess the impact of cooperatively organized HMI schemes on access to care among their insured members and their families. The following chapters justify this decision. They shortly explain the nature of qualitative impact assessments specifically for the context of microinsurance and when these are appropriate. Additionally, they discuss the nature of cooperatively organized Self-Help Organizations (SHOs) such as the HMI schemes under study and the appropriateness of different methods of impact assessment for their evaluation.

Often, the terms “assessment” and “evaluation” are used interchangeably, although—in the development context—the latter comprises criteria such as relevance, effectiveness, efficiency, impact and sustainability while the former focuses on effects and impact (OECD, n.d.). In this thesis, I follow this distinction.

2.1 Qualitative impact assessment in microinsurance research

Authors: Tara Sinha, Christina May, and Jeremy Holland.

This chapter is an excerpt of the chapter “Qualitative designs”, published in “A Practical Guide to Impact Assessments in Microinsurance”, edited by Ralf Radermacher and Katja Roth, 2014, p. 131-171.

2.1.1 Why use qualitative methods for impact assessment

The terms *qualitative* and *quantitative* refer to the type of data generated in the research process in simple words. Quantitative research produces data in the form of numbers while qualitative research tends to produce data that are stated in prose or textual

forms. While quantitative methods measure the impact of microinsurance in terms of quantitative indicators, qualitative methods can be used to understand the processes that explain this impact or, in the absence of quantitative impact studies, to explore what kind of impact can be expected. For example, quantitative methods may be used to measure how much impact microinsurance has, e.g., on the financial situation of the insured households, while qualitative methods ask why and how microinsurance impacts the financial situation and what the underlying processes are. Qualitative methods are used to look in depth at impacts; the data and analysis generated is interpreted in context. Contextual methods are applied to a specific locality, case or social setting, and sacrifice breadth of population coverage and statistical generalizability in order to explore or understand issues in depth (Booth et al., 1998).

Particularly for a relatively new field like microinsurance research, qualitative studies are needed to explore potential impacts and processes. Results may then be the basis for succeeding quantitative studies. Without knowing what kind of impact microinsurance may have, it is difficult to measure it, using a research design based on theoretical assumptions only. Moreover, qualitative researchers are able to use social analytical frameworks to interpret observed patterns and trends—including analysis of socially differentiated outcomes. Without these analytical insights into the complex “missing middle” between interventions and impacts, researchers and policy analysts tend to make “interpretive leaps” of analysis based on what is measured (Chambers, 1995).

Due to this iterative relationship, qualitative and quantitative methods are particularly effective when used in combination. However, when considering ways to combine quantitative and qualitative methods and data, it is important to be aware of their comparative advantages and to recognise that “strong fences make good neighbours” (Appleton and Booth, 2005).

In the following, we first summarize the differences of qualitative and quantitative impact assessments and highlight their specific strengths. We will then discuss quality criteria for qualitative impact assessments before we conclude on possible research designs and data collection methods.

2.1.2 The nature of qualitative impact assessment

Though there is increasing dialog between quantitative and qualitative-oriented research methods and the application of mixed methods becomes more and more popular, a differentiation between both approaches along the research process helps in grasping the distinctive nature of qualitative impact assessment.

TABLE 2.1: Differentiation of quantitative- and qualitative-oriented approaches to impact assessments.
Source: Own illustration.

Research process	Quantitative-oriented impact assessment	Qualitative-oriented impact assessment
Epistemological background and forms of knowledge	Post-positivist: deductive procedures, probabilistic law	Interpretivist: understanding subjective and contextual knowledge
Research problem and research question	What and how much impact for whom? Hypothesis-testing	How and why does impact occur/not occur: mechanisms and theories of change Discovery-oriented: What unintended and unexpected impact occurs?
Sampling	Random, large n	Purposive, small n
Data collection	(Quasi)experimental setting Tight prescription of research design Large-scale, standardized surveys	Naturalistic inquiry High flexibility of research design In-depth interviews (focus groups, key informants), observations and participatory methods Involvement of researcher in data collection
Data analysis	Calculation and statistical generalization Assess impact along predefined and externally imposed indicators Tables and numbers	Interpretation and particularization / analytical generalization / exploration Understand and represent the target group's perception of meaning, existence and significance of impact Rich and thick description

2.1.2.1 Epistemological background

Quantitative and qualitative approaches to impact assessment are based on different philosophies on how the world can be perceived and described. Quantitative approaches to impact assessments are based on the so-called postpositivist school of thought, which pursues objectivity and relies on deductive procedures and probabilistic laws to understand our world. Constructivist/interpretative thinking, which builds the background for qualitative research, holds the view that social phenomena can only be understood when the perception of the world by human beings is taken into account. Thus, subjective knowledge and specific contexts are of importance (Della Porta and Keating, 2008). In the remainder of the chapter, we will only use the terms quantitative and qualitative to differentiate between both approaches.

2.1.2.2 Research problem and research question

While quantitative-oriented impact assessments are interested in what and how much impact has occurred for whom, qualitative-oriented impact assessments focus on the how and why impact has occurred or not occurred. For example, qualitative methods would be suitable for the following questions on the impact of microinsurance:

- How does the insurance influence the financial/economic/social behavior of the insured?
- How do the insured perceive the value of insurance? Why do some perceive value and others do not?
- How does the perception of impact influence the insured's enrollment decision?

In some cases, one is not sure whether all possible impacts of microinsurance have been accounted for. In these scenarios, explorative qualitative studies can help in identifying impact on areas which had not been considered before. Qualitative methods can also be useful for explaining missing, unexpected, or unintended impacts reported in quantitative surveys, e.g., one wants to explore the underlying mechanisms when a quantitative impact assessment shows that a HMI scheme does not lead to a reduction of or to a rise in out-of-pocket payments.

Change is not always a linear process and, thus, mechanisms and causal chains behind impact require close examination, for which qualitative methods are especially suited (Roche, 1999; Kabeer, 2003; Faust, 2010). Qualitative inquiry and impact assessments are discovery-oriented. They do not limit possible outcomes of their research beforehand and react in a flexible manner to new discoveries, adapting the research process if necessary, and are thus better able to account for unexpected findings and impacts (Patton, 2002; Creswell, 2009; Kabeer, 2003).

Examples of “how”-questions in qualitative impact assessment

In a study on a health insurance program in India, McGuinness (2011) did not only intend to study whether the program had an impact on household’s financial protection, but also how the program provided this protection. Additionally, the community-managed reimbursement process of the scheme and its influence was assessed. McGuinness chose to apply a qualitative approach, combining household case studies with claims data.

Hietalahti and Linden (2006) conducted a study “to gain a better understanding of how microcredit projects impact on rural women’s livelihood structures, and how they can strengthen women’s welfare”, applying qualitative methods which were “designed to encourage respondents to describe their experience in their own words”.

In his study on the impact of a micro life insurance product in Indonesia, Hintz (2010) explains how, due to the field and study situation, he moved to an explorative-qualitative approach and how he finally found that the impact of the product under study was not linear and mostly unintended.

There can be both theoretical and practical reasons for choosing a qualitative impact assessment design. In some cases, qualitative impact assessments are preferred over quantitative impact assessments because of limited resources and difficulties in fulfilling formal requirements (Hulme, 2000; Copestake et al., 2005). Qualitative impact assessments can be less costly than quantitative, experimental, or quasi-experimental research designs since they do not involve large-scale surveys and do not necessarily make use of a comparison group to investigate causality.

2.1.2.3 Sampling

The sample size of qualitative studies is small; its specific size depends on the study question and the study purpose. As Patton (2002) puts it: “The validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information richness of the cases selected and the observational/analytical capabilities of the researcher than with sample size”. He describes different approaches to sampling in qualitative inquiry that all share a common principle: cases are not randomly chosen, as in quantitative research, but purposefully selected to provide rich information for the question under study (Patton, 2002). While sampling purposefully, one should be aware of what cases are needed for the question under study, i.e. whether the case should be typical for the study population or display a certain characteristic. Typical cases can be defined by a preceding quantitative survey (e.g. individuals with more or less the mean characteristics of the underlying population). Less typical cases, which are insightful for a certain aspect under study (e.g. individuals with a particular chronic disease or disability, or households that have accumulated assets or diversified livelihoods in the face of prevailing trends), can be identified from survey data, from direct observation,

or by snowball sampling through referral from group discussions and interviews, a sampling technique where initial respondents are asked for recommendations on who else to interview. The expectation is that persons belonging to a particular category already know each other and are thus able to provide references.

2.1.2.4 Data collection

Qualitative impact assessments are naturalistic inquiries, data is collected “in the field” without creating a lab situation and manipulating the phenomenon under study (Creswell, 2009). They can however make use of “natural experiments” where they are able to observe and document a change in the real world and its implications, for example when a new program is implemented and the possibility opens up to accompany this process (Patton, 2002). While quantitative-oriented approaches make use of large-scale, standardized surveys in order to generate representative findings, qualitative-oriented approaches conduct semi-standardized, or open interviews, and/or observations to gain an in-depth understanding of the phenomenon under study.

Data collection for a qualitative study differs significantly from that in a quantitative study. Since the data is gathered through in-depth interviews or Focus Group Discussions (FGDs), the tools for data collection, such as guides for the interviews or FGDs, are open-ended and relatively unstructured. The investigator needs skills that enable her to probe along each of the topics listed in the guide, to follow up on comments or remarks made by the respondent, and to bring a conversation back on track if it is going off course. For this, the investigator needs the requisite skills, which are usually much more than those required of an investigator filling out a structured questionnaire for a survey.

2.1.2.5 Data analysis

Quantitative impact assessments aim at statistical generalization, i.e., they intend to create results which can be generalized to whole populations. There are different opinions about the ability to generalize from qualitative inquiry: some researchers argue that qualitative research does not even intend to generalize and that it only aims at explaining the particular case in its specific context. Others want to extrapolate findings for cases with similar contexts or to generalize findings to broader theories —i.e., aim at analytical generalization. Qualitative inquiry does not analyze its data statistically, though sometimes numeric measures can be used, but derives patterns and themes from the data and thus interprets it (Patton, 2002). The core of analysis is to understand mechanisms of impact, and create and verify theories of change instead of testing hypotheses. For example, a hypothesis on the impact of HMI would state that being insured with the HMI scheme increases the utilization of health care services covered by the insurance

package. The underlying theory of change is that the financial barriers to access health care are reduced through prepayment into the insurance scheme and thus insured people do access health care more often. Quantitative methods would create evidence for or against the hypothesized impact, while qualitative methods would inquire whether the mechanisms of the theory of change are as expected or not, and why. While doing this, the qualitative researcher tries to understand the meaning and significance given to the phenomenon under study, by the study participants themselves, instead of applying his/her own point of view of what is important and what is not (Creswell, 2009). For example, as Oakley et al. (1998) argue, the target group of a certain intervention might value not only long-term impact but also short-term outcomes of a project, which would not be accounted for in quantitative impact assessments.

Comparison of quantitative and qualitative approaches to impact assessment

In a study on the impact of a microcredit program in Peru, Copestake et al. (2005) compared both quantitative and qualitative approaches to impact assessments and their respective advantages and disadvantages, concluding with a call for combining both approaches whenever possible:

“Both approaches [the econometric/quantitative and the interpretative/qualitative approach] have strengths and weaknesses. The econometric approach was based on a larger and more statistically reliable sample. It also offers precise estimates of key impact variables, most importantly household income. However, the approach remains open to selection bias, arising from unobservable differences between client and non-client samples. It was also limited in its inclusion of variables, and in the extent to which differences in impact between different sorts of clients can be measured. Reliability depended upon good survey management and skilled econometric analysis. The interpretative approach was based on a smaller sample, albeit one that was randomly selected from a baseline survey, and cross-analyzed against its findings. The range of potential variables covered was more open, and a greater range of differences in impact were highlighted, albeit less precisely. The reliability of impact attribution hinged on the specialist skills of the qualitative researchers, in both interviewing and analysis of the data. In the absence of budgetary constraints then, there is a case for arguing that the two approaches are complementary (...). However, this is a luxury that most microfinance institutions cannot afford.”

2.1.3 Quality criteria in qualitative impact assessment: validity, reliability and generalizability

Because qualitative impact assessments are flexible in their design and there are no universal processes to be followed, ensuring quality by responding to certain criteria is even more important. There are different sets of quality criteria, partly competing, which derive from different philosophical backgrounds of qualitative research (Patton, 2002).

Traditional scientific criteria transfer quality standards from quantitative to qualitative research, as does for example Yin (2003). He describes four criteria for quality of research designs from all spheres of research and explains how these criteria can be fulfilled in case study research, but his recommendations are applicable to other forms of qualitative research as well.

- **Construct validity (correct operationalization):** The phenomenon under study has to be thoroughly defined and indicators for operationalization relevant and justified.
- **Internal validity (causal relationship):** The causal relationship (y is caused by x) inferred from the data has to be thoroughly described and justified.
- **External validity (generalization to domain):** Qualitative research/case studies aim at analytical generalization, i.e., generalizing results to a broader theory. To achieve this generalization, a replication of findings for different cases is necessary and helpful.
- **Reliability (operations can be repeated with same results):** Close documentation of the research process is necessary to achieve reliability, each step of the formulation of the research question, the selection of cases, the data collection, and data analysis has to be documented so that others can repeat the procedure and come to the same conclusions (Yin 2003).

Internal and external validity are probably the two most contested quality criteria for qualitative impact assessment and will thus be discussed more in detail.

2.1.3.1 Internal validity and reliability

Radermacher et al. (2012) attest nonexperimental impact assessment designs only limited internal validity due to the lack of a control or comparison group to verify the causal relationship between observed impacts and the specific intervention. However, there are qualitative impact approaches involving comparison groups for attributing causality. Roche (1999) presents alternatives for control groups to overcome the problem of attribution if these are not available, such as including nonproject respondents, using secondary data and other key informants, and ruling out other explanations than the assumed causal effect. Patton (2002) argues that potential causal linkages should be addressed in qualitative evaluation research as long as it is made clear that these are only speculation and hypotheses. Considering rival explanations is recommended to increase internal validity of qualitative research (Patton, 2002; Creswell, 2009; Yin, 2003).

Another important quality criterion of qualitative impact assessment and qualitative research in general, is the triangulation of findings by:

- applying different methods (e.g., verifying interviews by direct observation: do people really do what they say they do?),
- collecting data from more than one source (e.g., insurance policyholders and insurance staff; male and female policyholders),
- involving more than one researcher in data collection and analysis
- or analyzing data from different theoretical perspectives.

The goal of triangulation is to strengthen research findings. When results obtained through one method, for instance, are mirrored in the results obtained from a different method, the research findings get confirmed. Moreover, triangulation aims to ensure that aspects which cannot be revealed by one method/source/researcher/theory are covered by one of the other approaches. It thus offers a more accurate picture of empirical reality (Patton, 2002; Roche, 1999; Creswell, 2009).

Contradictions found during this process need to be addressed: they might reveal bias or specific interests and thus might not only strengthen the validity of the findings but provide new insights into the phenomenon as well (Roche 1999). Presenting the findings to the study participants and discussing conclusions with them is not only a good method to increase the validity of the research (Creswell, 2009), but also increases the target group's involvement in the study and gives it a voice in the research process that is intended to be for its own good. The recommendation to the researcher is to be transparent about all steps of the research process when reporting findings and to provide any personal or professional information which might have influenced data collection, analysis or interpretation. The researcher should not underestimate the effect of her presence on those under study, as well as on herself and consider these effects and potential own biases when analyzing her data (Patton, 2002; Creswell, 2009). Possible follow-up actions of the research and potential consequences for the participants (e.g., introduction of a new insurance product or adjustments in the existing product) should be reported to the participants.

Triangulation and documentation strategies applied in a qualitative impact assessment study

In their baseline study for an impact assessment of health microinsurance in Pakistan, McGuinness et al. (2010) adopted a variety of triangulation and documentation strategies to ensure the validity and reliability of their results:

“The baseline Outcomes Assessment employed several methods to enhance the reliability and validity of the results. The research:

- *Included three separate studies covering all relevant aspects of the problem (the financial landscape, the health-care landscape, and consumer perspectives);*
- *Employed multiple data collection methods including interviews (66 total), focus group discussions (32 with a total of 243 participants), and a review of secondary data;*
- *Cross-referenced research questions across the discussion and interview guides to allow for triangulation;*
- *Employed multiple data sources reflecting diverse perspectives and experiences including key informants in various Network agencies, the financial services industry, health-care providers, community organisations, and community members; and*
- *Used different investigators with specialised expertise for each of the three studies.*

In addition to this, research procedures included:

- *Using a documented research protocol including the data collection tools; establishing a chain of evidence through preliminary key research questions that are linked through the documented research protocol to the findings and their respective data sources; and*
- *Developing of a research database.*

These measures, which included triangulation of data, methods and investigators, establishing a chain of evidence, and documenting the research protocol and all data collected, enhance the study’s construct validity and the reliability of its results”.

2.1.3.2 External validity and ability to generalize

The ability to generalize qualitative research findings is subject to an ongoing debate that is taking place against the background on the value of generalization and particularization in itself, which is seen as a trade-off between the breadth of a study and its depth (Patton, 2002). Most qualitative researchers accept the limited generalizability of their findings to whole populations, i.e., the lack of statistical generalization, arguing that

they do not strive for generalization at all, but see the value in the context-specificity of qualitative research and its ability to investigate a case in-depth (Creswell, 2009). Others aim for a generalization to broader theories, i.e., to an analytical generalization in the wording of Yin (2003), or—as a middle course—an extrapolation of findings to cases under similar, but never identical conditions (Patton, 2002).

Limitations to generalizability for qualitative impact studies

Hietalahti and Linden (2006) are very careful about generalizing from their data on the impact of a microfinance program on livelihoods in South Africa, arguing that their findings would only be transferable to similar socio-economic settings and even this only in a limited way.

“Although many important economic and social impacts of microcredits have been clarified in this study, it is still unable to provide a final answer to the question of the total effect of microcredits on local livelihoods, even in this single case observed in Tzaneen area. The results are still related only to a limited area, and the data have been gathered within only a limited period of time. It is, however, able to summarise cautiously the difficulties and opportunities that are directed towards microfinance in southern Africa, in areas that share a similar socio-economic setting. In this context it can be argued that, when properly designed, microfinance institutions such as The Small Enterprise Foundation have an important contribution to make to women’s empowerment.”

Blanchard-Horan (2007) also highlights the importance of the context of her study on the impact of a Ugandan HMI scheme on treatment-seeking behaviour for malaria and stresses that her findings only apply to specific schemes serving specific community groups and covering specific services.

2.1.4 Qualitative impact assessment research designs

The research design identifies the timing and frequency of observations to be undertaken in an impact assessment. Basically, we can differentiate between cross-sectional and longitudinal research designs for qualitative impact assessment. Additionally, we will discuss the case study approach.

2.1.4.1 Cross-sectional designs

Cross-sectional qualitative impact assessment designs collect data at only one point of time. Depending on whether the the intention of the impact assessment is to predict or identify the impact of a given intervention, the data is collected ex-ante or ex-post of the intervention. In the case of ex-ante assessment, it focuses on the present situation and potential changes due to a future intervention; in the case of ex-post assessments, it aims to identify the present situation and past changes due to an intervention. The involvement of a control or comparison group is possible to compare findings.

Retrospective, cross-sectional qualitative impact assessment

An example for a cross-sectional, retrospective qualitative design—though in combination with a preceding quantitative survey—is a study undertaken by Copestake et al. (2005) to assess the impact of a microcredit program (Promuc) in Peru. Here, a representative quantitative baseline study was followed one year later by qualitative in-depth interviews with a smaller sample of clients, focusing on changes experienced during the previous year and reasons for these changes.

“[T]he interviews were designed to elicit from respondents open-ended narrative explanations of changes they had experienced during the past year, and reasons for those changes, from which an experienced analyst could make a reliable assessment of impact attributable to their interaction with Promuc. An explicit part of the research was to pilot a qualitative in-depth interview protocol (...) for addressing the attribution problem using this interpretative, rather than a positivist, approach.”

Cross-sectional research designs are easy to implement and very cost-efficient since they do not require a long-term commitment of participants and data needs to be collected only once. At the same time, they are prone to recall bias (e.g., when respondents need to assess their financial situation of two years before but either do not remember correctly or their perception is influenced by their present financial situation and thus they give inaccurate information) and no direct comparison between data from before and after the intervention is possible. Involving comparison groups is beneficial, but might also create problems: e.g., a lack of commitment since the group does not benefit from the intervention under study, drop-out of the comparison group when a similar intervention is conducted in their area or spill-over effects become apparent (Roche, 1999).

2.1.4.2 Longitudinal designs

To understand the impact of an intervention, it is preferable to conduct longitudinal studies which involve at least two points in time of observation of the same population. This is true for quantitative studies trying to quantify the scope and scale of impact, as well as for qualitative studies addressing theories of change, causal chains, and unintended and unexpected impacts. Ideally, the first data collection, often referred to as baseline study, should take place before the start of the intervention to enable a comparison of the situation before and after the intervention. Again, a comparison group can be involved to allow for a double difference comparison.

Longitudinal qualitative impact assessment design

Hintz (2010) applied a longitudinal qualitative impact assessment design to assess the impact of a micro life insurance product in Indonesia.

“Payung Keluarga is a clear development intervention. It was conceived to ameliorate the assumed postmortem financial crisis of low-asset families, and to prevent a drop in their already low asset base. Through qualitative-exploratory field research from 2006 until 2008 I investigated if this developmental intention was realized. Research components consisted of a baseline-endline comparison with insured customers, beneficiary interviews, and ancillary (sic!) research components.”

To prepare the ground for the endline intervention, the guideline for baseline intervention should be structured with endline questions already in mind. A clear theory of change in the design process helps in keeping all intervention rounds aligned to each other. Identical questions posed during different rounds facilitate comparison.

Such longitudinal designs involving more than one round of data collection and, in some cases, even a comparison group, are substantially more expensive and more difficult to conduct than cross-sectional designs. Participants need to be approached more than once and it might be challenging to maintain the comparison group long-term. Drop-outs from the both study groups are possible and the researcher needs to consider beforehand how to deal with these.

2.1.4.3 Case study designs

Case studies are in-depth investigations of selected units (e.g., individuals, households, groups, insurance schemes). Different than other qualitative inquiry, case study research “involves the study of an issue explored through one or more cases within a bounded system” (Creswell, 2007), i.e., the case is seen as one example of a specific phenomenon. In other qualitative designs, information is gathered from different sources and then combined and synthesized to answer specific research questions. In the case study approach, each case is regarded as an entity, and interpreted and analyzed as such, though—of course—cross-case analysis and comparison is also done (Yin, 2003).

For impact assessments, case studies are especially useful to explain presumed causal links and explore what array of impacts an intervention has brought about (Yin, 2003). They can be cross-sectional or longitudinal, i.e., cases can either be studied at one point of time or over a period of time and can either comprise only one or several cases (Gerring, 2007). They rely on a combination of different data sources, such as in-depth interviews, observations, and document analysis, and do not necessarily only make use of qualitative data (Yin, 2003).

TABLE 2.2: Different qualitative research designs.
Source: Own illustration.

Research design	Data collection	Advantages and disadvantages	Specifically useful for . . .	Further issues to consider
Cross-sectional	At one point in time, ex-ante or ex-post the intervention under study	<p>Advantages:</p> <ul style="list-style-type: none"> Easy to implement and cost-efficient Fast results <p>Disadvantages:</p> <ul style="list-style-type: none"> Prone to recall bias (in case of ex-post intervention) No direct comparison of data from before and after intervention possible 	<ul style="list-style-type: none"> Exploring for unintended and unexpected impacts Understanding impact observations from other studies or data 	<ul style="list-style-type: none"> Number and type of participants Type of data collection tools to use
Longitudinal	At least at two points in time, ideally before and after intervention under study	<p>Advantages:</p> <ul style="list-style-type: none"> Direct comparison of data from before and after intervention, less recall bias <p>Disadvantages:</p> <ul style="list-style-type: none"> More expensive and difficult to conduct Long-term commitment of study participants required 	<ul style="list-style-type: none"> Understanding impacts evolving over time, such as attitude and behavioral changes 	<ul style="list-style-type: none"> Number and type of participants Type of data collection tools to use Frequency of data collection rounds Time between data collection rounds How to motivate participants to commit to the study How to deal with dropouts
Case study	At one or more points in time (cross-sectional or longitudinal)	See advantages or disadvantages of cross-sectional and longitudinal designs	<ul style="list-style-type: none"> Understanding the holistic impact of an intervention 	<ul style="list-style-type: none"> Number of cases to involve Type of cases to involve: typical or untypical Entity to treat as a case, such as individual, household, groups Specifically for cross-sectional or longitudinal case studies: see above

Case study approach in qualitative impact assessment

McGuinness (2011) chose a case study approach to assess the impact of a HMI program in India and interviewed insured as well as uninsured households to compare how these coped with serious cases of malaria:

“The key research questions addressed include:

- Does Uplift health microinsurance protect households financially? If so, how?*
- Are the out-of-pocket (OOP) costs of healthcare lower for Insured households than for Uninsured households?*
- How does the unique community-managed reimbursement process at Uplift influence the financial protection effect of the insurance?*

These key questions are addressed in two ways. The first is through a case study which compares the specific experiences of 15 Insured households and 10 Uninsured households to assess whether Uplift-Insured households are financially protected when faced with a serious case of malaria. This case study yielded interesting insights into the experiences and coping strategies of low-income households faced with a serious, widespread disease, but the sample size was too small to make its findings generalizable to the Health Mutual Fund (HMF) population as a whole. In addition to the case study, (...) [we] carried out an analysis of Uplift’s claims and financial data.”

2.1.5 Conclusion

Qualitative approaches to impact assessment are especially suited when processes of impact should be explored, identified, and understood in depth. They have the advantage to be open to unexpected findings, susceptible to perceptions of the study group and flexible in their research design. Nevertheless, qualitative impact designs have been pushed into the background by the increasing popularity of experimental designs (i.e., Randomized Controlled Trials (RCTs)). However, as shown, qualitative impact studies have a value of their own: besides exploring what would be valuable to be measured, qualitative methods can help to understand what is measured in quantitative and experimental approaches and open the black box to assess whether the assumed theories of change hold. Furthermore, they can give insight in impact in microinsurance for cases where quantitative methods—like RCTs—are difficult to be implemented or might not be sufficient (e.g., for cases with very low probability of occurrence of the insured event). Both quantitative as well as qualitative approaches to impact assessment have their strengths and weaknesses and are appropriate for specific research interests. Thus, whenever possible, both approaches should be combined to obtain a full picture of the impact of a microinsurance program.

2.2 Randomized Controlled Trials as new “gold standard” for impact evaluation in development cooperation—also for cooperative self-help organizations?

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2.2.1 Introduction

In the Paris Declaration on Aid Effectiveness from 2005 and the Accra Agenda for Action from 2008, the international community agreed upon a stronger focus on the effectiveness of development aid and according adaptations of development policies (OECD, 2008). Since then, impact evaluations have gained importance in international development cooperation, which is reflected in the creation of corresponding institutions. For example, the World Bank started its so called Development Impact Evaluation Initiative (DIME) in 2005 with the aim to evaluate the impact of selected activities. In November 2012, the German Institute for Development Evaluation (DEval) in Bonn was inaugurated. The International Initiative for Impact Evaluation (3ie), which unites national development organizations and ministries of different countries, also strives to find scientifically sound evidence on which development interventions are effective and efficient by applying impact evaluations and systematic reviews.

Randomized Controlled Trials (RCTs) have been applied in medical research for some time and have developed into a sort of “gold standard” for impact evaluation, too (Banerjee and Duflo, 2011; Karlan, 2011). On international level, the work of the Abdul Latif Jameel Poverty Action Lab (J-PAL) and its partner organization Innovations for Poverty Action (IPA) have attracted attention. The objective of these global networks of professors and scientists is a scientifically based work for poverty reduction. RCTs are intended to measure the impact of programs for poverty reduction and thus to contribute to a scaling-up of successful interventions and the improvement or discontinuation of unsuccessful measures.

This development towards a rigorous evaluation of development programs poses new challenges for cooperative development cooperation. Specifically, it needs to be addressed whether this new “gold standard” is appropriate for the impact evaluation of cooperatively organized development projects and their specific characteristics. The present chapter deals with this question. By doing so, we address the methodological requirements of RCTs and explore whether these or other approaches for impact evaluation are suitable for cooperative Self-Help Organizations (SHOs). Following this, we

dedicate ourselves to the different functions impact evaluations can fulfill for stakeholders of cooperative SHOs and discuss whether RCTs are able to adequately address these. This discussion is necessary as cooperative SHOs derive their justification in development cooperation from the effects they achieve. In a way, they are in competition with other organizational forms in this regard (Novkovic, 2011).

2.2.2 Cooperative SHOs and impact evaluation

2.2.2.1 Definition and background on cooperative SHOs

The following explanations basically apply to all forms of organizations created or supported in development cooperation which fulfill the fundamental cooperative principles (Göler von Ravensburg, 2007; ICA, 2013). For these organizations, we use the term cooperative self-help organizations (SHOs). They comprise formal and informal cooperatives¹ which aim at supporting private households or businesses (in the context of development cooperation mostly small self-employed businesses in agriculture or trade) (Schmale and Degens, 2013). It can be assumed that the need for impact evaluation is higher among formal cooperatives than among informal ones, given that the former are often externally mobilized (and not by the members themselves) and usually receive some financial support in the beginning.² The organizations providing this support thus have a special interest in assessing their impact. Not only to justify the investment of funds, but also to be able to identify successful measures to be potentially replicated in other regions, countries, sectors or branches.

SHOs can be considered a special form of “community-based” or “community-driven” development projects which—according to Mansuri and Rao (2004)—evolved from revolutionary, anti-colonial and anti-modernist movements towards being a part of the development mainstream. Principles like the involvement of the target group in the build-up and management of projects (“community-based”) culminating in the control and power of decision over key areas such as investment of funds (“community-driven”) have expanded into many areas during the last years (Mansuri and Rao, 2004). Cooperative SHOs go beyond these approaches as they rely on democratic principles and membership and are now—after a phase of disappointed expectations—back on the development agenda (Rösner, 2000; Pollet and Develtere, 2004; Birchall, 2004). According to Göler von Ravensburg (2007), their past “failure” was largely due to the instrumentalization and officialization of the cooperative idea. Dülfer (1975) additionally criticizes the unjustified generalization of positive and negative experiences with cooperatives in industrialized and developing societies, which first resulted in high expectations and then a massive disappointment. He also points out that the causality between success or

¹See Göler von Ravensburg (2007) for this distinction.

²Rösner (2000) therefore calls it “initiated” self-help. See the same publication for further information on the importance of outside help for cooperative self-help organization in development contexts.

failure and cooperative economic activities has not been addressed sufficiently to come to a conclusion on the potential impact of cooperatives, especially in comparison with other forms of economic activities. He hence identifies a need for impact evaluations for cooperatives.³

2.2.2.2 Effects, objectives and success of cooperative SHOs

The main objective of impact evaluations is to check which effects a particular intervention or measure brings about. These effects can be long-term, but also short- or medium-term; they can be positive or negative, primary or secondary, intended or unintended as well as direct or indirect (OECD/DAC, 2009). Different to approaches of program evaluation, impact evaluations not only address the output generated by a development project, but also the short-, medium- and long-term changes it has brought about (so-called outcomes or impacts). It is of special interest to learn whether the effects aimed for by the intervention have been reached. Beyond that, positive and negative effects which have not been intentional and are rather “byproducts” of the program are also identified.

Apart from measuring effects quantitatively, impact evaluation also concern themselves with the exploration and understanding of causal relationships. These are important for understanding the connection between intervention and effects and for implementing successful programs in other regions or countries. At the same time, assumptions about causal relationships are the starting point for both planning and evaluating projects. During planning, to be able to define the intervention to be carried out based on the effects intended. For its evaluation, to identify expected effects—including negative ones or those concerning a different target group—in order to assess them later. These causal relationships are often depicted in Input-Output-Outcome-Impact (IOOI) models: interventions in form of investment of financial, personal and material resources (inputs) are supposed to produce immediate results such as products, investment goods or services (outputs), which in turn should lead to short- and medium-term effects (outcomes) and finally to long-term changes (impacts) (OECD/DAC, 2009).⁴

As described above, effects comprise the entirety of realized and not realized, intended and unintended, positive and negative changes brought about by a SHO. On the basis of these effects, the SHO considers itself successful or not or is considered as such by its stakeholders. Thus, success is normative and depends on how it is defined by the cooperative SHO and its stakeholders and what these want to achieve. The scientific

³See also Mansuri and Rao (2004): “[A] project may deliver many things that both recipients and project implementers consider beneficial, but what can actually be ascribed to participation is unclear. A convincing evaluation would need to validate (or invalidate) the participatory model itself and the relationship between project process and impact.”

⁴This causal chain is also called “theory of change”.

literature on cooperatives has in the past dealt extensively with the aims and definitions of success of cooperatives in general and in development cooperation in particular (Engelhardt, 1986; Tschöpel, 2010; Blome-Drees, 2008; Dülfer, 1979). Each of the stakeholders of a cooperative has its own specific set of goals (Dülfer, 1975). Stakeholders can be, among others, the members of the cooperative themselves, but also its management, employees and secondary/tertiary cooperatives, a village community or the community of the urban district where the cooperative is active. The interested public and—in the context of development—the state or other institutions acting as initiator or sponsor of a SHO are further potential stakeholders. The goals of these different actors can be diametrical, but also complementary or neutral towards one another (Zerche et al., 1998). They can be situated on all the different levels of the IOOI-model, thus referring to specific inputs, outputs, outcomes or impacts. Dülfer (1975) stresses potential divergences between the goals of public development concepts and those of their target group and therefore argues for a consideration of institutional, developmental and member-based efficiency of cooperatives. Jäger and Schröer (2012) also demand a “hybrid measurement of success” which considers both the expectations of sponsors and the target group. These approaches all imply a variety of goals and perspectives, which illustrates that the success of a SHO can be assessed differently. A sponsor can have different goals than the member of a SHO. If these potential differences are not considered, it can come to the apparently paradox situation that a sponsoring institution considers a SHO as successful, while at the same time, membership in this organization drops due to unfulfilled expectations of its members. Therefore, it is necessary to identify the expectations of a program’s target group before its implementation and to explain its function and goals to potential members in detail in order to not create wrong expectations and adapt the intervention if necessary.

Apart from the above discussed question of effectiveness, the efficiency of an intervention is also under scrutiny. Given that cooperative SHOs in the end compete with other organizational forms, they have to address the question whether these could reach the same effects in a more efficient manner. As a result, what needs to be examined is not only the “absolute” effect of an intervention (“Has been achieved what was intended?”) but also its “relative” effect (“Could the same effects have been reached in a more cost-efficient manner or could a different intervention have reached more with the same costs?”).⁵

Ideally, an impact evaluation addresses the effectiveness and efficiency of all effects on all stakeholders at all time. In practice, a focus is necessary. This focus has to consider the primary function to be fulfilled by the evaluation and for which target group it is primarily conducted. This also has consequences for the design and the planning of the impact evaluation (Stockmann, 2006). Before addressing the different functions

⁵In this context, it is also of interest which special objectives cooperative SHOs have in comparison to other programs in development cooperation and if these could—in theory—be accomplished through other organizational forms as well.

of impact evaluations and their corresponding methods, we briefly want to elaborate further on the latter ones and assess their appropriateness from the point of view of cooperative SHOs.

2.2.3 Methods of impact evaluation in development cooperation and their appropriateness for SHOs

Impact evaluations can apply both quantitative and qualitative methods as well as a combination of these (mixed-methods). While quantitative methods (experimental and non-experimental ones) aim at measuring and quantifying previously defined effects, qualitative methods offer the possibility to identify potential effects in exploratory approaches and unravel and explain causal relationships.

Randomized Controlled Trials (RCTs) are an experimental design which randomly assigns individuals, household or also whole villages/cities or regions to a treatment and a control group. The treatment group participates in a (developmental) program while the control group does not. Given a sufficient size, both groups' participants are comparable due to their random allocation to one group. Thus, by comparing selected indicators and potentially their development over time, the effects of an intervention can be measured. For the application of a RCT, the planning and implementation of the study design has to start before the program's initiation to be able to randomly allocate participants to both groups. Furthermore, it is necessary to avoid spill-over effects between control and comparison group to be able to quantify the effects exactly. Especially this last aspect can pose a problem for cooperative SHOs, given that they often explicitly aim for effects beyond their direct membership (Rösner, 2000). Accordingly, the consideration of the general public's interest is part of the cooperative principles formulated by the International Co-operative Alliance (ICA) (ICA, 2013). Because of the necessary study size and the involvement of two study groups, RCTs consume a lot of resources and their costs can exceed the budgets of smaller projects, such as many SHOs.

In cases where a random allocation of treatment and control group is not possible, non-experimental methods can (1) model two comparison groups as identical as possible or (2) consider and thus eliminate differences between two groups by using certain statistical methods. Methods like the Difference-in-Differences (DiD) approach, Propensity Score Matching (PSM) or Regression Discontinuity Design (RDD) can fulfill this task and thus produce reliable measurements of effects. Nevertheless, they also require two separate study groups so that respective resources have to be invested. Due to the non-random allocation to treatment and control group, however, these approaches allow for an impact evaluation ex-post (in the case of propensity score matching) and for an impact evaluation of those kinds of projects which—due to different reasons—do not allow for a random allocation or where it is considered unethical.

It is a common critique of RCTs that they exclude the control group from a potentially helpful intervention.⁶ It can however also be argued that the implementation of “untested” interventions, whose effects have not been subject to empirical research, is also unethical (Banerjee and Duflo, 2011). RCTs are also often accused of focusing on short- and medium-term effects and neglecting a real understanding of why a particular intervention was successful or not (Robson, 2002). A combination of RCTs or experimental methods with other methodological approaches can overcome this shortcoming. This combination is not only necessary in order to identify the causal relationships behind an effect, potential disruptions or surprising connections, but also to catch particular effects in the first place. Objectives which cannot be easily quantified, such as the promotion of the democratic principle in the case of SHOs but also effects on the framework of economic activities mentioned by Rösner (2000), are hard to grasp with quantitative methods. Not only because of a lack of quantifiability, but also because there is no control or comparison group for effects on the macro level. Also, effects beyond the membership of a SHO are not easily captured with quantitative methods, although they are explicitly desired by SHOs. Thus, to do justice to the manifold potential effects of cooperative SHOs in an evaluation, it is important to apply other methodological approaches additionally to quantitative methods.

Qualitative, non-statistical methods of impact evaluation are especially suitable for understanding the causal relationships behind an identified effect. They examine causal connections between effect and intervention by comparing the assumed results chain and rival possibilities (i.e. alternate explications how an effect could have been brought about independently from the particular intervention) with the data gathered.⁷ This is of special importance when unintended effects are detected or expected effects do not unfold, i.e. when the connection between program and effect is not as assumed. As already described, a thorough understanding of relationships is necessary for the scale-up of an SHO or the transferral of its approach to other branches, regions, countries or target groups. Furthermore, qualitative methods can help to understand (though not quantify) non-quantifiable effects of an intervention.

Participatory methods involve the target group itself in the collection, analysis and/or interpretation of data (Chambers, 2009; Patton, 2008; Chambers, 1994). Though they are not limited to qualitative methods, they are often associated with them. For an impact evaluation of SHOs they seem especially suitable given that SHOs are participatory themselves. An involvement of its members in the evaluation of business operations is consistent with the principles of self-administration and self-responsibility. That way, members are enabled to reflect on their organization already during the process

⁶See Banerjee and Duflo (2008) and Cohen and Easterly (2009) for arguments pro and con RCTs.

⁷See White and Phillips (2012) for an extensive review of different methods of impact evaluation without a comparison group and using only a small number of cases. Also see Ebrahim and Rangan (2010) and Mildenerger et al. (2012) for an overview of different instruments of impact evaluation.

of evaluation. Additionally, their involvement can potentially sharpen their sense for self-responsibility.

A combination of the different approaches described in terms of a mixed-method approach is desirable. It facilitates both the quantification of effects as well as a deep understanding of these. The approach taken by the “Measuring the Co-operative Difference Research Network” is a good example. The network united the Canadian Co-operative Association and four Canadian universities. Together, they examined the economic, social and ecological effects of Canadian cooperatives. Their approach combined quantitative and qualitative data collections with a participatory approach involving the cooperatives’ members in the evaluation process (Measuring the Co-operative Difference Research Network, 2010). Vicari and de Muro (2012) also used a combination of quantitative (propensity score matching) and participatory methods in their evaluation of an agricultural cooperative in Brazil. Nevertheless, the combination of different methods comes with a need for more resources (costs and time) and the corresponding technical know-how.

2.2.4 Functions of impact evaluations for the stakeholders of cooperative SHOs

Both Stockmann (2006) and Caspari (2004) differentiate between five partly overlapping functions of evaluations: insight, legitimation, dialog, control and development. Based mostly on Caspari, we provide in the following more details on these functions for the specific case of impact evaluations and describe their importance for a SHO and its stakeholders. In principle, impact evaluations can fulfill all five functions, but the stakeholders can also prioritize particular ones. We examine the importance of each function for the evaluation of cooperative SHOs and to what extent RCTs are the appropriate research method for addressing them.

The **insight function** is insofar superordinated to the other functions as the insight into the “causes of success or failure as well as the effectiveness” (Caspari, 2004) of a development intervention is the basis for all other functions. Insights can refer to the past and concern themselves only with the specific intervention under evaluation and what it has achieved. They can however also aim at the generalization of evaluation results in order to optimize future processes of other SHOs. At the same time, these insights should be transferable to other target groups or SHOs in different regions, countries or branches. Consequently, the insight function can go beyond the single SHO. An impact evaluation can be ex-ante to explore potential effects of a SHO during its planning as well as ex-post to understand the effects and causal chain of an existing SHO. Those funding or supporting organizations which aim for an effective and efficient utilization of their future funding have a special interest in such insights as well as governments and political institutions which shape the environment for SHOs. Additionally, there is

interest from a scientific side. But also for the management of SHOs and their members it is of importance to analyze own successes and failures and to learn which interventions have an effect and which not and how to potentially adapt the latter ones.

RCTs are especially suited for the quantification of the effectiveness of individual development interventions. However, if one wants to identify also SHO-specific and hardly quantifiable effects, a combination of different methodological approaches is necessary. If the transfer of knowledge gained on a SHO into different contexts is desired, the results of an impact evaluation require a high external viability. While RCTs have a high internal viability, their external viability is rather low. Other approaches, such as qualitative and participatory ones, are more appropriate in this regard if carried out carefully. In comparison to RCTs and other statistical procedures, they have the advantage to also be able to explore the reasons for occurring or missing expected effects and the appearance of unexpected ones. The causal chain and its individual steps can be checked, while these remain more of a “black box” in RCTs or non-experimental, statistical approaches. Based on this, it is possible to examine the transferability of successful interventions to other contexts.

The insights gained from an impact evaluation can be utilized for the **legitimation** of the respective program. In the case of cooperative SHOs, this can be necessary for different stakeholder groups: public and private organizations as well as private donors which have supported the initiation or running of the SHO with financial or other resources are often interested in learning whether their efforts have positive effects on members or beyond. Especially a comparison with other organizational forms can be the aim of an impact evaluation. Ultimately, cooperative SHOs compete with other forms of organization and derive their legitimation from their comparative advantages over these (Göler von Ravensburg, 2007). Thus, not only the effectiveness but also the efficiency of the SHO with regard to its stakeholders objectives is under scrutiny.

According to the ICA, the consideration of the general public’s interest is part of the cooperative principles (ICA, 2013). Rösner (2000) examines the economic development contributions of cooperatives in the three dimensions order, structure and process. Apart from their contribution to the emergence of medium-sized businesses and the strengthening of small producers, he identifies additional positive effects for society as a whole: the improvement of public infrastructure by taking charge of the supply with drinking water and electricity and the exposure of legal gaps and the enforcement of legal regulations. From these and similar expected effects stems the interest of the SHO’s closer environment in its work, like for example the village or urban community.⁸ Additionally, consumers—especially from developed countries—are interested in the promotional effects of the SHO if, as in the case of producers’ cooperatives, they buy its products to

⁸For example, a positive effect like the promotion of the local economy or local job opportunities could lead to support from the local community, while negative effects like the contamination of drinking water by a SHO-business could damage its legitimation within the local community.

support it. Last but not least, the members themselves want to learn about the effects of their involvement to make an informed decision about their future membership.

An impact evaluation with mostly legitimizing function can be carried out ex-ante if one wants to evaluate potential and prospective effects of an intervention or sponsorship. Mostly, however, these evaluations are implemented ex-post, after the sponsorship has ended and when it can be expected that also long-term or at least medium-term effects have been reached. Basically, the legitimating function can be fulfilled well by RCTs and other statistical procedures. Quantitative measurement of effects and the demonstration of a causality between effect and intervention—which can be provided by RCTs and other, e.g. quasi-experimental, procedures—are the crucial point for the legitimation of an intervention. If a legitimizing function is to be fulfilled ex ante, quantitative measurement of effects is not appropriate and other evaluation techniques have to be applied.

In order to legitimize the SHO as a particular form of organization, however, it is necessary to evaluate also effects which are based on cooperative specifics, as already discussed with regard to the insight function. The utilization of qualitative and especially participatory procedures is helpful: they cannot quantify effects but can show the subjective meaning different stakeholders assign to the SHO and whether, e.g., its members or the local community perceive economic support or a strengthening of democratic structures.

Impact evaluations also offer the possibility for **dialog and learning** for the stakeholders of a SHO. The communication and interpretation of insights gained from an evaluation can serve as a basis for future common learning. Even the evaluation process itself can be seen as a forum for exchange. Ideally, all stakeholders are involved in this process, but the dialog between the supporting institution and the SHO's management and its members is considered especially important. This exchange can happen before, during or after the support of the SHO. It is possible to discuss intended effects ex-ante, to exchange expectations of different stakeholders and derive particular priorities. This contributes to the design of the SHO and at the same time serves as a basis for a later impact evaluation. Ex-post and during the collaboration, evaluation results should be discussed between stakeholders in a transparent manner and be the foundation for further collaboration. Thus, the exchange and collaboration within the SHO are strengthened and the identification of members with their organization is consolidated.

The effects of a SHO quantified by an RCT can serve as a basis for dialog and learning and can relativize very subjective perspectives. If, however, the evaluation process itself is supposed to fulfill the function of dialog and learning, RCTs are not well suited as a methodological approach. It is possible to create an exchange between stakeholders about intended effects in the form of an ex-ante dialog which can then be considered in an RCT. Nevertheless, the rigid research design of an RCT ideally requires that the intervention under study is not adapted after its start. If an intervention is adapted

after the initiation of an RCT (e.g. with regard to its process or inputs) it cannot be determined definitely if an observed effect is attributable to the intervention in its original or adapted form. Additionally, potential dynamics of effects over time cannot be identified. At least for a part of the target group, the intervention should thus remain unchanged in the context of an RCT to be able to attribute observed effects without doubt.

Furthermore, RCTs do not or only hardly enable the active involvement of members in the evaluation process. In contrast, qualitative and especially participatory methods can contribute to an intensive dialog during an impact evaluation by involving participants of a program or members of a cooperative SHO during the analysis process. This also ensures that their points of view are heard and reflected in the evaluation results. In case only the results of an impact evaluation and not the process itself should contribute to dialog and learning, RCTs are in principle suitable. But they should be complemented by other approaches to discuss, communicate and if necessary improve assumptions about causal chains behind the effects measured. Particularly the absence of intended and appearance of undesired effects should be understood.

Apart from fulfilling an insight, legitimizing or dialog function, impact evaluations can also be a kind of **control**. In this case, they are used to check whether the respective persons in charge within and outside the SHO are fulfilling their tasks. The control function of impact evaluations is especially relevant for supporting organizations, the management and the members of a SHO who are all interested in the adequate fulfillment of their duties by staff and other persons. Quantified effects identified in RCTs (or other non-experimental methods with control or comparison groups) can be a starting point for control. For example, if desired effects have not been realized and the reasons should be identified. Nevertheless, RCTs do not consider the organizational processes of development intervention, so that it is not possible to adapt its functioning on the basis of according information. Qualitative and/or participatory methods, on the other hand, can provide information about the difficulties of the results chain and organizational obstacles.

Finally, all the functions mentioned above can contribute to an adaptation of the evaluated measure if necessary, to a recognition of the deficits in the design of the SHO and the intervention and to timely countermeasures (**development function**). This is especially important for the management of the SHO, its members and supporting organizations, who are interested in a sustainable success of the intervention. For RCTs, which aim at an explicit attribution of effects to a specifically designed intervention and the quantification of these effects, it is however necessary to not adapt the intervention under study. Modifications of the functioning of the SHO and its design would thus only be possible after the conclusion of the evaluation. Furthermore, RCTs cannot provide insights on the specific connections between inputs, outputs and effects or the underlying effects chain. Without qualitative or participatory data collection, there would be no

base for making the intervention more successful after the conclusion of the experiment. However, effects proven and quantified through an RCT can be used as an argument for scaling-up and transferring successful interventions and thus for the steering of programs beyond the specific SHO.

Table 2.3 summarizes the advantages and disadvantages of RCTs for the different functions of impact evaluations and shows where alternative methods can come into play.

2.2.5 Conclusion

It can be concluded that impact evaluations need to take into account a SHO's specific characteristics and the different sets of goals of its stakeholders. A particular challenge is to do justice to the complexity of effects within the SHO itself, in its local context and on regional and national level. In doing so, not only the intended positive effects but also non-intended negative effects as well as missing and unexpected effects need to be addressed. Ensuring this requires a careful selection and implementation of different methods of impact evaluation. It was shown that RCTs alone cannot ensure a comprehensive evaluation of the effects of a cooperative SHO given that many of its effects are difficult to measure.⁹ Furthermore, some functions of impact evaluations cannot be fulfilled by a mere measurement but require an understanding of the underlying results chain and causal relationships. Additionally, functions of impact evaluations might require an adaptation of the intervention during its runtime and not only after its conclusion. In other cases, an active involvement of SHO members is promising. This is a characteristic of participatory methods which include members and their perspectives in the evaluation. A combination of different methods therefore appears not only reasonable, but necessary for the impact evaluation of SHOs.

The principles of self-administration and self-help are central motives of community-based and cooperative-oriented development aid and are expected to contribute to the sustainability of development and development programs (Mansuri and Rao, 2004). In order to prove sustainability and measure it, long-term impact evaluations conducted over decades are necessary and should especially address the years after a potential end of external support and funding. This is theoretically possible with RCTs. The actual focus of evaluation and especially the measurement of effects however has led to the trend that, in practice, results are expected or demanded earlier (e.g. immediately after the conclusion of sponsorship) (Banerjee, 2005).¹⁰ This could lead to a neglect of long-term effects. For cooperative SHOs, this brings about the risk that especially those effect which are the result of cooperative structures and thus constitute their comparative

⁹Even prominent advocates of RCTs like Duflo and Kremer (2005) point out that RCTs are suitable to evaluate the effect of many, but not all development programs.

¹⁰Paradoxically, the term "impact evaluation" targets long-term effects ("impacts") and neglects "outcomes" in the sense of short and medium-term effects. Nevertheless, only a small part of "impact evaluations" concerns itself with long-term effects (> 5 years).

TABLE 2.3: Advantages and disadvantages of RCTs for different functions.
Source: Own illustration.

Functions	Central stakeholders of cooperative SHOs	Advantages RCT	Disadvantages RCT	Alternatives/Complements
Insight function	Public/private supporters and sponsors Governments and political institutions SHO management Members Science	Measurement and quantification of effects	Potential neglect of SHO-specific and difficult-to-quantify effects Low external validity: results chain remains a “black box”	Qualitative and participatory approaches with a focus on the results chain
Legitimizing function	Public/private supporters and sponsors General public Consumers Members	Measurement and quantification of effects Establishes causality between intervention and effects	Potential neglect of SHO-specific and difficult-to-quantify effects	Qualitative and participatory approaches: no quantification of effects, but their assessment by stakeholders
Dialog and learning function	Public/private supporters and sponsors SHO management Members	Quantification as basis for dialog in order to relativize strongly subjective perspectives	When implementing RCTs correctly, measurement and dialog can only be done subsequently Rigid research design and high standardization require unchanged interventions for achieving the best study results No or only little active involvement of members in evaluation process	Qualitative and participatory approaches with flexible research design Participatory approaches: intense dialog and consideration of members’ perspectives

Continued on next page

TABLE 2.3: Advantages and disadvantages of RCTs for different functions (continued).

Functions	Central stakeholders of cooperative SHOs	Advantages RCT	Disadvantages RCT	Alternatives/Complements
Control function	Public/private supporters and sponsors SHO management Members	Quantified effects as starting point for control	Organizational processes and procedures of development interventions are not reflected	Qualitative and participatory approaches with focus on results chain and insight into organizational obstacles
Development function	SHO management Members Public/private supporters and sponsors	Proven and quantified effects as basis for scale-up of interventions	Rigid research design and high standardization require unchanged interventions for achieving the best study results Result chain remains a “black box”: if the intervention was not effective, RCT results do not show why	Qualitative and participatory approaches with focus on the result chain as basis for steering measures

advantage are not addressed. This would hinder cooperatives in demonstrating their advantages in comparison to other forms of organisation.

An additional, more practical aspect, can lead to an intensification of this effect: Given that RCTs are comparatively expensive due to the required study size and the involvement of a treatment and control group as well as their long-term research design, they are often only applied for greater interventions to be able to justify expenditures in comparison to program costs. Especially in the case of smaller projects like many SHOs, costs for such an evaluation can surpass the available budget.¹¹ Thus, SHOs will mainly be subject to an RCT when there are additional external resources available. A subsequent possible lack of these kind of studies involving SHOs can have different consequences: First, the comparative superior knowledge about the effects of other, non-cooperative organizational forms, is intensified. Second, there might thus be a lack of rationale for sponsors and donor organizations to invest in SHOs. Since they are often required or at least requested by the public to explain the effects of their funding, there is the risk that only interventions with easily measurable effects will be supported.¹² For SHOs, this could lead to a comparative disadvantage with regard to their funding.

It is thus of importance to develop scientifically sound approaches for a comprehensive impact evaluation of cooperative SHOs in the sense of the functions discussed above. These should be able to illustrate the potential of cooperative institutions in developing countries with regard to the support of their members as well as a general poverty reduction and democratization in order to legitimize the existence of cooperative SHOs in competition with other organizations. For this, the consideration of all effects of a SHO is necessary, especially those specific to cooperatives. Here, not an adaptation to indicators of other organizational forms should be the objective but approaches which allow for a comparison and at the same time consider the specific cooperative effects according to their importance and—apart from short-term and medium-term effects—also their long-term impacts.

* * *

The deliberations in this chapter have shown that qualitative methods for impact assessment¹³ are the appropriate approach for my research questions and the insurance schemes under study. The focus of my research are insured and their subjective perception of access to outpatient care through their respective HMI schemes. As cooperative

¹¹It needs to be mentioned, however, that a lack of adequate resources should not lead to the use of more affordable, but less reliable methods. Examples are “before-after” estimation within the target group or ex-post comparisons of particular indicators of the target group with another group (“differences in means”) without checking their comparability. For more details, see Frölich et al. (2014).

¹²For nonprofit organizations, see Mildemberger et al. (2012).

¹³As mentioned before, the term impact evaluation (or assessment) usually comprises both medium-term outcomes and long-term impacts and is thus appropriate for medium-term outcomes such as improved access to care, too.

organizations, the schemes have the benefit for their members as primary rationale and objective. Hence, their members' subjective perception plays an important role when assessing or evaluating effects and impacts of these schemes. Additionally, the research community and implementing organizations have a high interest in identifying these perceptions for a general understanding (insight function) and a potential adaptation of current or future insurance schemes (development function) to improve access to care.

The qualitative original data presented in this thesis is one study component of a mixed-method research project on the impact of HMI (see also chapter 1). Due to the subjective nature of the specific research question under study, I opted for a qualitative impact assessment approach which aims at understanding *why* and *how* insured make use of their outpatient service options the way they do and what impact they perceive. There are however also publications on the access to care through the insurance schemes under study based on quantitative data (Raza et al., 2016a,b).

Before turning to my original data, chapter 3 provides a systematic review of previous qualitative studies on access to care through HMI schemes.

Chapter 3

Qualitative evidence on the effect of health microinsurance on access to health care—A systematic review and thematic synthesis

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3.1 Introduction

While the need of making quality health care services accessible for everyone is increasingly acknowledged (World Health Organization, 2010, 2013), there still is a lack of national or social health insurance schemes reaching marginalized sections of the population in low- and middle-income countries. Health microinsurance (HMI) has experienced increasing attention as a way to close this gap. HMI is defined as a contributory, voluntary risk pooling mechanism targeting people with low incomes in the informal sector. It can be provided by different risk-carriers (from local, informal groups to multinational insurance companies) and through different delivery channels (e.g. through microfinance institutions or local agencies) (Dror, 2014).

Recently, a number of systematic reviews addressing the question whether these schemes have been successful in improving their insured's access to care have been published (Ekman, 2004; Spaan et al., 2012; Acharya et al., 2013; Mebratie et al., 2013b). Systematic reviews inform policy making by mapping relevant research for specific questions,

appraising it critically and synthesizing its findings, all based on explicit criteria. The aforementioned reviews on HMI focus on the quantitative evidence on access to care and address the questions *whether and by how much* health care utilization has increased (or not) due to the existence of insurance coverage. To the best of my knowledge, until now no systematic review has aimed to unfold *how* HMI have contributed (or failed to contribute) to improve access to care in order to replicate successful and adapt unsuccessful arrangements. Given that the satisfaction of the insured is crucial for their (re)enrollment decisions, I argue that it is especially important to consider their point of view. Therefore, the present review addresses the following questions:

1. What positive effect of HMI on access to care do insured perceive?
2. What are the reasons for a lack of perceived positive effects?
3. What conclusions can be drawn for making HMI more successful in improving access to care as perceived by the insured?

This type of research question warrants a different approach than that taken by previous reviews, as these focus on quantitative studies and do not include qualitative evidence. The following section describes the methodological approach taken. This is followed by a presentation of the review's results and their discussion. The chapter closes with concluding remarks.

3.2 Methodology

Systematic reviews are increasingly used for informing decisions in policy and practice. As it usually would be too time-consuming for policy-makers and practitioners to review numerous individual studies themselves, they rely on researchers to provide up-to-date summaries of relevant literature and research. Compared to single studies, reviews provide a more comprehensive and reliable picture regarding the evidence on a certain topic or intervention. Since these reviews are products of research processes themselves, they need to fulfill the same basic criteria. Therefore, they rest on using “systematic and explicit, accountable methods” (Gough et al., 2012) in mapping relevant research, critically appraising it and synthesizing its findings. By consolidating results from different studies, they generate new insights. Similar to primary research and different to conventional literature reviews, systematic reviews address specific research questions while providing explicit criteria for searching and including or excluding particular studies. As in primary research, systematic reviews vary in methodological approaches and criteria applied according to the type of research question posed. Broadly, they can be allocated on a continuum between aggregative reviews (which add up data to answer the question under study) and configurative reviews (which organize data from included studies).

Typically, the former is related to quantitative studies and the latter to qualitative evidence, though it is also possible to aggregate qualitative data or organize quantitative data (Gough et al., 2012). Due to the nature of the research questions under study here, which aim at understanding rather than measuring the impact of HMI on access to care, the present review focuses on qualitative evidence and its synthesis in a configurative form. The following paragraphs explain in detail the approach for finding, judging, analyzing and synthesizing the literature.

3.2.1 Literature search

I identified a set of data bases to be included into my literature search and made sure to consider other relevant websites of research or implementing institutions, given that in international development, studies are frequently published as grey literature (Mallett et al., 2012; Stewart et al., 2012). see Table 3.1 for details.

For scanning of data bases, a standardized set of search terms was used, adapted to the specific search syntax of the data base. Searches looked for matches with any of the following terms: “health microinsurance”, “community based health insurance”, “micro health insurance”, “mutual health insurance” or “community health financing”. For scanning the institutional websites, built-in keywords or simple search terms such as “insurance” or “health insurance” were used given that the quality of indexing on many sites was questionable. For the same reason, I did not use search terms related to qualitative research. The literature search was conducted in December 2013. In June 2015, the data bases and websites were checked again to identify newly published literature.

After excluding duplicates from the pool of studies identified, 201 studies remained. Four of these studies could not be found. The abstracts of the remaining 197 were then scanned to determine whether they fulfilled the following criteria:

- Whether they presented original research
- which was conducted in a developing country,
- investigated HMI (based on the definition given in the introductory paragraph),
- investigated the perceived impact of HMI on access to health care and/or barriers to accessing care through HMI
- and used qualitative methods.

In total, 14 studies complied with the inclusion criteria. These were then subject to a quality appraisal to determine their inclusion or exclusion from the review.

TABLE 3.1: Data bases and institutional websites considered in systematic review.
Source: Own illustration.

Data bases	Institutional websites
British Library of Development Studies	Abt Associates
EBSCO Host	Basis
Google Scholar	Centre for Financial Regulation and Inclusion
Ingenta	Centre for Global Development
Institute of Tropical Medicine Antwerp online library	Centre for Microfinance
Inter-Science (Wiley)	Consortium on Financial Systems and Poverty
Journal Storage	Consultative Group to Assist the Poor
PopLine	EPPI centre
ProQuest	Global Development Network
ScienceDirect	Global Extension of Social Security
Scirus	ICMIF Microinsurance
Scopus	IDEAS Economics and Finance Research
theses.com	Institute of Development Studies, Sussex
Web of Knowledge	Inter-American Development Bank
World Health Organization Library Information System	International Development Research Centre
World Health Organization Iris	International Initiative for Impact Evaluation
	Microinsurance Center
	Microinsurance Innovation Facility
	Munich Re Foundation
	Overseas Development Institute
	Poverty Action Lab
	Research4Development
	Rural Finance Learning Center
	Social Assistance in Developing Countries Database
	South-south learning on social protection
	The World Bank
	UNDP Poverty Centre

3.2.2 Quality appraisal

There is no uniform approach among systematic reviews of qualitative evidence regarding the use of quality appraisal. While some argue not to exclude studies due to their quality, others find it important to establish the trustworthiness of the evidence presented (Attree and Milton, 2007). As in qualitative research tradition in general, there is no standardized set of guidelines for quality appraisal but a large variety of different approaches (Dixon-Woods et al., 2004). Nevermind the approach utilized, however, the ability to judge the quality of a study relies heavily on its reporting. It is thus also argued that one does not so much appraise the quality of the study itself, but how well it is presented (Carroll et al., 2012). Therefore, a comparison of results with and without studies of questionable quality is recommended (Carroll et al., 2012; Thomas and Harden, 2008).

I used the widely used Qualitative Checklist developed by Critical Appraisal Skills Programme (CASP) for my quality appraisal (Dixon-Woods et al., 2007). Though a comparison of three appraisal methods (including the CASP tool) employed by different researchers showed only slight agreement, it did confirm that the use of a structured approach obliges researchers to be more explicit about their judgement (Dixon-Woods et al., 2007). In appendix C, I present the detailed results of the CASP tool for the 14 studies considered for quality appraisal. Although four of the studies reviewed (Atim and Sock, 2000; Derriennic et al., 2005; Jowett, 2002; Twikirize and O'Brien, 2012) have methodological flaws or major gaps in reporting, I decided to include them due to the limited evidence available. Based on a sensitivity analysis comparing results with and without these four studies, I later discuss their impact on the findings presented. Table C.1 in the appendix gives an overview over the studies reviewed.

3.2.3 Qualitative synthesis

Among the vast number of approaches to synthesizing qualitative data in a systematic review (Barnett-Page and Thomas, 2009), the thematic synthesis approach proposed and applied by Thomas and Harden (2008) was deemed the most appropriate for the research question under study here.¹ This approach transfers the methods of thematic

¹The approach developed by Thomas and Harden combines third-order interpretations and translation from meta-ethnography with the inductive, constant comparison method from grounded theory and is specifically valuable for questions addressing intervention need, appropriateness, acceptability and effectiveness, all aspects of the research questions under study. Other approaches aim at providing concrete policy implications which is not the purpose of the present review (meta-ethnography), are based on a grounded theory approach which excludes studies with other methodological approaches (grounded theory), only aim at translating, not transforming the data (textual narrative synthesis, ecological triangulation, framework synthesis), require profound analysis of methods employed which are not always presented in the studies considered for the review (meta-study), work on a philosophical meta-level not appropriate for the practical questions posed (meta-narrative), reflect a quantitative logic (fledgling approaches) or aim at combining quantitative and qualitative data which was not the aim of the present review (critical interpretive synthesis) (Barnett-Page and Thomas, 2009).

analysis in primary studies into systematic reviews and comprises the following steps:

- Quality assessment of the studies identified (to prevent unreliable conclusions)
- Coding of findings of studies included into the review in three stages (considering everything presented under “findings” or “results”)
 - Free line-by-line coding of findings
 - Organisation of free codes into related areas to construct descriptive themes
 - Development of analytical themes

3.3 Results

Of the 14 studies included into the review, seven treated insurance schemes in Africa (three in Uganda, two in Ghana, one in Burundi and one in Guinea). The remaining seven referred to schemes in Asia (six in India and one in Vietnam). It is noteworthy that there was some overlap, i.e. different studies treated the same insurance schemes: three studies investigated the *VIMO SEWA* scheme in India, though different aspects of it (Sinha et al., 2014a, 2006; Ranson et al., 2006). Another three studies all covered the *Microcare health insurance scheme* in Kisiizi, Uganda (Derriennic et al., 2005; Blanchard-Horan, 2006; Twikirize and O’Brien, 2012). While four of the studies referred to schemes only covering inpatient care, the remaining eight addressed both outpatient and inpatient care. The majority of the studies considered (nine) used a mixed-methods approach while the rest (five) exclusively used qualitative evidence from focus group discussions and individual interviews (see Table C.1 for details).

The conclusions of the different studies regarding the effect of the insurance schemes studied on access to care are mixed. While some identify overall positive effects (Alatinga and Fielmua, 2011; Derriennic et al., 2005; Sinha et al., 2014a; Blanchard-Horan, 2006), others report no effect (Baza et al., 1993; Criel and Waelkens, 2003; McGuinness et al., 2010; Jowett, 2002) or mixed results (Ranson et al., 2006; Twikirize and O’Brien, 2012).² Despite these overall conclusions, most studies did describe positive impacts on access to healthcare as identified by their respondents. In the following, I first present the descriptive themes that emerged from the analysis of the primary studies and which describe this perceived positive impact of HMI on access to healthcare (chapter 3.3.1). This is followed by a presentation of the analytical themes developed based on these findings, which address the barriers experienced in accessing this care (see chapter 3.3.2).

²One study (Sinha et al., 2006) did not address an effect on access but only the different barriers identified in accessing insurance benefits.

3.3.1 Positive effects of HMI on access to health care as perceived by insured

The respondents in the different studies perceived a wide variety of benefits from insurance for their access to care. They reported (1) faster access to care, (2) better financial access (no need to sell assets, reduced treatment costs) and (3) better quality of care due to insurance (see Table 3.2).

1. Faster access to health care The studies found that due to the reduced costs for treatment, insured patients would contact health care providers more rapidly, without trying many different alternative forms of treatment before or waiting without treatment at all.

“(M)ost people without health microinsurance understood that they needed urgent care during a serious malaria episode. However, they did not always act upon this knowledge immediately. (...) Contrarily, health microinsurance users were not as likely to delay care for serious malaria cases.” (*Blanchard-Horan, 2006*)

“Members of the Mutolere scheme said that people now access care more easily; before, they wasted a lot of time, waiting until they had to be carried to the facility.” (*Derriennic, Wolf & Kiwanuka-Mukiibi, 2005*)

2. Better financial access Being insured provides patients with perceived better financial access to care, too. The studies reviewed found that insurance reduced the need to sell assets (often at a loss) to be able to pay for care and reduced the costs of treatment.

“The focus group discussions at Comboni, Mutolere, and Luwero confirmed that, with scheme coverage, members no longer have to hurriedly sell assets—presumably at a loss—in order to pay medical bills.” (*Derriennic, Wolf & Kiwanuka-Mukiibi, 2005*)

“Members and Vimo SEWA workers perceived the financial component of the Preferred Provider System (PPS)—reimbursement before discharge from hospital—as the primary benefit of the PPS: ‘There was a member... she was very ill and did not have money for the treatment ... When she was hospitalized, [the doctor] treated her without taking a penny from her. This was due to the PPS system. If the system had not been in place, he would not have been so considerate about the poor member.’ (PPS local representative, Nakhatrana taluka)” (*Ranson et al., 2006*)

Insured perceive it as a benefit that in exchange for a small amount (the insurance premium), they can access care of considerably higher costs, e.g. in the case of operations.

“Improved financial access is often the reason why people join an MHO (...). Access to expensive hospital care is especially appreciated: ‘by paying 3000 Guinean Franc (FG), you can deliver by operation, which costs more than 30,000 FG’.” (*Criel & Waelkens, 2003*)

Even if the insurance requires patients to advance funds for care, the reimbursement of these costs is highly appreciated. In some studies, the insured thus perceive HMI as a preventive measure, one which allows them to access medical care based on a pre-payment basis.

“When explaining why they did subscribe to Maliando, participants frequently used expressions such as ‘in anticipation of future illness (...)’, to ‘preserve our health (...)’, ‘guarantee our health (...)’”, to have ‘the guarantee to benefit from health care during the whole year (...)’, or ‘it’s for when times are hard (...)’. The concept of prevention, i.e. to contribute today in order to avoid financial difficulties tomorrow, appears to be well understood.” (*Criel & Waelkens, 2003*)

“I have a big family and am poor. I do not always have money to access medical care whenever needed. The scheme allows me to pay before so that I can go to hospital whenever need arises. That helps me a lot. (Scheme member, Ndago parish, Nyarushanje sub-county, September, 2007)” (*Twikirize & O’Brien, 2012*)

Two studies also identified access to specific services such as health camps and check-ups as well as health education and promotion as benefits of insurance (McGuinness, 2011; Derriennic et al., 2005); however, since these observations were not explicitly made by clients but rather observations from the researchers or health workers, these were not included into this analysis.

3. Better quality of care with insurance Finally, different studies reported access to better quality care through insurance.

“Patients with health insurance get better care. I do not have health insurance but my brothers and my children have a card. I used to go to hospital to take care of them so I know. The health worker asked in detail about everything. Even the room is different. Insurance members stay in a different room—there is even an electric fan in the room. (Female, aged 50 years, Van Rai Commune, Ninh Binh Province)” (*Jowett, 2002*)

“Both subscribers and non-subscribers alike recognise the role of an MHO as a body that represents its members’ interest in their dealings with health care providers at health centres and hospitals. ‘We know that Maliando is there to defend us by enabling us to have a good treatment when we show our membership card’.” (*Criel & Waelkens, 2003*)

3.3.2 Barriers to improved access to care through HMI

Despite these positive perceived effects of HMI, the studies also identified barriers to accessing care through health insurance and a subsequent lack or compromise of perceived positive effects of being insured. The barriers mentioned include (1) low quality of care, (2) compromised physical access to providers covered by the HMI, (3) administrative procedures and arrangements at hospitals or the HMI, (4) lack of information on the HMI, (5) exclusion of certain illnesses from insurance coverage and (6) lack of familiarity with or trust in provider (see Table 3.3).

1. Low quality of care The biggest problems stem from the lack of quality care provided in their respective health care systems. The lack of attractiveness of the health care providers covered by insurance schemes negatively affects the benefits perceived such as faster and easier access to health care:

“Although fast access to care is seen as an advantage, both members and non-members conclude that this is hardly a benefit since the care on offer is inferior. ‘I know, they have more facilities but to resolve what? Often when they [the insured] come back they tell us about their disappointment’.” (*Criel & Waelkens, 2003*)

The studies also identify the unavailability of drugs and disrespectful treatment by the health providers as critical issues of quality of care provided.

“Why do people fail to take this opportunity to insure themselves against future illness when it is available at such a low price? The explanation which emerged from the focus group discussions and household survey is clear: they do not feel that the CAM [Carte d’Assurance Maladie] gives good value for money. There is a general perception that government health centres are often out-of-stock of basic drugs (aspirin, chloroquine, mebendazole). Focus group discussions revealed that people feel they run the risk of a tiring journey on foot to arrive at a health centre which cannot provide the drugs they need.” (*Baza et al., 1993*)

TABLE 3.2: Overview of benefits of HMI identified in different studies reviewed.
Source: Own illustration.

	Faster access	Better financial access	Better quality of care
Alatinga & Fielmua, 2011	x	x	x
Atim & Sock, 2000	x	x	x
Baza et al., 1993	x	x	x
Blanchard-Horan, 2006	✓	✓	x
Criel & Waelkens, 2003	✓	✓	✓
Derriennic, Wolf & Kiwanuka-Mikuiibi, 2005	✓	✓	✓
Jowett, 2002	x	✓	✓
McGuinness, 2011	x	✓	x
Ranson et al., 2006	x	x	x
Sinha et al., 2006	x	x	x
Sinha, Desai & Mahal, 2014	✓	✓	✓
Twikirize & O'Brien, 2012	✓	✓	x

✓: benefit identified in study

x : benefit not identified in study

Additionally to the general low quality of care provided to patients, many of the studies identified a perceived discrimination of insured patients. Respondents complained about slower services for insured patients, prescription of qualitatively inferior drugs, rude behavior of staff and other factors. Though some studies question the objectivity of these assessments, they do acknowledge the negative influence on satisfaction with the insurance scheme.

“The FGDs further suggest that some health providers (nurses) intentionally inflate the prices of certain drugs for the uninsured for their own advantage hence they tend to give immediate attention to the uninsured. It is also reported that the insured are usually given drugs that cannot even cure headache while the uninsured rather get better drugs. For instance, it was reported during FGDs with the insured that: ‘now that we are health insured, paracetamol is our only medicine’.” (*Alatinga & Fielmua, 2011*)

“During the focus group discussions, two groups including ex-patients qualified their responses by noting that doctors and nurses constantly ask about their insured status before prescribing treatment. Three other groups, when asked for suggestions for improvement, requested that medical staff stop asking for their insured status. The insured people are convinced that the only reason to ask for this information is to be able to discriminate against them.” (*Atim & Sock, 2000*)

“Respondents believed that non-subscribers have access to a variety of drugs perceived as more effective, but that they pay a higher price. These are drugs sold through a parallel circuit run by the nurses. Subscribers to Maliando are not welcome ‘because the staff of the Yende health centre does not have any financial benefits with us, they feel that they are losing out’.” (*Criel & Waelkens, 2003*)

“I think service quality is the same [for members and non-members], the difference is only reimbursement. When you have health insurance the workers dislike because they cannot ‘gain profit’. They ‘gain’ more from people with no health insurance. So when I go to hospital I say to them that I do not have health insurance card until I have to pay—then I show my card. People say that it is not good to present health insurance card in advance. (Male, insured, Tan Dan Commune, Hai Phong Province)” (*Jowett, 2002*)

One of the explanations provided by respondents for the discrimination by health provider staff was the fact that—unlike non-insured patients—insured patients do not pay cash. Thus, the staff would perceive not to make any profit with their work.

“Yes, sometime I was sick and went to the hospital. We were in a queue waiting. As we waited the uninsured people just came and they were given immediate consultation, prescription and drugs and we were still sitting. This is because they are going to pay cash. So this is one thing that is bringing back the success of the [insurance scheme].” (*Alatinga & Fielmua, 2011*)

Related to these observations, another studied mentioned extra, unofficial payments to be made to the health provider to receive better and faster care.

“Voluntary health insurance is beneficial but you still have to give gifts to get quick treatment. Many patients with voluntary health insurance should give extra money, otherwise they will never get as good treatment as those without insurance. (Female, Hai Phong, farmer, uninsured)” (*Jowett, 2002*)

2. Compromised physical access Physical distance to the providers included into the insurance scheme was another major factor identified as a barrier to accessing care through HMI:

“If my child is so sick he gets a high fever I go out and buy some medicines for him. I do not bring him to hospital because the hospital for health insurance is (...) about 5 km away. I have no time to bring him there, so I go and buy medicines for him, I do not use his health insurance card’. (Female, aged 33 years, Hai Phong, farmer, insured)” (*Jowett, 2002*)

“There were several reasons for members not using PPS facilities. In some subdistricts, the selected hospitals were too far away for members to access easily (...).” (*Ranson et al., 2006*)

In two studies, insured patients identified transportation as a major problem when accessing care covered by the insurance.

“Transportation was a major problem for about half of the respondents. (...) Only one of the health microinsurance users allowed transportation costs to delay their care more than 5 days. Whereas, a third of the nonusers indicated that transportation caused them to delay obtaining care more than 5 days”. (*Blanchard-Horan, 2006*)

“Some of SEWA Insurance’s members lived in remote villages, which were far from hospital facilities. Transportation was expensive and sometimes

difficult to arrange in an emergency: ‘They have to go to the city from the village to get admitted and transportation is very expensive. So they feel that, ‘whatever money we will get after claiming from the insurance will be as much as the transportation expenses and nothing will be left with us.’ (Aagewan [grassroot worker] in a less-developed rural district)” (*Sinha et al., 2006*)

Nevertheless, the inclusion of additional providers to choose from can be difficult for some insurance schemes, as discussed in a study on a provider-based insurance scheme:

“When asked how schemes could be improved, several communities felt that the scheme benefits should expand the pool of affiliated providers so that members can obtain outpatient care at clinics closer to their homes. This would save members both time and transport costs. It also has the potential to lower treatment costs to the scheme, as outpatient clinics generally have lower overhead costs than do hospitals. However, this is likely to be difficult for most schemes as the majority of them are owned by the facilities in which they are based; increasing the number of affiliated facilities would add to the complexities of contracting with providers.” (*Derriennic, Wolf & Kiwanuka-Mukiibi, 2005*)

Additionally, the organization of health camps in the context of a scheme in India did not provide improved access to care for those insured who had to work during their opening hours:

“Some respondents mentioned that they could not attend health camps because they are held during work hours.” (*McGuinness, 2011*)

3. Complicated administrative procedures and arrangements Complicated administrative procedures when going for examination at the hospital were named in one study as a deterrent to accessing care even when insured.

“‘With health insurance you do not have to pay fees. But the service attitudes of health workers are not so good. They serve members of insurance not so warmly. So I think it is still bureaucratic, and procedure is quite troublesome, not like treatment for non-members. It is more administratively complicated for members than non-members.’ (Female, aged 36 years, farmer, insured, Ninh My Commune, Ninh Binh Province)” (*Jowett, 2002*)

Many of the insurance schemes studied—especially those with coverage for hospitalization—work on the basis of a reimbursement arrangement. This means that the insured patients

advance the hospital fees and other costs and later apply for reimbursement from their respective insurance. The need to advance fees arose as an additional obstacle in accessing care through Vimo SEWA in India:

“Members may still have to struggle to ensure that they have the money to cover the costs they incur (particularly medicines which have to be purchased outside of the partner hospitals) before they can be reimbursed from Vimo SEWA: ‘And the local [PPS] representative would help us get the claim papers, and give us reimbursement. But immediately, who would give us money? Nobody would know us in the drug stores, and who would give us medicines without money? We would have to ask our relatives for money, and then get admitted immediately.’ (Son of member who used PPS, Bayad taluka)” (*Ranson et al., 2006*)

“The cost of hospitalization was one of the deterrents for seeking hospitalization: Many (members of Vimo SEWA) just stay at home because they don’t have money to go to the doctor... Instead of borrowing it is better not to go to the hospital at all. (Member in a more-developed rural district)” (*Sinha et al., 2006*)

“In all cases, the reimbursement from insurance was lower than the total costs incurred, and almost always less than the direct costs of hospitalization. The additional costs are a deterrent and appear to influence hospitalization decisions.” (*Sinha, Desai & Mahal, 2014*)

4. Lack of information about insurance scheme A lack of information about what providers to approach under insurance in case of illness was another hindering factor identified in one of the studies.

“A second factor that prevented members from using the PPS was lack of knowledge about the overall system, or about the identity or location of PPS hospitals.” (*Ranson et al., 2006*)

5. Exclusion of certain illnesses as barrier Another factor was the exclusion of certain illnesses or conditions from the benefit package.

“Some of the obstacles to utilising services through CHI included the cost of the insurance premium; the limited number of health service providers of an acceptable quality; unpopular design features of the programme, such as excluding some conditions from the benefits package; and rigidities in the enrolment procedure, for example, the refusal to enrol individual households.” (*Twikirize & O’Brien, 2012*)

6. Lack of familiarity with or trust in provider In two studies targeting the same HMI scheme in India, a lack of familiarity with or trust in the eligible provider was identified as a hindering factor for accessing care through insurance:

“The members’ poor perception of a PPS facility, or lack of familiarity with it, were also reasons for members not using the PPS:

Respondent: “(...) Whenever we have to go [to a hospital], we go to Acharya hospital only. We get well only at Acharya hospital.” (*Ranson et al., 2006*)

“In fact I was saying I do not want to go to this hospital. I do not have faith in this hospital—it does not suit me.” (*Sinha, Desai & Mahal, 2014*)

3.4 Discussion and conclusion

Due to the small number of studies available, four of the studies reviewed were included despite gaps in reporting, such as a lack of details on recruitment strategies for respondents or missing explanations of the data analysis process, (*Atim and Sock, 2000; Derriennic et al., 2005; Jowett, 2002; Twikirize and O’Brien, 2012*). See Appendix C for details. A sensitivity analysis showed that with regard to the benefits perceived from being insured, their exclusion from analysis would not have an effect on the overall findings as all aspects identified are also present in other studies. Regarding the barriers identified to accessing care, however, two of these studies provide the exclusive evidence for unofficial payments (*Jowett, 2002*) and exclusion of certain illnesses (*Twikirize and O’Brien, 2012*). Nevertheless, I keep these findings in the following discussion of my results as they present only limited evidence, but interesting aspects.

Another challenge of my data is that some studies investigated the same schemes. Most of the barriers identified from these studies are also reported for other schemes, so that a bias in results is unlikely. In case of lack of familiarity with/trust in selected providers and lack of information about insurance and their negative effect on accessing care, however, these are only identified in single studies or studies on the same insurance scheme (*Ranson et al., 2006; Sinha et al., 2006, 2014a*). Given that I do not want to generalize regarding the presence of these barriers in HMIs in general but rather consider the different barriers that could come into play, I include these complications into my discussion as well.

HMI are embedded into the health care system of their respective countries and aim to improve access to public and/or private health care providers. For some schemes, studies concluded that the insured perceive a variety of benefits from HMI with regard to access to health care and that HMI have successfully managed to overcome or at least attenuate problems of the health system in which they operate. In other cases, however, they have

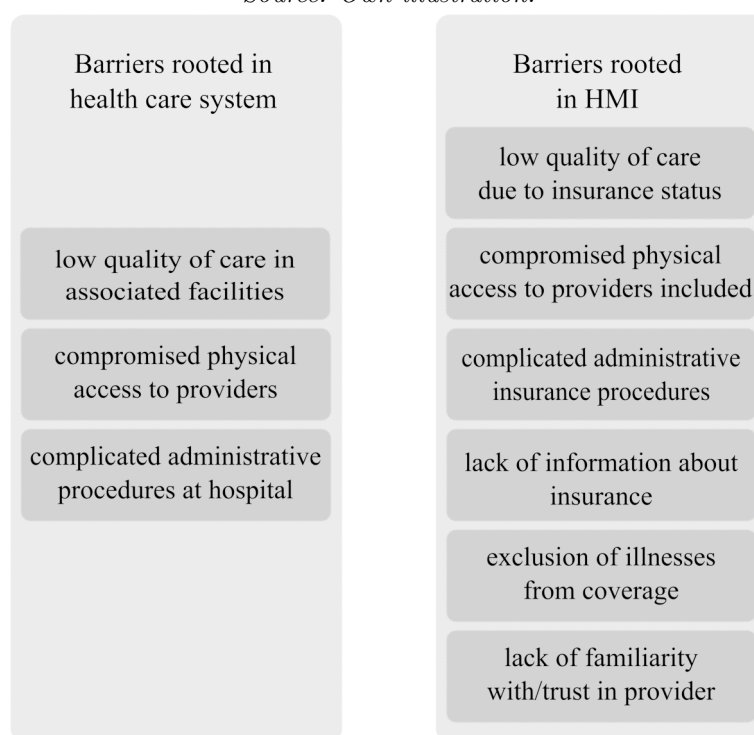
TABLE 3.3: Overview of barriers to accessing care through HMI identified in different studies reviewed.
Source: Own illustration.

	Low quality of care	Compromised physical access	Administrative procedures	Lack of information on HMI	Exclusion of illnesses from coverage	Lack of familiarity with/ trust in provider
Alatinga & Fielmua, 2011	✓	x	x	x	x	x
Atim & Sock, 2000	✓	x	x	x	x	x
Baza et al., 1993	✓	x	x	x	x	x
Blanchard-Horan, 2006	x	✓	x	x	x	x
Criel & Waelkens, 2003	✓	x	x	x	x	x
Derriennic, Wolf & Kiwanuka-Mukiibi, 2005	x	✓	x	x	x	x
Jowett, 2002	✓	✓	✓	x	x	x
McGuinness, 2011	x	✓	x	x	x	x
Ranson et al., 2006	x	✓	✓	✓	x	x
Sinha et al., 2006	x	✓	x	x	x	✓
Sinha, Desai & Mahal, 2014	x	x	✓	x	x	✓
Twikirize & O'Brien, 2012	x	x	x	x	✓	x

✓: barrier identified in study
x : barrier not identified in study

not been successful, at least from the point of view of their clients. This lack of success in improving access to care can be due to the HMI’s design and how the surrounding health care system reacts to its existence (e.g. when clients are discriminated because of their insurance status or when health care providers included into the schemes are too far). Often, however, it is the health system itself which hampers access to care through insurance (e.g. because of the low quality of care provided or complicated administrative procedures at health facilities). Figure 3.1 summarizes the barriers and their origin (health care system or HMI). In the following, I will present some ideas on how HMI can deal with the barriers identified in the review.

FIGURE 3.1: Barriers to accessing care through HMI.
 Source: Own illustration.



3.4.1 Barriers rooted in health care system

The barriers identified illustrate that the performance and success of HMI scheme are subject to the health system in which it operates. Unsurprisingly, the schemes are not in the position to tackle systemic problems, but they can try to attenuate some of them to limit their effects on their work.

The main drawback for clients of the HMIs studied was the low quality of care offered in the public health system. Though in some cases, the schemes managed to improve quality of care for their clients, e.g. by acting as an advocate for their interests, in many other cases, it was reported that quality of care was so poor that it diminished

other benefits perceived from being insured. Especially when the choice of providers is limited and the HMI does not have the possibility to switch to other health care providers potentially offering better care, the schemes should try to make more use of their bargaining power in front of the authorities and pressure for improvements.

Another problem frequently reported was physical access to the services covered due to the distance of health care providers and a lack of transportation opportunities. HMI schemes could try to arrange for outreach programs into the communities where their clients reside while at the same time exploring possibilities such as arranging for transportation.

To avoid that administrative procedures at hospitals hinder access to care through HMI, the insurance scheme should implement simple and manageable procedures for all parties involved.

3.4.2 Barriers rooted in HMI

In different studies insured clients reported that they would be discriminated by health care providers due to their insurance status and receive care of lesser quality and after longer waiting times. This is contrary to what is usually expected, as providers should have an incentive to overtreat and overprescribe when attending insured patients as the insurance would cover the expenses. Nevertheless, the insured clients reason that the perceived discrimination is the result of not paying in cash at the facility, which would give the staff the impression that they could not make any profit from their treatment. This “reaction” of the health care system to the presence of HMI could potentially be attenuated if the schemes implemented points of complaints in such cases and used its bargaining position to negotiate better treatment for its clients.

In some cases, clients complained about the distance of providers included into the insurance scheme or a lack of familiarity with them and chose to visit other providers than those covered by insurance. This could be avoided by including a range of providers, if administratively manageable and if there are appropriately qualified providers to choose from. Alternatively, the insured themselves could be involved in choosing the health care providers to be part of the insurance scheme in order to ensure that popular and trusted providers are considered.

Administrative procedures at the HMI should be kept as simple as possible in order to not prevent clients from accessing care and/or their benefits. One problem mentioned was that in one scheme, the insured still had to pay for inpatient care and only got their reimbursement from the insurance afterwards. It could be considered to introduce some kind of partial advancement to make it easier for clients to access this kind of care.

Finally, in a few cases clients complained about a lack of information about the HMI or the exclusion of certain illnesses which hampered access to its treatment. In both cases, it is clear that clients need to be well informed about how HMI works and why certain illnesses might not be part of its portfolio. Additionally, it could be considered to gather potential clients feedback or input on the design of the health insurance packages to be offered to them in order to really cover their needs and to increase ownership.

3.4.3 Final remarks

The review addressed the question *how* HMI schemes contribute or fail to contribute to improve access to care from the point of view of the insured. It has shown that these insurance schemes can help by providing care faster, making it financially more accessible and improving its quality. However, it has also shown that providing financing schemes such as HMI alone does not necessarily improve access to (quality) care if systemic problems within the health care system are not tackled simultaneously. Additionally, the schemes themselves need to be designed carefully in order to improve access for their clients. If not, there is the risk of actually compromising access even further, such as in cases where clients can only turn to specific providers through the scheme which are farer away than the providers they would usually consult without insurance.

One of the challenges in conducting this review was the small number of qualitative studies on this issue and the suboptimal reporting of their methods in some of them. More longitudinal studies would be recommendable to consider how the insured's attitude towards HMI and access to care changes at different points in time with different health and financial needs. In this review, I have focused on the HMIs' clients and how they perceive their access to care through insurance. For a more complete picture and understanding of the mechanisms behind HMI and access to care, the consideration of health workers' and scheme management's perspective would be advisable.

* * *

We have seen in this chapter that HMI-clients appreciate close and trusted providers and that the inclusion of clients into the selection of health care providers could potentially improve perceived access to care. In the context of rural northern India, local NDAPs are the most popular health care providers for outpatient care for acute illness episodes as they combine just these characteristics. The next chapter has a closer look at this phenomenon when it investigates the health care seeking behavior of our schemes' target group and the role NDAPs play therein.

Chapter 4

Non-degree allopathic practitioners as first contact points for acute illness episodes: Insights from a qualitative study in rural northern India

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4.1 Background

India's National Rural Health Mission (NRHM), launched in 2005, aimed to improve the quality of and access to public health care services, especially for the rural poor. The reasons for these measures were the manifold problems in the public sector hampering the utilization of its services, such as low-quality care, absenteeism of staff and a dearth of physically accessible facilities (Bajpai et al., 2010). The results of the NRHM have been mixed: availability of health resources and health services delivery have improved (Bajpai et al., 2010; Prasad et al., 2013), but problems with the quality of care continue (Singh et al., 2012). After its first 7 years, the initiative failed to reach all of its key goals and was hence extended until 2017 (MoHFW, 2012b; Planning Commission, 2011b).

Despite the achievements of the NRHM with regard to availability of public health resources, recent evidence shows that the rural poor seek care for acute illness episodes primarily from private non-degree allopathic practitioners (NDAPs) (Gautham et al.,

2011; Raza et al., 2016b). These health care providers practice allopathy, although they do not have valid qualification in modern medicine. Some do not have any kind of qualification, while others hold degrees from traditional Indian systems of medicine (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy, often summarized under AYUSH) (Rohde and Viswanathan, 1995; Kumar et al., 2007; Viswanathan, 2004; Abraham, 2005; Rao, 2005; Sabde et al., 2011).¹ Our study addresses the question why the rural poor continue to rely on NDAPs. We explore the NDAPs' accessibility and characteristics from the viewpoint of their patients and examine their role in the rural health care system. To better comprehend this role, we consider the communities' understanding of the local health system and the different health care options they perceive. Recent studies on the utilization of rural health care after the introduction of the NRHM use a quantitative approach (Raza et al., 2013), focus on southern and eastern India (Gautham et al., 2011; George and Iyer, 2013) or do not differentiate between formal and informal health care providers (Aitken et al., 2013). We use data from a qualitative study conducted in three rural settings in Bihar and Uttar Pradesh, two of the high-focus states of the NRHM in northern India. We focus on acute illness episodes because they are the most frequent ones. Also, as a household survey of our study population has shown, NDAPs are the most popular health care providers for these illnesses (Raza et al., 2013). To explain NDAPs' significance, we use a theoretical framework for access to health care based on Penchansky and Thomas (1981) and adapted by McIntyre et al. (2009) and Peters et al. (2008).

In the next sections, we give an overview of the rural health care system in India and present the theoretical framework that guides our analysis. This is followed by a description of the data and methods used before we present and discuss our results. The chapter ends with some concluding remarks.

4.1.1 Rural Indian health care system

Rural Indian health care in the public sector is hierarchically organized in a three-tier system and based on population norms within a geographical area (see Table 4.1). Higher-level facilities serve as referral units for lower-level facilities. Sub-centers staffed with one male and at least one female health worker represent the first level and are the first contact point for primary care. They engage in promoting behavioral change that is integral to maternal and child health, family welfare, nutrition, immunization, and prevention of diarrhea and communicable diseases. Sub-centers are equipped with basic medicines for minor ailments (MoHFW, 2012c). As part of the NRHM, the Indian government introduced so-called Accredited Social Health Activists (ASHAs)—female community health workers—as a contact point in the villages for any health-related demand, but especially for those of women and children. ASHAs are designed to act as

¹There have been recent efforts in some Indian states to allow AYUSH doctors to practice allopathy as well (Shivaranjini, July 18, 2012).

TABLE 4.1: Population norms for public health facilities in rural areas in India.
Source: adopted from MoHFW, 2012.

	Norm in plain areas	Norm in hilly/tribal/difficult areas
Sub-Center	5 000	3 000
Primary Health Center	30 000	20 000
Community Health Center	1 200 000	80 000

a link between the community and the public health system, promoting good health practices, providing basic curative services and making referrals (MoHFW, 2012a). Primary Health Centers (PHCs) represent the second level of the rural public health care system. They are the first point of contact with a qualified doctor. Here, the medical officer and other paramedical staff provide curative, preventive, promotive and family welfare services. Community Health Centers (CHCs) are the third level. They serve as referral centers for PHCs and offer specialist services and testing facilities (MoHFW, 2012c). Fees are charged in public hospitals and health centers, but people living below poverty line are exempted (Bajpai and Saraya, 2010; Prinja et al., 2012), though the High Level Expert Group on Universal Health Coverage in India expressed its doubt about the practical implementation of these exemptions (Planning Commission, 2011a).

As of March 2010, at the time of our data collection, only 7 out of 35 Indian states and territories fulfilled the population norms for sub-centers, PHCs and CHCs as defined by the Ministry of Health and Family Welfare. Bihar was 35.18% short of required sub-centers, 25.15% short of required PHCs and 88.75% short of required CHCs; Uttar Pradesh was 22.1% short of required sub-centers, 15.9% short of required PHCs and 53.05% short of required CHCs. In those PHCs already functioning, only 20 out of 35 states/territories had no shortfall of allopathic doctors; Uttar Pradesh had a shortfall of 45.77% and Bihar a shortfall of 11.95%. Only two states (Sikkim, Chandigarh) had no shortfall of specialists at already functioning CHCs; Uttar Pradesh had a shortfall of 70% and Bihar a shortfall of 62.86% (MoHFW, 2010). According to the latest data from 2012, the availability of doctors has improved in our study states, but is still deficient. The shortfall of allopathic doctors in PHCs is still 22.51% in Uttar Pradesh, while it has decreased to zero in Bihar; the shortfall of specialists at CHCs is 15.53% in Uttar Pradesh and 46.07% in Bihar (MoHFW, 2012c).

Apart from public facilities, a vast number of private health care providers are available in rural India, but many of them have insufficient training. In a national study involving 812 private medical practitioners in 507 Indian villages, only 11.1% of these providers had a formal qualification in allopathy (Bachelor of Medicine or higher). Nevertheless, allopathy is the most dominant form of treatment: 71.6% of all providers surveyed reported that they practiced it (Rao, 2005). Non-national studies from across India report

similar findings with regard to the lack of formal qualification of rural medical practitioners and the prevalence of allopathic treatment (Kumar et al., 2007; Viswanathan, 2004; Abraham, 2005; Naryana, 2006; Banerjee et al., 2004; Jarhyan et al., 2012). NDAPs administer, prescribe and sell medicine, injections and intravenous fluids and do minor surgeries (Kumar et al., 2007; Naryana, 2006; Jarhyan et al., 2012; Kanjilal et al., 2007).

Despite their lack of formal qualification, NDAPs are preferred by the community because they permit deferred payment or payment in kind, are located nearby and available around the clock and offer fast, friendly and effective treatment with powerful medications and injections (Rohde and Viswanathan, 1995; Kanjilal et al., 2007). Recent studies conducted after the introduction of the NRHM confirmed that NDAPs are still perceived by patients as being affordable, accessible and providing quick “all-in-one” services (Gautham et al., 2011; Dharmaraj and Duttagupta, 2013). George and Iyer (2013) had a closer look at the relationship between NDAPs and their communities in northern Karnataka, India. They found that NDAPs and other informal health providers are embedded in their communities, and stress the social pressure these providers are exposed to—one of the reasons they prescribe allopathic medicine. Banerjee and Duflo (2011) also report under- and over-medication by NDAPs as a result of patients’ demand for cheap and quick recovery. Because of their popularity and lack of formal training, demands for new efforts in certifying, integrating and regulating NDAPs have been brought forward since the 1990s (Rohde and Viswanathan, 1995; Rao, 2005; Kanjilal et al., 2007; Yadav et al., 2009; Sudhinaraset et al., 2013).

4.1.2 Theoretical framework for analysis

In order to understand the community’s preference for NDAPs, it is important to have a look at their accessibility. In analyzing our data, we applied the theoretical framework described below in this section.

Andersen (1995) differentiates between potential access (the presence of resources enabling an individual to use health care services) and realized access (the actual use of health care services). Realized access or utilization is often used as an indicator for access to health care because it is argued that access without utilization is not an end itself (Culyer et al., 1992b,a). Others have claimed that potential access is the appropriate focus because it can be a value in itself for individuals, even if they do not make use of it (Mooney et al., 1992). As our focus is on actual utilization of NDAPs, we follow the concept of realized access. One influential framework of access was developed by Penchansky and Thomas (1981). It consists of five dimensions—availability, accessibility, accommodation, affordability and acceptability—to evaluate the “degree of fit” between the clients and the health system. As some components of this original framework are

not always easy to distinguish, we define the following dimensions, a combination of adaptations by McIntyre et al. (2009) and Peters et al. (2008)²:

- Availability or physical access: the supply with appropriate health care providers or services in the right place at the right time
- Affordability or financial access: the fit between costs of service utilization and the patient's ability to pay
- Acceptability or cultural access: the fit between provider and patient attitudes; responsiveness of health services and providers to social and cultural expectations of their patients and communities

4.2 Methods

4.2.1 Sampling and data collection

The data presented here is part of a larger study on the impact of three community-based health insurance (CBHI) schemes in the Vaishali district (Mahua block) in Bihar, as well as in the Pratapgarh district (Shivgarh block) and the Kanpur Dehat district (Rasoolabad block), both in Uttar Pradesh, India. Bihar and Uttar Pradesh are two of the high-focus states of the NRHM with weak public health infrastructure and indicators. This larger study is a collaboration between Erasmus University Rotterdam, Netherlands; the University of Cologne, Germany; the Micro Insurance Academy, India; and three local Indian partner organizations (BAIF, Nidan, Shramik Bharti). It combines quantitative, qualitative and spatial data and a stepped wedge implementation of CBHI schemes (Doyle et al., 2011; Dixit and Panda, 2013). The data used in this study was collected prior to the introduction of these schemes. The study population consists of members of female micro-credit self-help groups (SHGs) and their households. These SHGs are groups of 10-12 women saving together and giving each other loans from their common fund. They are facilitated by one of the three local partner organizations. On the whole, the SHG households are economically and socially disadvantaged in comparison to non-SHG households from the same villages (Panda et al., 2013). At the same time, they are privileged in comparison to non-SHG households when it comes to access to credit for health care: in case larger amounts are needed, our respondents can turn to their respective SHG for a loan at a relatively low interest rate. Using data from a census of all SHG-affiliated households eligible for the CBHI schemes and from a spatial survey, both conducted as parts of the larger study mentioned above, Table 2 compares the socioeconomic characteristics of the SHG households and the average distance to the

²Following Peters et al. (2008), we here understand quality of services as a component of all access-related dimensions, and hence do not treat it as a separate entity.

TABLE 4.2: Socioeconomic characteristics of study households.
Source: Own illustration.

	SC/ST (in percent)	Average years of house- hold head's education	Average monthly per capita expen- diture (in INR)	Average dis- tance of study villages to next PHC/ CHC (in km)
Kanpur Dehat district, Uttar Pradesh	8.6	6.2	1781.1	5
Pratapgarh district, Uttar Pradesh	42.5	5.3	1194.7	3.1
Vaishali dis- trict, Bihar	33.8	4.1	1269.8	2.9

SC/ST: Scheduled caste/scheduled tribe — historically disadvantaged groups in India.

INR: Indian Rupee.

N = 1,039 SHG households (Kanpur Dehat district), 1,284 SHG households (Pratapgarh district), 1,363 SHG households (Vaishali district).

next public formally qualified doctor in a PHC/CHC. SHG households in the Kanpur Dehat district are on average socioeconomically better off than those in the other two sites, with more educated household heads, a higher average monthly per capita expenditure and a lower proportion of scheduled tribes/scheduled castes households. At the same time, the Kanpur Dehat district is the site with the largest average distance to the next PHC/CHC. Due to these differences, we undertook sampling, data collection and data analysis separately for all three sites to achieve greater external validity.

Data collection took place in December 2009 and January 2010. We conducted focus group discussions (FGDs) with members of the SHGs and their respective household heads.³ To account for the differences in geographic accessibility of public health care providers among the SHGs, we purposefully chose respondents from villages with close, medium and far distances to the next PHC or CHC in each study site. CHCs were used as reference facilities in the Kanpur Dehat and Pratapgarh districts. In the Vaishali district, there was no CHC in our study block at the time of data collection, so PHCs were used as reference facilities. We did not use sub-centers as reference facilities because these are not staffed with formally qualified doctors. We then worked together with the respective local partner organization to select those SHGs most likely to be willing to participate in the study from all SHGs active in the identified villages. The broad thematic approach of the overarching CBHI study, which comprises various impact-related topics not addressed in this study but covered in the same FGDs, made it

³The tool used for data collection and the complete FGD transcripts can be found in appendix E

necessary to identify a number of respondents large enough to reach data saturation in each region. Otherwise, our data would have been at risk of not being rich enough for a meaningful qualitative analysis (Morse, 2000). We conducted FGDs separately by gender and within a single self-help group only. In the Kanpur Dehat district, 18 FGDs with female participants and 18 with male participants were held; in the Pratapgarh district, 18 FGDs with female participants and 17 with male participants were held; and in the Vaishali district, 12 with female participants and 17 with male participants were held. Table 4.3 shows the number of FGDs conducted at each site and for each distance category.

To allow for data comparison, we used semi-structured FGD guidelines containing both exploratory questions and targeted questions. Participation in all interventions was voluntary and confidential, based on informed consent. FGDs were conducted by a qualitative researcher from the Micro Insurance Academy and researchers from the local partner organizations, who were trained in a four-day workshop that included recorded mock sessions. All discussions were conducted in Hindi and tape-recorded; transcripts were then translated into English. In accordance with the guidelines issued by the Indian Council of Medical Research Indian Council of Medical Research (2006), the overall study and the English versions of all employed data collection tools were checked and approved by the Ethics Committee of the University of Cologne (Germany).

4.2.2 Data analysis

Using NVivo software, we conducted a directed qualitative content analysis of our data (Hsieh and Shannon, 2005). The analysis was deductive, but also involved inductive categorization of data. Its process consisted of two steps: first, we derived codes and a hierarchical coding tree deductively from the literature and the FGD guidelines. Coding was done by three researchers cross-site, and we added inductive codes or adapted existing ones whenever the content of the FGDs did not fit into one of the established codes. Comparisons between the codings of different researchers ensured a common understanding of text and codes. After this step, we focused on codes relevant to the research question under study in this chapter. From these, we developed interpretative codes, again comprising deductive codes using literature on health care-seeking behavior and inductive codes describing patterns and “indigenous typologies”, i.e. classifications developed by the population under study (Patton, 2002). We conducted the analysis separately for each site to achieve greater external validity, but found a common understanding of the rural health care system and the favorable characteristics of NDAPs. The results from the three sites are therefore presented together; differences found between them are addressed when present in the data.

TABLE 4.3: Number of FGDs conducted, separated by site and distance.
Source: Own illustration.

	Kanpur Dehat district			Pratapgarh district*			Vaishali district*		
	Close	Medium	Far	Close	Medium	Far	Close	Medium	Far
Distance (in km) ⁺	< 10	10-19	> 20	< 5	5-6	≥ 7	≤ 3	4	≥ 5
Female SHG members (FGDs)	6	6	6	7	5	6	4	4	4
Male household heads (FGDs)	6	6	6	4	7	6	5	6	6

⁺ For Kanpur Dehat district and Pratapgarh district, the distance reflects the proximity to the next CHC; for Vaishali district, the proximity to the next PHC.

*The numbers of female and male FGDs do not match because some discussions with female/male groups could not be arranged.

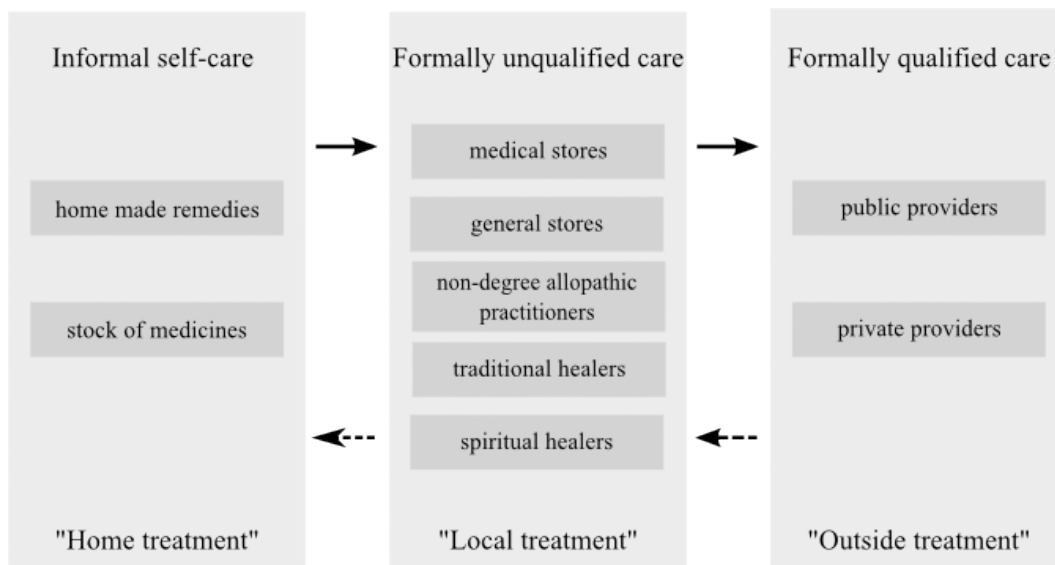
4.3 Results

4.3.1 Three levels of health care: home, local and outside

Before turning to non-degree allopathic practitioners and their accessibility in the three dimensions defined in our theoretical framework, we want to understand the broader context of the rural health care system as it is perceived and utilized by our target population. This will then help us in defining the role NDAPs play in the system.

The notions used by our respondents to structure and describe different health care sources available reveal an indigenous typology. The central criterion for this typology is location. Respondents group sources of health care into three levels: “home treatment”, “local treatment” and “outside treatment”, characterized by informal self-care, care by formally unqualified practitioners and care by formally qualified practitioners, respectively (see Figure 4.1).

FIGURE 4.1: Different health care levels in rural northern India as described by the study population.
Source: Own illustration.



The first level refers to care provided by family members or the patients themselves at home. This can include home remedies as well as self-medication:

“For normal sickness why visit medical stores? We get treated at home.”
 (FGD with female SHG members, Pratapgarh district)

The second level consists of formally unqualified care provided by a variety of practitioners. These are usually available “locally”, “in the village”, “here” or “nearby”:

“Here, if someone has fever or something, we call the local doctor.” (FGD with female SHG members, Vaishali district).

Despite their lack of formal training, respondents usually refer to these practitioners as “doctors”. From the FGDs we learned that these are non-degree allopathic practitioners offering mostly allopathic treatment, though sometimes mixing it with medicines from other systems of medicine.

Specialized traditional and spiritual healers, another source of health care on the local level, are not as popular as they used to be and respondents reported that most villagers turn to allopathic, modern treatment nowadays. Specialized medical stores or general stores selling common medicines are another important source of local health care services. They offer inexpensive and often immediate relief for minor ailments such as coughs, colds, fevers, diarrhea and headaches. Specialized medicines are not available at these shops, though, and need to be procured outside the village. Interestingly, female community health workers, ASHAs,—supposed to be the primary contact point for health-related demands in the villages—were not mentioned as a local health care option for acute illness episodes by our respondents. Mostly, they were mentioned in relation to other services such as maternal care, family planning and public health programs for tuberculosis.

The third level of care is the formal health care system, i.e. formally qualified public and private providers such as doctors, nurses and other paramedical staff. In contrast to the other two levels, these providers are usually not located in the villages and respondents refer to them as being “outside”. One respondent said:

“Even in case of some major disease, we call him [the local doctor] and if he can’t control the disease, we have to consult some other doctors outside.” (FGD with female SHG members, Vaishali district)

At this level, both public and private providers such as clinics, PHCs, CHCs and pharmacies are approached by the patients often only after the illness has progressed and other treatments have not helped:

“Firstly we go to local doctors. (...) If it does not get cured in 2 to 3 days, then we take the patient to the hospital.” (FGD with female SHG members, Pratapgarh district).

Our study group established a pathway along an informal hierarchical system (illustrated in Figure 1), similar to the hierarchical structure of the public rural health system guiding patients from sub-centers to CHCs. Both systems overlap only partially because patients seek health care in informal and untrained settings including non-allopathic and other

healing services. The pathway leads from lower levels to higher levels: from self-care at home to consultation of local formally unqualified practitioners and onwards to formally qualified ones:

“If there is less severe pain, then someone within the family advises to take one or two dosages of drugs from the medical store and you will feel relieved or we will see what to do. Men decide to visit the doctor based on [the] amount they have in [their] wallet. They will first go to [the] store, if they do not feel better after taking medicines from the store, then they visit the doctor. If the small-time doctors [NDAPs] are unable to handle the case, then villagers go to [a] nursing home. If the nursing home is also unable to handle the case, then the villagers go to the Pratapgarh hospital [district hospital] or bigger nursing home in Pratapgarh.” (FGD with male household heads, Pratapgarh district)

There are also many instances when people move laterally, i.e. from one provider to another on the same level, due to dissatisfaction about lack of improvement. Formally qualified providers, whether public or private, are often the last resort when other options have failed. For minor illnesses, but also for very urgent ailments that cannot be delayed, care is first sought at the local level. But respondents do not always enter the pathway described at the lowest level. For more serious cases such as high fever care is directly sought outside if the means are available, either from public or private formally qualified providers. Respondents say they choose the particular provider based on the distance and costs of the health care sources considered suitable for their ailment. In some cases distance and costs prevent respondents from accessing care at a higher level:

“Where will we go [other than the NDAP] when we do not have resources? (...) If some problem comes in the evening, then where will we go? Then we call [the NDAP], he gives some medicine. Once we relax a bit, then we go to Birhun [nearby town] the next morning.” (FGD with female SHG members, Kanpur Dehat district)

The predominant reason mentioned for turning to one of the next levels of care is the current caregivers' inability to cure the ailment. When home treatment fails, households seek relief from informal or formal health care providers. If the condition persists after consulting a NDAP or more advanced services are needed, patients proceed to formally qualified providers, either on their own or through referrals from the local provider. Referrals can be to specific hospitals or doctors (both public and private), with or without specific recommendation. Sometimes NDAPs make referrals immediately after realizing that they are unable to treat a condition. Often, however, they attempt to provide treatment and refer patients to other providers only when conditions worsen. Few respondents believe that NDAPs receive commissions for referrals to larger hospitals.

Comparison of structure and pathway across study sites and distances

Since the proximity of formally qualified doctors differed for the population under study, the classification of providers was not always uniform. A few respondents identified public, formally qualified providers as “local” because they are located very close to their village. Yet the perception that providers from outside are better trained than local providers, including local public doctors, holds true for many respondents:

“Whatever these people are telling is right. All the doctors that come over here are not perfect. (...) There are no experienced doctors available here.”
(FGD with male household heads, Pratapgarh district, close proximity to next CHC)

At the same time, respondents also reported visiting NDAPs and other informal providers who are from “outside” their local area, such as famous spiritual healers. They also gave examples of trained health care providers unable to cure a particular condition, despite their formal education and the use of sophisticated and costly medical services, and how local informal providers were able to help. In general, however, the understanding of the health care system as a three-level hierarchical structure described above is strongly supported by the data.

The common pathway described by our respondents was similar for all three study sites and all distances to the next PHC/CHC. Our data suggests that qualified doctors are less accessible geographically in the Kanpur Dehat district than in the other two sites, which is in accordance with the average distances to the next PHC/CHC given in Table 4.2. As for the use of spiritual healers, respondents from the Kanpur Dehat and Vaishali districts reported a decline in visitations, though a female respondent from the Pratapgarh district mentioned that the number of spiritual healers available in the village had risen.

4.3.2 Popularity of non-degree allopathic practitioners

Even when respondents live close to formally qualified public doctors, the use of NDAPs is a consistent pattern in our FGDs. This suggests that other factors in addition to distance determine the choice of provider. In the following, we group our respondents’ explanations for the utilization of NDAPs into the three dimensions of accessibility defined before.

Availability or physical access Our study population identifies NDAPs as “jholachap”, a Hindi expression literally translating into “man with a bag” and a reference to their accessibility as they travel around to offer their services. NDAPs are situated close to the population and often available around the clock. This makes them a first contact point for acute illness episodes. People save time when they do not have to travel

to far away and often overcrowded public facilities with long waiting periods. Instead, they acquire services conveniently at their doorsteps. NDAPs also make home visits and can be reached by the respondents via mobile phone.

Our findings indicate that the rural population is aware of the lack of formal qualification of NDAPs and the fact that formally qualified modern practitioners are not available at the local level. A female SHG member from the Kanpur Dehat district explained the difference between formally trained health care providers and NDAPs:

“The doctor here keeps giving the medicines for pain without knowing the reason of pain. It is only after we go to some doctor to another place that we will know the cause of illness.” (FGD with female SHG members, Kanpur Dehat district)

Rural residents nevertheless make use of these providers because of their availability. Respondents complained that NDAPs sometimes treat conditions that they know are beyond their capabilities. Patients also use NDAPs as a first point of relief while they accumulate the funds needed to see a formally qualified health care provider. In these cases, NDAPs are not expected to cure the condition, but are seen as a temporary solution until better options can be accessed:

“We have to manage the sources like we call the doctors from village and get some injections and medicines [in case of illness]. After some relief we again proceed to the better option available.” (FGD with male household heads, Kanpur Dehat district)

Affordability or financial access NDAPs are more affordable than “outside” private providers. They usually provide their services for a lump-sum, and charge only for medication without taking consultation fees, though some respondents reported that NDAPs charge additional fees for home visits. Our respondents prefer NDAPs to governmental hospitals and primary health centers. Although the latter offer services at a lower price than NDAPs, additional expenditures accrue for travel and medicines. Because of a shortage of drugs for free distribution in public facilities, patients are usually required to purchase prescribed medicines from private pharmacies, which results in higher costs. This reduces the comparative cost advantages of public hospitals.

It was also reported that NDAPs consider the financial situation of their patients, and prescribe cheaper medicines than those dispensed by formally qualified health care providers. In addition, they are said to keep prescriptions flexible, prescribing medicine for two to three days only, and then see whether it works for the patient. At the same time, many of the discussants think that local providers such as NDAPs are taking advantage of uneducated patients, who do not have any other option than consulting

the nearest available practitioner. Though local providers were usually characterized as affordable, some respondents complained about high fees. One person said,

“If we consult a local doctor [NDAP], he may call three to four times and make four to five hundred rupees for himself. He charges around hundred rupees at a time. Whenever we call, he prescribes three or four types of medicines. Since we are illiterate, he charges four to five hundred rupees for it.” (FGD with male household heads, Vaishali district)

Apart from potentially lower costs of their services, NDAPs offer the possibility of paying in installments and even treat on credit, making their services more affordable. Respondents noted that some NDAPs accept payment in the form of work and advance the fee for treatment at the doctors to whom they refer their patients. Respondents feel that NDAPs offer such payment options to foster good relationships with their clients. In some instances, patients move from the outside level of the health care system down to local NDAPs. This happens, for example, when formally qualified care becomes too expensive or when patients think that the treatment prescribed by formal providers could be administered more cheaply by NDAPs. As one respondent explains,

“Mahua [a bigger town] is nearby, so we go to Mahua, to just get diagnosed. If he [the formally qualified doctor] asks us to take an injection or medicines, in morning and evening, then we go to local doctor and ask him to administer [that] injection.” (FGD with male household heads, Vaishali district)

Respondents do not always access the best services when seeking health care and “visit that doctor who treat them on credit, whether his medicines suit them or not” (FGD with female SHG members, Kanpur Dehat district).

Acceptability or cultural access The NDAPs’ responsiveness to the financial and service needs of their patients described above are a consequence of their embeddedness in the village communities and an example of their social and cultural accessibility. Some participants of FGDs in the Kanpur Dehat district stressed the importance of relationships between them and their doctor, because one chooses the doctor who has given quick relief in the past and who treats on credit if there is a lack of money. This mutual trust in the ability of the NDAP to provide relief and the honesty of patients to repay their debt is important for the reputation of NDAPs and their success in the community, as respondents said they rely on the recommendations of others when choosing a health care provider. The following quote illustrates how this trust does not always exist when it comes to government hospitals:

“Even if the poor [person] is having severe problems, they [at the government hospital] will not pay attention. They will first see these rich people and then

call the poor. (...) What I mean to say is, you are a doctor and you should pay attention to the patient irrespective of his caste. (...) We develop faith in a doctor when he is worth of it. You have completed (...) [medical] education, you have a license and what I mean is use it appropriately for poor people. A poor person should not need to tell everything [his symptoms] in a specific manner. You are a doctor and should catch the correct nerve.”
(FGD with male household heads, Pratapgarh district)

Another aspect of cultural accessibility of NDAPs is how they take into account the belief system of their patients. In many FGDs, respondents confirmed that they consult spiritual healers for their ailments, too, depending on the nature of their disease and the success of alternative treatment. In an FGD with male household heads in the Kanpur Dehat district, it was reported that NDAPs also refer to these spiritual healers when they themselves are unable to cure the disease:

“When the medical treatment does not help, then these jholachap doctors [NDAPs] say that this is chakkar [dizziness], show it to some bhagat [a religious devotee].”

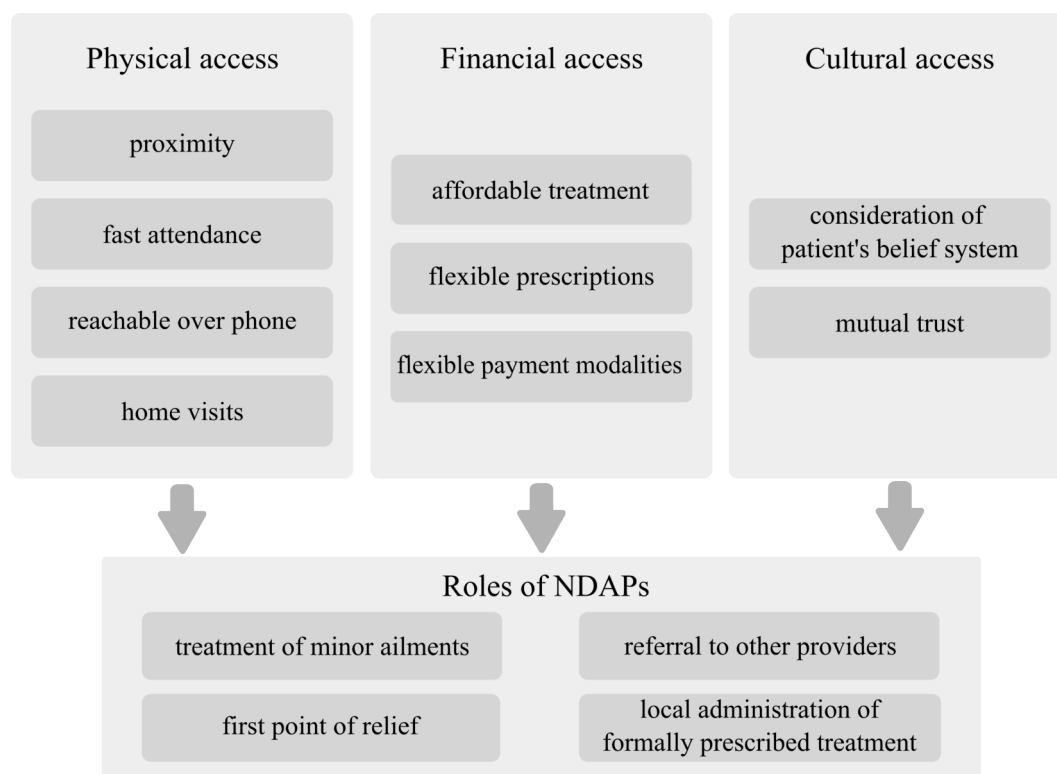
As NDAPs are part of the village community themselves, they have adapted the way they provide their services to the villagers’ cultural expectations.

Figure 4.2 summarizes our findings on the accessibility of NDAPs and the role they fulfill within the rural health system.

4.4 Discussion

Starting from the ongoing popularity of private non-degree practitioners in rural northern India, we explored the rural poor’s perception and utilization of the rural health care system and the role and accessibility of NDAPs therein. To the best of our knowledge, the present study is the first since the introduction of the NRHM to do so for northern India. Our study reveals that NDAPs are still the most important health care source for primary care in our study sites. This is in keeping with the results of a household survey on the same population, which finds that NDAPs are consulted most often for acute illness episodes (Raza et al., 2013). Interestingly, the reasons brought forward for consulting NDAPs are—despite the achievements of NRHM—the same today as Rohde and Viswanathan identified already 30 years ago: they are close by, provide fast and affordable treatment, offer flexible prescription and payment options and take into account patients’ belief system (Rohde and Viswanathan, 1995). Embedded in the community, NDAPs have adapted their services to people’s needs, preferences and economic abilities. This leads—in the terminology of Penchansky and Thomas—to a high degree

FIGURE 4.2: Access to NDAPs and their role in the rural health system.
Source: Own illustration.



of fit between them and their clients. George and Iyer (2013) reported similar findings for NDAPs and other informal health providers in northern Karnataka, India.

Our study shows that the community shapes the private supply side of health care through its demand for physically and financially accessible care and its definition of what is culturally acceptable. The typology created by our study population shows that public and private health care by formally qualified providers is not accessible at the local level in rural areas. Health-care-seeking pathways for acute illness episodes through the identified three-level structure do not correspond to the design of the Indian public health sector, as rural patients self-medicate first, then consult unqualified, informal providers and move to formally qualified providers only at a later stage, if at all. The NRHM envisioned trained ASHAs to be the first contact point for any health-related demand, but for the community NDAPs take on this role when acute illness arises. They cure minor ailments and influence their patients' health-care-seeking behavior by referring or recommending certain providers. Additionally, they offer an interim solution as providers of temporary relief before more formally trained providers can be accessed. We thus confirm Gautham et al.'s (2011) findings from southern and eastern Indian states that NDAPs fill a gap in access to care. We go beyond their study when revealing the rural health care system's three-level structure described above and that NDAPs

also locally administer treatment formally prescribed by “outside” doctors. This spares the patient additional expenditures on transport, fees and opportunity costs.

4.4.1 Limitations of the study

The FGDs were conducted with inhabitants of villages in two districts in Uttar Pradesh and one district in Bihar. Accordingly, our findings cannot automatically be generalized to entire districts or states, let alone the whole country. We compared results across study districts and distances to the next PHC/CHC and found that, despite their differences, inhabitants share a common perception and utilization of the rural health care system. This suggests that our findings might at least be partially generalizable to larger regions. As mentioned before, our findings from Bihar and Uttar Pradesh also confirm recent insights from southern and eastern Indian states with respect to health-care-seeking pathways, the popularity of NDAPs and their favorable characteristics (Gautham et al., 2011; Rohde and Viswanathan, 1995; Dharmaraj and Duttagupta, 2013). This shows that there are similarities across the borders of the Indian states. We did not consider access to care for chronic illnesses, however. More research is necessary to gain a fuller picture of the role of NDAPs in India generally and for different kinds of illnesses specifically.

Our rural households are privileged compared with the general disadvantaged rural population concerning access to credit, such as for health care, because they can borrow from their SHG on a relatively low interest rate. This might raise doubts regarding the transferability of our findings to comparable economic groups. But these loans are not always available on short notice, which may be necessary in case of acute health emergencies, and thus in all likelihood do not play an important part in access to care for episodes of acute illness. Because of their involvement with local partner organizations that are active in health-related awareness activities, the SHGs might be more aware of preventive care and the necessity of health care by trained providers than the rest of the village population. In choosing which SHGs to interview, we relied on these partner organizations, which might have biased our results in favor of more successful and open groups. Both potential biases would rather lead to an underestimation of problems in accessing health care, however. Finally, the fact that the local researchers who conducted some of the FGDs are representatives of the local partner organizations might have influenced the SHGs in their ability to discuss some issues. At the same time, their presence might have elicited increased openness from SHG members because of their familiarity with the organization and its staff. As we did not discuss any of the partners’ activities during our FGDs, we assume that the influence of their staffs’ presence is negligible.

4.4.2 Potential policy measures

The problem of the low accessibility of public health care by formally qualified providers can be addressed at two levels: 1) tackling the shortcomings of the public sector, and 2) integrating NDAPs into the public health care system.

1. Most of the shortcomings of the public sector identified in our data were already addressed in the NRHM, but evidently not thoroughly enough. The purchase of medicines prescribed by public doctors continues to be a problem, and an important reason not to consult public providers. Accordingly, it is important that the Indian government works to ensure the supply of public facilities with the necessary medicines and their distribution. Initiatives to improve the availability of quality public providers, so as to make health care by formally qualified providers more “local”, need to be further strengthened as well. Increasing the quality of public health care is another essential measure. But changing prevalent perceptions among the rural poor about the low quality of public care will probably take quite a while.

2. If the Indian government restricts itself to just these measures, however, it will overlook the complexity of the accessibility issue. Even after the above issues have been properly addressed, NDAPs will have advantages over public health care services: night availability, home visits, flexible prescriptions and payment options and cultural familiarity. ASHAs were envisioned to have some of these characteristics as well, but our study shows that they are consulted mostly for specific conditions. As a large part of health care seeking for acute illness episodes takes place outside the public health care system, governmental measures to improve access to qualified care could go beyond that system and include NDAPs. Demands for new efforts to certify, integrate and regulate NDAPs have been raised since the 1990s, in India and elsewhere (Rohde and Viswanathan, 1995; Rao, 2005; Kanjilal et al., 2007; Yadav et al., 2009; Sudhinaraset et al., 2013). Recent approaches in several Indian states to allow degree holders in alternative medical systems (AYUSH) to practice allopathic medicine are first steps in satisfying these demands (Shivaranjini, July 18, 2012). But integrative efforts should not be restricted to AYUSH degree holders; they must include all kinds of NDAPs, who already fulfill tasks of first contact points for primary care. Regulations and formal certification procedures could be introduced that permit NDAPs to treat those illnesses they are able to handle, refer those that are beyond their ability to other providers, provide interim primary care until patients have the necessary means to access higher level health care and administer simpler therapies prescribed by trained doctors. One must consider, however, that regulation and certification will change the way NDAPs provide care, such as by reducing their flexibility in treatment and fees. This, in turn, might decrease their popularity in the community. Accordingly, any interventions must be carefully designed so as not to compromise the NDAPs’ appeal for patients and providers. Past experiences in India with integrating NDAPs into the public health

system have shown that the new regulations should, for example, continue to permit private practice (Rohde and Viswanathan, 1995).

4.5 Conclusions

Our rural study population, located in two of the high-focus states of the NRHM in northern India, developed an informal three-level hierarchical structure of the rural health care system, which patients usually follow from the lower to higher levels for acute illness episodes. Respondents perceive themselves as being isolated from quality health care and restricted to providers in their immediate proximity, because though they view outside care as well qualified, it is often far away, expensive and culturally unfamiliar. Accordingly, they mostly seek care from local NDAPs because these services better fit rural communities' needs and preferences. Because they are embedded in the community, NDAPs are more physically, financially and culturally accessible for acute illness episodes, despite the achievements of the NRHM. The Indian government could turn these providers into formally trained and regulated entry points to the public rural health system, comparable to what ASHAs were envisioned to be, but with enhanced capacities such as treatment for a larger variety of acute ailments. It should be kept in mind, however, that such measures would affect the way these providers work, possibly decreasing their accessibility for the rural poor. Consultation of the community, appropriate policies and accompanying research should be instituted to monitor possible changes in, and consequences for, health-care-seeking behavior.

* * *

This chapter has explained why NDAPs are the most popular health care providers for outpatient services among the target group of the study schemes. Because of this popularity and to account for the wishes of their clients, the HMI schemes under study in this thesis included these providers in their portfolios and even consulted with the community when selecting particular providers. The next chapter sheds light on whether the inclusion of NDAPs was successful in improving access to outpatient care from the point of view of insured households.

Chapter 5

Barriers and facilitating factors in accessing local outpatient care through community-based health insurance—evidence from rural India

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5.1 Introduction

In the light of an increased focus on making quality health services financially accessible for everyone (World Health Organization, 2010, 2013) and a coexisting lack of national or social health insurance schemes reaching marginalized sections of the population in low- and middle-income countries, health microinsurance (HMI) has experienced increasing attention. HMI is defined as a contributory, voluntary risk pooling mechanism targeting people with low incomes in the informal sector. It can be provided by different risk-carriers (from local, informal groups to multinational insurance companies) and through different delivery channels (e.g. through microfinance institutions or local agencies) (Dror, 2014).

When it comes to evaluating the effect of HMI on access to health care, research has mainly focused on quantitative studies (Alkenbrack and Lindelow, 2015; Dror et al., 2005, 2006; Ekman, 2007; Franco et al., 2008; Gnawali et al., 2009; James et al., 2008; Jütting, 2004; Kagubare, 2006; Lei and Lin, 2009; Mahal et al., 2013; Mebratie et al., 2013b,a; Mwaura and Pongpanich, 2012; Nguyen, 2012; Parmar et al., 2014; Robyn et al.,

2012; Saksena et al., 2011). Some of these involve qualitative components (Alatinga and Fielmua, 2011; Atim and Sock, 2000; Baza et al., 1993; Jowett, 2002; Moneti, 2004; Ranson et al., 2006; Sinha et al., 2014a; Twikirize and O'Brien, 2012). Purely or predominantly qualitative studies on access to different services through HMI are lesser in number (Blanchard-Horan, 2006; Criel and Waelkens, 2003; Derriennic et al., 2005; McGuinness, 2011; Ranson and John, 2002; Sinha et al., 2006). This is although qualitative methods are useful to address important questions such as the effect of insurance as perceived by the insured themselves and the facilitating factors and barriers for accessing care in a specific insurance scheme. This information is necessary for understanding dynamics in place when clients make or not make use of insurance-related health care services and for improving accessibility of these.

We intend to broaden the qualitative evidence on these issues by presenting results from qualitative, longitudinal household case studies, conducted in three community-based micro health insurance (CBHI) schemes in rural northern India. This specific form of HMI implies the involvement of the community to be insured in the design and management of the scheme. Nevertheless, we argue that it is relevant for other forms of HMI as well, as it does not specifically address issues of community involvement. To our knowledge, we are the first to apply a qualitative, longitudinal case study design in the context of access to care in HMI.

We focus on an innovative feature of our schemes under study, namely the integration of outpatient care at the local level by the inclusion of Non-Degree Allopathic Practitioners (NDAPs). We address the following research questions to achieve a comprehensive understanding of access to local outpatient care in our insurance schemes as perceived by the insured:

- What are the facilitating factors and barriers in accessing outpatient care through CBHI?
- How are CBHI outpatient services integrated into the health care seeking behavior of insured households?
- What recommendations can be drawn from our data to improve access to outpatient care through CBHI?

In the next sections, we give an overview of the present evidence on access to (outpatient) care in HMI, present the theoretical framework that guides our analysis and describe the CBHI schemes under study. This is followed by a description of the data and methods used before we present and discuss our results. The chapter ends with some concluding remarks.

5.2 Background

5.2.1 Literature review

Systematic reviews on the impact of HMI have found positive evidence for an increased utilization of health care services and decreased out-of-pocket payments (Ekman, 2004; Mebratie et al., 2013b; Spaan et al., 2012). Interestingly, studies suggest that the impact on utilization of outpatient care is larger than the impact on utilization of inpatient care (Mebratie et al., 2013a). Qualitative studies on perceived access to care through HMI find that respondents seek care earlier and are less challenged by costs and transport for malaria treatment (Blanchard-Horan, 2006), report a reduced financial risk because of insurance (Derriennic et al., 2005) and that insurance has made care more affordable (Atim and Sock, 2000) and easier to access (Twikirize and O’Brien, 2012).

Qualitative studies also show, however, that these positive effects are compromised when services are not of acceptable quality. A study reports that respondents who had dropped out of or never joined a mutual health scheme in Guinea explained that the quality of care provided in the scheme was so low that benefits in improved access were outweighed (Criel and Waelkens, 2003). Positive perceptions regarding the effects of HMI on access to care are also diminished by the perceived lower quality of care provided to insured compared to uninsured patients (Alatinga and Fielmua, 2011) and by the limited number of providers of acceptable quality available to the insured (Twikirize and O’Brien, 2012). A systematic review of the existing evidence from quantitative studies on the effect of HMI on quality of care found only weak evidence for an improvement of quality of care (Spaan et al., 2012). Another systematic review on factors influencing enrollment in voluntary insurance and CBHI identified quality of care as one important factor (Panda et al., 2015b).

The evidence available suggests that access to care in HMI should not be understood only as the possibility to utilize health care services, but as the possibility to utilize *quality* health care. Therefore, the analytical framework used in this study comprises multiple dimensions to capture the different aspects of access to care, as we explain in the next section.

5.2.2 Analytical framework

We base our analysis on the analytical framework for access to health care developed by Penchansky and Thomas (1981), which has been applied in numerous studies (Ansari, 2007; McIntyre et al., 2009; Peters et al., 2008; Norris and Aiken, 2006; Ergler et al., 2011; Obrist et al., 2007). It comprises five dimensions—availability, accessibility, accommodation, affordability and acceptability—to evaluate the “degree of fit” between the patient and the health system. Because some components of this original framework

are not always easy to distinguish and we specifically want to include quality of care, we make use of a combination of adaptations done by McIntyre et al. (2009) and Peters et al. (2008). We define the different dimensions as follows:

- Affordability or financial access: the fit between costs of service utilization and the patient's ability to pay
- Availability or physical access: the supply with appropriate health care providers or services in the right place at the right time
- Acceptability or cultural access: the fit between provider and patient attitudes; responsiveness of health services and providers to social and cultural expectations of their patients and communities
- Quality: (perceived) technical ability of health services to affect people's health, integral to all dimensions

To tackle problems of their clients in these different areas, many HMIs follow an integrated approach: they not only address affordability but also issues of quality, acceptability and availability, e.g. by introducing quality standards and arranging additional health care providers and services. In the following, we describe the CBHI schemes under study and their specific design features to address problems in accessing outpatient health care.

5.2.3 CBHI schemes under study

The three CBHI schemes under study were introduced in a step-wedge approach in rural northern India (Kanpur Dehat district, Pratapgarh district, both Uttar Pradesh, and Vaishali district, Bihar). From 2011 on, insurance coverage was offered to female micro-credit self-help group members and their households through local Non-Governmental Organizations (NGOs). Each year, purchase of the product was offered to more households. Although en-bloc enrollment of both self-help groups and households was aimed at, it proved not to be feasible because of reluctance among the community. If a household chose to insure, the enrollment of the female self-help group member of the household was mandatory (see also Doyle et al. (2011)). Overall, 1,436 households joined the CBHI schemes in the three years from 2011-2013 (enrollment rate: 39%), and 621 households dropped out (dropout rate: 43%). At the individual-level during the same period, 4,665 individuals joined the CBHI schemes (enrollment rate: 23%), and 2,189 individuals dropped out (dropout rate: 47%). Between the three sites, enrollment rates varied considerably (e.g., in 2011, 30% of individuals offered insurance in Vaishali decided to take it, 23% in Pratapgarh district and 15% in Kanpur Dehat district). There is however no indication that one scheme fares systematically better than the others over the years (Panda et al., 2016).

The insurance schemes were managed by the community, with support from the local NGOs. The benefit packages offered to the households were tailored to their needs on the basis of an extensive baseline study and the target group's participation (Dror et al., 2014) and are presented in the appendix (Table D.1, D.2, D.3).

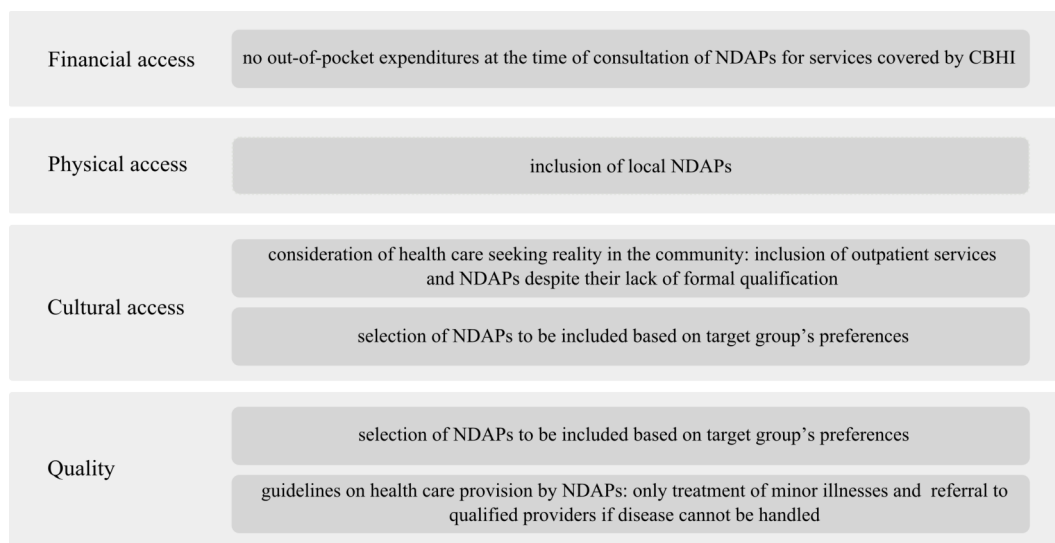
During our study period in 2012/2013, the yearly per-person premium were 192 Indian Rupees (approx. 3.46 US-Dollar) (2012) and 200 Indian Rupees (approx. 3.6 US-Dollar) (2013) in Kanpur Dehat district, 250 Indian Rupees (approx. 4.5 US-Dollar) in Pratapgarh district and 197 Indian Rupees (approx. 3.55 US-Dollar) in Vaishali district. Common outpatient services covered in all three sites were outpatient consultations and medicines from identified medical providers. These are local private, non-degree allopathic practitioners (NDAPs) who—despite their lack of formal qualification and their informality—are the primary care-givers and first contact points for our target group for acute illness episodes (May et al., 2014; Raza et al., 2016b). Based on a list of providers usually consulted by the communities and a Global Positioning System (GPS) mapping of the provider's distribution, the local NGOs and the communities came to a consensus which of these providers to include into the schemes.

The CBHI-associated NDAPs received between 40 and 50 Indian rupees per insured per year (between 0.72 and 0.90 US-dollars as of Dec. 2012), in one site according to the number of insured assigned to them (Kanpur Dehat), and in the other two sites based on the number of patients attended. Services from the NDAPs included consultations and medicine, provided within the budget they received from the CBHI scheme. Within the CBHI system, NDAPs were tasked to treat minor ailments only like cough, cold, viral fever, diarrhea, vomiting, and heat stroke and not to provide services such as injections and glucose bottles under the insurance. They were instructed to refer patients with more serious illnesses to formally qualified doctors.

Additionally to outpatient services from a NDAP, the NGO in Kanpur Dehat district also included the services of a formally qualified doctor from August 2012 on. The doctor came once a week to three specified villages in the field and the NGO's office in a larger town. This service was accessible to all people living in the area on a subsidized price, but it was free only for members of the CBHI. Because this service was not paid for from the insurance premiums collected and we want to focus on the integration of local, non-degree allopathic practitioners, we only address this service occasionally in our analysis.

Figure 5.1 summarizes the mechanisms integrated by the CBHI schemes to improve access to quality outpatient care for its members.

FIGURE 5.1: Mechanisms of CBHI schemes under study to improve access to quality outpatient care.
Source: Own illustration.



5.3 Methods

5.3.1 Sampling and data collection

We conducted qualitative, longitudinal case studies with a total of 42 households in our three study sites. We intended to get a detailed understanding of health-related incidences, behaviors and decisions within our study households—especially with regard to the CBHI package offered to them—while also considering their general financial and family situation. By visiting the households about every four months over a 16-month period (February 2012 to August 2013, i.e. five visits per household), we gained a deeper understanding of every single household and changes occurring over time. We got immediate and detailed information on illness episodes and health care seeking behavior, shedding light on access issues and perceptions in different stages of the household's condition (higher or lower income, different type of illnesses, with or without insurance coverage and so forth).

We included households from different poverty strata and insurance statuses into our study to have a diverse group with different stages of experience with insurance. To identify a group of potential respondents from the insurance schemes' complete target population (in Kanpur Dehat district: 1,039 SHG households, in Pratapgarh district: 1,284 SHG households, in Vaishali district: 1,363 SHG households) we grouped the households at each site. First we grouped them according to their insurance status: (i) decided to purchase when insurance was first offered in 2011, (ii) decided not to purchase when insurance was first offered in 2011 and (iii) not offered insurance yet. Then, we assigned them to three poverty strata based on consumption reported in a household

survey in 2010: (i) extreme poverty = <\$1.25 per day per person, (ii) poverty = <\$2 per day per person and (iii) non-poverty = >\$2 per day per person. We then chose 20 households at random for each stratum. Together with local facilitators from the NGOs, we picked potentially responsive and cooperating households from this list. As a whole, we chose 14 households at each study site, summing up to a total of 42 households for all three sites. Only one household, which was from Vaishali district, dropped out of the study completely. Table 5.1 gives an overview of our sample and its insurance status over time.

Our meetings were usually with the female self-help group members of the household, but occasionally we also talked to their husbands or to other informative household members. Participation in the study was voluntary and confidential, based on verbal informed consent. The frequent visits enabled us to develop a bond of trust, which manifested itself not only in the drop-out of only one household, but also in the fact that households became more and more sharing.

We used semi-structured interview guidelines for our study. Interviews were conducted by one of the study authors (SG) together with a local researcher from the respective local NGO who had been trained on how to use the tool. Usually, a local facilitator well acquainted with the household was also present. The fact that households were not hesitant to voice critique during the interviews leads us to assume that the presence of local researchers and facilitators from the NGOs involved in the CBHI schemes did not have an effect on the openness of the respondents regarding their satisfaction with these schemes. Interviews were conducted in the respondents' mother-tongue (Hindi)—with clarifications by the local facilitator in the local dialect where necessary—and tape-recorded. Additionally, the researchers noted down their observations after interviews. Recordings were then transcribed and translated into English. Based on the information from previous interviews rounds, we personalized the guidelines for each household and each round of data collection to follow-up interesting issues or missing information.¹

5.3.2 Data analysis

Based on Stake (1995), our analysis of the data consisted of case description and analysis and explanation of themes and patterns. To ensure that we captured patterns across households without neglecting the specific context of the individual case, we combined within-case and across-case methods and used matrices for easy comparison of household information, as have also been applied in other case studies (Ayres et al., 2003; Knafel and Ayres, 1996). See Table 5.2 for an overview of the different steps and their purpose.²

¹The tools used for each round of data collection can be found in appendix E.

²The profiles created over the course of data collection as well as the matrices developed can be found in appendix E

TABLE 5.1: Overview of study sample.
Source: Own illustration.

Case Study	Kanpur Dehat district					Pratapgarh district					Vaishali district				
	Poverty Stratum	Insurance Status			Poverty Stratum	Insurance Status			Poverty Stratum	Insurance Status			Case Study		
		2011	2012	2013		2011	2012	2013		2011	2012	2013			
1	Poverty	✓	✓	✓	Extreme Poverty	✓	✓	✓	Poverty	x	x	✓	1		
2	Non-Poverty	-	✓	x	Poverty	✓	✓	✓	Non-Poverty	x	x	✓	2		
3	Non-Poverty	✓	✓	✓	Non-Poverty	-	-	✓	Poverty	✓	✓	x	3		
4	Non-Poverty	-	-	✓	Non-Poverty	✓	✓	✓	Poverty	-	-	x	4		
5	Non-Poverty	x	✓	✓	Extreme Poverty	x	x	x	Poverty	✓	✓	x	5		
6	Non-Poverty	-	x	✓	Poverty	-	-	x	Non-Poverty	✓	✓	✓	6		
7	Poverty	✓	✓	✓	Non-Poverty	x	x	✓	Extreme Poverty	✓	✓	✓	7		
8	Non-Poverty	-	✓	✓	Extreme Poverty	✓	✓	✓	Non-Poverty	✓	✓	x	8		
9	Extreme Poverty	✓	x	x	Poverty	x	✓	x	Non-Poverty	✓	✓	✓	9		
10	Poverty	-	x	x	Poverty	✓	✓	✓	<i>Household dropped out of study</i>			10			
11	Non-Poverty	✓	x	x	Extreme Poverty	-	-	✓	ExtremePoverty	x	x	x	11		
12	Extreme Poverty	-	x	x	Poverty	✓	✓	✓	Non-Poverty	-	-	✓	12		
13	Non-Poverty	✓	x	x	Extreme Poverty	-	-	-*	Poverty	✓	x	x	13		
14	Non-Poverty	x	x	x	Non-Poverty	✓	x	✓	Extreme Poverty	✓	✓	✓	14		

✓: household insured in the respective year

x : household did not insure in the respective year

- : household was not offered insurance in the respective year (control group)

*: the SHG to which the household was associated was discontinued and thus CBHI was never offered

Of our 41 households which remained in the study over the full study period (14 in Pratapgarh, 14 in Kanpur Dehat and 13 in Vaishali), eight (three each in Kanpur Dehat and Pratapgarh, two in Vaishali) never insured with CBHI and were thus excluded from our analysis. Additionally, those households which had joined insurance only shortly before our last data collection (which took place in 2013) and had not much experience with CBHI doctors and their services yet were also excluded (four households: one from Pratapgarh district, one from Vaishali district and two from Kanpur Dehat district). In contrast, households which had joined only recently but had already visited CBHI doctors were included into analysis. In the end, the data from 29 households was analyzed. Findings belonging to different persons of the same household are subsumed under the latter because the household is treated as the unit of analysis in this study. For the quotes it is indicated whether they come from male or female household members.

5.4 Results

In the following sections, we first address our study households' experiences, both positive and negative ones, in accessing outpatient care from CBHI-associated NDAPs. After that, we discuss different utilization patterns identified.

5.4.1 Financial access

To improve insured households' financial access to local outpatient care, the CBHI schemes under study provided access to treatment by selected NDAPs without out-of-pocket expenditures at the time of consultation. Nine households mentioned this as a positive aspect of CBHI. They appreciated that, because of being insured, treatment can be accessed immediately:

“At any point in time, if someone falls ill, we can go immediately. (...) For example, even if I do not have the money, I can get the treatment here. If one does not have the money and falls ill, they will be left like that. If I have insurance, I will get the treatment under the insurance.” (Male household head, Kanpur Dehat district)

The majority of households (16), however, reported to still pay out-of-pocket when seeking outpatient care from CBHI-associated NDAPs. Most of these payments were made to receive more medicines from the practitioners (an issue which we will discuss later under quality of care). One household in Kanpur Dehat district also reported that the associated NDAPs did not give medicine without out-of-pocket payments because of delayed payment to the NDAPs from the CBHI scheme.

TABLE 5.2: Different steps of data analysis.
Source: Own illustration.

Step		Purpose
Description		
1	Within-case	Give overview of each household, its situation and its development over time Reduce large amounts of data while preserving integrity of household unit → Household profiles combining information on key issues from all rounds of data collection
2	Within-case	Summarize information on each household and its members Double-check profiles and update them if necessary for later usage → Summaries for each household on relevant issues
3	Within-case	Create case descriptions easily comparable across cases → Matrix combining all cases displaying short summaries on each impact-relevant issue for individual households → Document with memos for later in-depth analysis
4	Across-case	Create common codes which describe specific case and enable to compare across case → Matrix combining all cases displaying codes on each relevant issue for individual households → Document with memos for later in-depth analysis
Analysis		
5	Within-case	Find patterns and regularities within cases
6	Across-case/ Within-case	Find patterns and regularities across cases
Explanation building		
7	Across-case/ Within-case	Find explanations for identified patterns
8	Across-case/ Within-case	Find causalities behind access to care through CBHI
9	Across-case/ Within-case	Develop typologies

“[The CBHI-associated NDAP] is refusing (...) [free] treatment as [he is] not getting the money on time. (...) [He is] not getting [his] money; [he is] getting it late so that’s why.” (Male household head, Kanpur Dehat district)

Three households consulted CBHI-associated NDAPs without their membership card and preferred to pay out-of-pocket in the hope of receiving better care:

“As I was not getting good medicines, I did not take my card along.” (Female SHG member, Pratapgarh district)

Other circumstances which required households to pay out-of-pocket were the loss of the practitioner’s registry, in which the associated NDAP usually documents the consultations provided under CBHI to receive the reimbursements from the scheme, and forgetting to carry the insurance membership card.

5.4.2 Physical access

The experiences made by our study group relating to physical access of outpatient care in CBHI are differentiated into experiences with accessing associated practitioners in general and experiences with accessing specific services from these providers.

5.4.2.1 Consulting associated practitioners

NDAPs were included into the CBHI schemes as they usually are the only locally available health care providers in the villages. Three households (two in Kanpur Dehat district and one in Vaishali district) specifically mentioned this proximity of CBHI-associated NDAPs and their availability at night as a positive aspect of CBHI:

“If there is cold and cough then we go there as it’s nearby.” (Female SHG member, Vaishali district)

“[The associated NDAP] is good for our people even in the middle of the night.” (Female SHG member, Kanpur Dehat district)

Interestingly, none of the households interviewed from Pratapgarh district mentioned that associated NDAPs are close to their home. This might be, however, the result of our sample selection, which is not representative and could have left out respective households.

Nevertheless, ten households (three in Pratapgarh district, five in Kanpur Dehat district and two in Vaishali district) reported that their respective CBHI-associated NDAP was

located too far away. Although the community was involved in the choice of providers, it seems that it was not possible to select one easily accessible for all households. As a result, the ten households consulted health care providers not included in the CBHI scheme when falling sick.

“It was far off and (...) if one more person would go with him, then (...) in going in and coming back 80 Indian Rupees get spent (...), so that is why there used to be problem in going to [the CBHI-associated NDAP].” (Female SHG member, Kanpur Dehat district)

Two households reported that they had not enrolled or reenrolled household members because of the distance to the practitioner. In one case in Pratapgarh district, the household did not want to consult the associated NDAP because of a lack of trust in his treatment. In theory, the household would have been able to consult another CBHI-associated NDAP; however, the alternative associated NDAPs were too far away for them to consult.

Besides their distance, the availability of providers also was a problem reported by in total six households (two in each district). They are not always in their store or practice, and are not always reachable over phones.

“[W]hen we call him [the CBHI-associated NDAP], the phone does not connect. At times it says it is switched off and at times it is out of India, so in emergency, we will have to get medicine from somewhere [else].” (Female SHG member, Vaishali district)

The two households from Kanpur Dehat district however changed their opinion when the associated NDAPs were substituted by others in a subsequent insurance year and stated that their availability had improved.

Closely related to quality issues in the CBHI schemes under study is the problem of the necessity of frequent consultations. Because of the limited amount they received from the insurance for the treatment of their patients, associated NDAPs reduced their doses of medicines given out when treating under the insurance. Households were often obliged to go several times to the practitioner to get the sufficient doses. In one case, a household even reported that the practitioner would only treat them once a month when not paying out-of-pocket:

“He gives medicines for 30 Rupees at a time and when we go again then he says no. He says that he has to do the check-up [only] once in a month.” (Female SHG member, Vaishali district)

Because of the geographical limits of the CBHI schemes and the organization of outpatient services as a prepayment system, insured cannot access outpatient care outside the schemes' catchment areas. One household in Kanpur Dehat district reported this problem when a household member fell sick while staying outside of the village.

“Once I had fallen ill when I was [outside] so I went to [a different place] and took the medicine from there. (...) I had to leave the village, so how could I have got the treatment done [in CBHI]?” (Male household head, Kanpur Dehat district)

In two other cases, a lack of information about who the associated NDAP was prevented insured household members from accessing care.

5.4.2.2 Accessing specific services

Not all services offered by associated NDAPs are covered by the benefit package. If insured want to make use of these services, they either pay out-of-pocket or consult health care providers outside of the insurance scheme. The need to pay for services such as glucose bottles, injections, syrup and ear-drops was the most common complaint among our case study households when it comes to the accessibility of specific services.

Additionally, from the point of view of 15 households (most of these in Pratapgarh district) CBHI does not take care of major illnesses: the medicines issued by associated NDAPs are not sufficient to treat conditions other than minor coughs, colds and fevers. For major illnesses one either has to pay additional fees to the CBHI-associated NDAPs or has to seek care outside of CBHI. Interestingly, our study households perceived this lack of coverage for “major” outpatient illness episodes differently. Although some of them were dissatisfied and eventually dropped out of CBHI, others were content with the services offered and had not expected CBHI to offer care for all kinds of illnesses in the first place:

“The expectation was that if we get cold, cough or any minor illness and if we don't have money then too we would get the treatment. (...) We are getting that.” (Female SHG member, Kanpur Dehat district)

In Kanpur Dehat district, the inclusion of the qualified MBBS doctor partly compensates for this “coverage gap”, as exemplified by one household member from Kanpur Dehat district. He reported to usually go directly to the MBBS doctor and not the local NDAP because the former has more medicines.

5.4.2.3 Cultural access

With regard to cultural access, a salient issue was familiarity with the provider. In some cases it encouraged households to join the scheme, whereas in others it encouraged households to consult practitioners outside CBHI. One household from Kanpur Dehat district had consulted the associated NDAP for 20 years already and therefore had trust in him:

“The whole community says they are getting treated by the doctor for twenty years. (...) The doctor is good.” (Male household head, Kanpur Dehat district)

Another household from Kanpur Dehat district explained that because of the familiarity of the associated NDAP with the household, he knew about the adverse reactions allopathic medicines caused for one of the household members and adapted his treatment accordingly. A different household from the same district justified their decision to consult a practitioner outside CBHI with their familiarity with that particular practitioner.

A lack of trust in the NDAP associated with CBHI was also reported by one household which had lost faith in him after learning that he had cheated and accounted for more patients than he had treated. Another one did not trust their assigned provider because of his bad reputation.

Besides trust issues, frequent consultations also posed a barrier for cultural access to care. As mentioned earlier, frequent visits became necessary because of the smaller amount of medicines prescribed by the associated NDAPs per visit. In one case in Pratapgarh district, this proved to be problematic not only because of the time invested and related expenditures on transportation, but also because the respective female household member was ashamed to go to the market daily to get her medicines:

“He [the CBHI-associated NDAP] gives less medicines and asks us to come daily, now we do not have so much time and we feel shame as it is the market.” (Female SHG member, Pratapgarh district)

With regard to the way how the associated NDAPs treat their patients, in all three districts, there was at least one household which mentioned that the practitioners involved treated them nicely and respectfully:

“They [the associated NDAPs] talk nicely. Everyone talks nicely.” (Male household head, Kanpur Dehat district)

Two households in Kanpur Dehat district noticed that CBHI-associated NDAPs would treat both insured and uninsured patients equally. In three other cases however, all

from Pratapgarh district, households criticized interpersonal aspects of treatment. The associated NDAP would treat those patients without insurance first and give better medicines to them than to insured patients.

“If you go to him directly and get the private treatment [i.e. without the insurance card], his behavior is good. Otherwise he neglects.” (Male household head, Pratapgarh district)

“[The associated NDAPs] do not give good medicines as they come to know that I have insurance.” (Male household member, Pratapgarh district)

In another case, a male respondent criticized the lack of privacy while being examined by a CBHI-associated NDAP. After experiencing that the NDAP involved in CBHI treated his patients without any curtains to provide privacy, he decided not to consult this practitioner anymore:

“We got the check-up done by the doctor and what should I tell you about his position. Once we took [my daughter] to his place also, so the doctor didn’t seem right to me at all. (...) Suppose a girl goes there and ten people are sitting there in front of her and you are giving an injection and then in front of them you are doing the dressing. So if some curtain would be dropped then you may give an injection.” (Male household head, Kanpur Dehat district)

5.4.3 Quality of care provided through CBHI

When discussing the quality of care provided by CBHI-associated NDAPs, we mean quality as perceived by the household members participating in this study, i.e. a subjective concept of quality of care and not an objective one. As already mentioned before, quality is defined as the (perceived) technical ability of health services to affect people’s health. It is a cross-cutting issue and closely related to the previous three dimensions discussed. Thus, some of the following findings overlap with previous results.

In all three study sites, households reported at least at some point to get relief from the CBHI-associated NDAP’s treatment and being satisfied with the quality of medicines provided (13 households, thereof seven in Pratapgarh district, four in Kanpur Dehat district and two in Vaishali district). Of those households satisfied with the quality of care provided, many stressed that practitioners were only suitable for certain kind of illnesses, i.e. minor illnesses. For other ailments and specific services, a consultation of practitioners outside CBHI was necessary.

The satisfaction of households with the quality of care provided often changed over time and depended both on the specific NDAP associated with CBHI as well as the amount

of money such providers received from the insurance scheme. In Pratapgarh district, a household commented on an improvement of the treatment when the insurance scheme decided to increase the amount of money given to associated NDAPs for each patient treated, so that the providers were able to distribute more medicine.

“[The doctor] used to give medicines for 15 Rupees. We all told him to give medicines for 2-3 days even if he charged 10-20 Rupees extra which we would have given out of pocket (...). This [year], they are giving medicines for 3-4 days in one go.” (Female SHG member, Pratapgarh district)

In Kanpur Dehat district three households noticed an improvement in the quality of care when the associated NDAP was changed.

The remaining 16 households, however, expressed dissatisfaction with the quality of treatment and a lack of relief. Households explained that CBHI-associated NDAPs adapted their medicine distribution to the payment they received from the CBHI scheme, which means that instead of issuing doses for three to four days in one consultation, they issued doses for only one or two days:

“Yes, they [the CBHI-associated NDAPs] are giving less. (...) [T]wo doses of medicine is brought and consumed in one day, every day you should go for medicine. (...) [O]therwise the medicine they give is good.” (Male household head, Pratapgarh district)

Households reasoned that NDAPs reduced the quantity of medicines to keep costs low and within the budget they received from the insurance scheme.

Although some respondents stated that the quality of medicines was good, only the doses not sufficient, others criticized the quality of medicine dispensed and that the practitioner associated with the scheme lacked formal qualification.

“[H]e [the CBHI-associated NDAP] had learned how to give injection and about medicines from some doctor. He is not a doctor.” (Male SHG member, Vaishali district)

One household reported an incident when the health condition of a woman receiving treatment from the CBHI-associated NDAP had worsened because of the treatment provided:

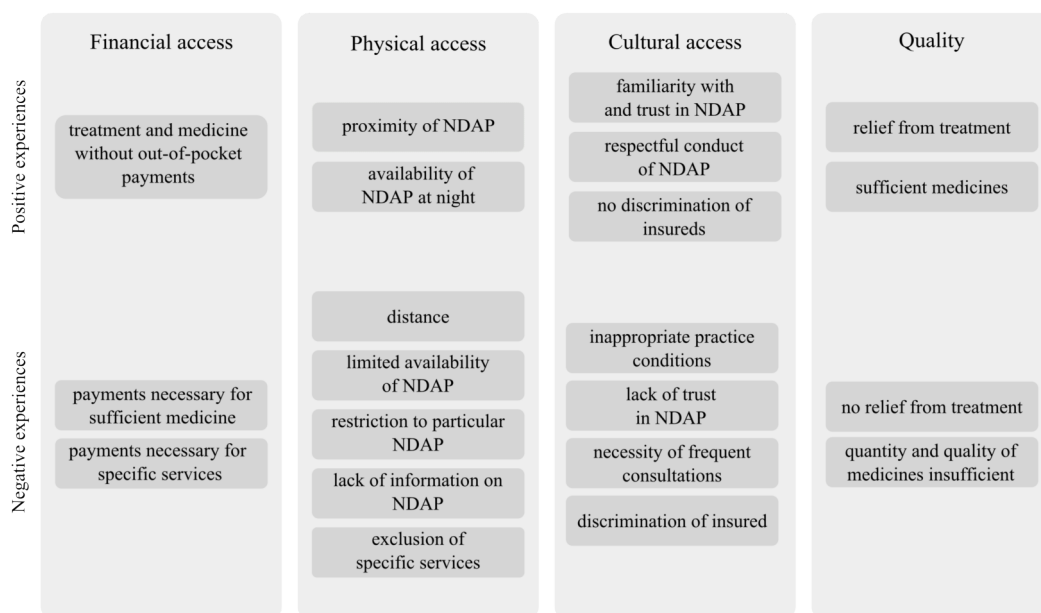
“[S]he had gone with us to take the medicines and after coming back, as soon as she took the medicines, she started pulling her hair (...). What kind of medicines do they give with which we don’t get any benefit?” (Male household head, Kanpur Dehat district)

One household complained that the associated NDAP only dispensed governmental medicines which would not be trustworthy; at the same time, another household preferred government medicines to the local ones dispensed by this associated NDAP. Another household was not satisfied that the CBHI-associated NDAP did not check whether the medicines prescribed would give relief by first giving out smaller doses and changing the prescription if there was no improvement. Yet a different household complained that the medicines prescribed would take too long before showing any effect.

Figure 5.2 summarizes the main findings on positive and negative experiences in accessing outpatient care in CBHI.

FIGURE 5.2: Positive and negative experiences in accessing outpatient care services in CBHI.

Source: Own illustration.



5.4.4 Access experience in the context of utilization patterns

The households under study deal differently with the facilitating factors and barriers to access outpatient care. We can identify three utilization patterns for outpatient care under CBHI: no utilization, combined/integrated utilization and exclusive utilization. Table D.4 in the appendix shows to which utilization type the different households under study belong.

5.4.4.1 Type I: No utilization

12 of the 29 households under study (three in Pratapgarh, three in Kanpur Dehat and six in Vaishali) did not make use of CBHI-associated NDAPs during their insurance membership although they experienced illness episodes or decided not to use the doctors anymore after only few consultations. Nearly all of these households were not satisfied with the access to quality care under CBHI. The most common complaints were a lack of relief from treatment and that the amount of medicines dispensed was insufficient. Five households found it difficult to physically access CBHI-associated NDAPs because of their unavailability. These disadvantages outweighed positive aspects perceived by households of this type.

Not surprisingly, eight of the 12 households which did not make use of outpatient care in the CBHI decided to drop out because of their dissatisfaction with the scheme. Two others which had insured only recently in 2013 were not sure yet whether to renew membership again. Two of the twelve households reenrolled twice during our study period. For the household from Pratapgarh district, two claims submitted to the insurance for an eye operation and for a hospitalization for fever (with a reimbursed total sum of approx. 3,700 Indian Rupees) seem to have compensated for the lack of relief perceived from treatment provided by CBHI-associated NDAPs. The household from Vaishali district, however, reported outside pressure as the reason for reenrolling twice.

5.4.4.2 Type II: Combined/integrated utilization

A slight majority of 15 out of the 29 study households consulted both CBHI-associated NDAPs and other practitioners during their insurance membership. Households of this type—though not all of them—perceived a variety of positive aspects in access to care under CBHI, such as free and immediate treatment, proximity of the associated NDAP and quality care providing relief to patients.

Nevertheless, all of them also consulted providers outside of CBHI for outpatient care. This was motivated by different reasons. Most households cited difficulties in physical access, especially the coverage of services, but some of them also reported difficulties with the availability and distance of providers. Some households of this category also paid extra money to the associated provider to obtain services not covered in CBHI.

Nearly all households (12) who combined CBHI-associated and independent providers explained that CBHI-associated NDAPs were only suitable for minor illnesses and that treatment for major illnesses or specific services had to be sought outside of CBHI. Although many households did not complain about this because it corresponded to their expectations before joining the insurance scheme, others were not satisfied with it. However, they perceived other benefits from being insured, such as reimbursement of

claims. Apart from treatment for minor illnesses, associated NDAPs were also perceived as an access to first aid and first relief in case of emergencies before possibly turning to other providers.

The majority of the households of this type renewed its membership during our study period (13 households) and only one dropped out because of the lack of access to care for major illnesses and/or specific services. The remaining household had just joined shortly before our last interview and had thus not had the chance yet to renew its membership.

5.4.4.3 Type III: Exclusive utilization

Two of our 29 households reported to exclusively consult CBHI-associated NDAPs for outpatient care. However, one of them also mentioned that they would only be suitable for minor illnesses. The household had only joined CBHI shortly before our last interview and had not experienced any major illnesses episode since then, so that the consultation of a practitioner outside CBHI had not been necessary yet.

In contrast, the second household who reported to only consult CBHI-associated NDAPs consulted these not only for minor illnesses, but for major illnesses as well. Because this household is from the study site in Kanpur Dehat district, it also had access to a MBBS doctor under the scheme who is qualified to treat illnesses beyond cough, cold and mild fevers. This could be one of the reasons for the exclusive use of CBHI-associated NDAPs. However, from the interviews with this household, we also learn that its members delayed treatment for illness episodes while insured with CBHI, which indicates that there might also be a lack of access to practitioners outside the insurance arrangement. Regarding the care under CBHI, this household was very satisfied with it: it appreciated free and immediate access, proximity of and familiarity with the associated NDAP and complimented the quality of his treatment. Consequently, the household also had renewed its membership during our study period.

5.5 Discussion

To our knowledge, our qualitative study is the first of its kind on access to outpatient care in a CBHI/HMI scheme to apply a systematic and comprehensive framework and use a longitudinal approach. Additionally, it addresses a unique study object because the schemes under study have integrated local outpatient care from NDAPs into their portfolio. In the following, we discuss the results of our study along the three research questions posed in the beginning of this chapter.

5.5.1 Facilitating factors and barriers in accessing local outpatient care through CBHI

Our study households appreciated the possibility to access care in CBHI without paying out-of-pocket and without the need to accumulate money before consultation. The same observations were made in two studies on CBHI/HMI in Uganda (Blanchard-Horan, 2006; Derriennic et al., 2005; Twikirize and O'Brien, 2012). While many of our households accepted to have to pay at the CBHI-associated NDAP for additional medicines, others were not satisfied with it.

Familiarity with the doctor was a salient issue under cultural access which came up during our interviews. It seems that the CBHI schemes were able to take advantage of the embeddedness of associated NDAPs in their communities because many households had already consulted the same doctor before joining CBHI. However, in other cases, households opted to consult familiar doctors outside CBHI or complained that they did not know the associated NDAP prior to joining the scheme.

Though many households were satisfied with the quality of care provided, for many others this was the main point of critique. They expressed that the quality of care provided to them was lower than the quality provided to uninsured patients, the reason being that the latter would pay out-of-pocket for the services provided. Complaints like this are also known from other studies (Alatinga and Fielmua, 2011; Atim and Sock, 2000; Blanchard-Horan, 2006; Jowett, 2002). Some households perceived a direct connection between the insurance scheme and the reduction of medicine dispensed by associated NDAPs, because they had been familiar with the practitioners involved from consultations before the introduction of CBHI. From what we learn from the interviews, this reduction in medicine is caused by the provider payment mechanism: the associated NDAPs receive a fixed amount per insured per year, either for the number of patients attended per month or the number of patients assigned to them. To avoid that the value of medicines they dispense exceeds the money they get from the insurance, the respective NDAPs reduced the doses of medicines per consultation or restricted the number of consultations per insured to once a month. As a result, some households started to consult CBHI-associated NDAPs without their insurance card and preferred to pay extra to receive better care. This phenomenon was also observed in voluntary private health insurance in Vietnam (Jowett, 2002). What consequences this might have for associated NDAPs in the long run—whether it will affect their popularity in the community negatively—needs to be addressed in future research. Especially in Pratapgarh district, households reported that quality of care improved after the insurance scheme increased the payment to associated NDAPs for patients treated. Our data from Kanpur Dehat district also shows a change in the perceived quality of care after the substitution of

associated NDAPs from one insurance year to another (sometimes for the better, sometimes for the worse), without any changes in the payment amount. This confirms that perceived quality of care is not only a question of the budget available.

Some households reported the need to consult the CBHI-associated NDAP more frequently or even daily to get the required medication. We also observed that households made use of a variety of health care providers outside of CBHI, even when insured, e.g. to procure more medicine. These developments demonstrate that increased utilization does not necessarily mean better access to care; in our case, it is indeed the other way around. Because of a reduced access to (subjectively appropriate) quality care, insured go to the associated NDAP more often or consult services outside of CBHI, too. Giedion and Díaz (2010) discuss a similar dynamic in their review of literature on the impact of health insurance in developing countries. They raise the issue that even if out-of-pocket payments are reduced, a rise in health care utilization might in fact result in increased total out-of-pocket payments. This indicates that utilization should never be looked at in isolation, but in possible interaction with other aspects, too.

In their systematic review, Mebratie et al. (2013b) observed that scheme design features play an important role in the impact of CBHI. This is supported by our study results. As already discussed above, the payment system of associated NDAPs has—from the point of view of the insured households—affected their medicine provision negatively. However, not only quality of care provided by associated NDAPs was affected by CBHI (in the sense that households perceived a reduced technical ability of the associated NDAP to affect their health due to a reduction in medicine), but also their accessibility. Despite the satisfaction of many households with the physical accessibility of CBHI-associated NDAPs, others reported problems regarding their distance and availability. Outside CBHI, patients are usually not restricted to one health care provider or NDAP but have different options to choose from. Thus, if a particular provider is too far or not available when needed, they can approach an alternative provider instead. In the CBHI under study, this is not possible. Although households are free to choose among all NDAPs involved in the insurance scheme, alternative providers which are also under the scheme are usually too far away to consult them.

With regard to the array of services offered by associated NDAPs and covered by CBHI, many households complained that certain services were not covered. CBHI seemed to restrict their access to care from the NDAPs involved, although they could still access these services by paying out-of-pocket. Especially the access to chronic outpatient care and major acute outpatient care in CBHI proved to be problematic because it is not covered in CBHI, but often demanded by insured households. In many cases, this resulted in dissatisfaction with the scheme and drop-out of CBHI.

5.5.2 Integration of CBHI outpatient services into insured's health care seeking behavior

We identified three different types of utilization patterns of CBHI-associated NDAPs in our data: no utilization (type 1), combined/integrated utilization (type 2) and exclusive utilization (type 3). Of these three types, type 2 is the one closest to utilizing CBHI as it was envisaged because households of this type make use of CBHI-associated NDAPs mostly for minor illnesses and resort to other providers for more serious ailments requiring specific services. Most of our households (15 out of 29) belonged to this category. Nevertheless, 12 out of 29 households belonged to type 1, i.e. no utilization of CBHI-associated NDAPs. Though our sample is by no means representative, it is striking that as many of the households under study do not use outpatient care offered by CBHI at all. Access to good quality outpatient care under CBHI was not achieved for these households. Although for one household, this disadvantage was compensated by other services provided like reimbursement of hospitalization or testing costs, this situation is not desirable and access, including quality, needs to be improved.

Our evidence on type 3, i.e. the exclusive utilization of CBHI-associated NDAPs, is quite weak because only two households belonged to this category and one of them had not experienced the need for major outpatient care since being enrolled. The other household, however, seemed to be restricted to outpatient care provided through CBHI due to a lack of (financial) access to other options.

5.5.3 Recommendations for improving access to outpatient care in CBHI

The results presented here are from a qualitative longitudinal study with a limited number of households in three districts in northern rural India. Our sample is not representative and the results thus cannot easily be generalized to the insurance schemes as a whole, let alone other contexts. However, they do give useful hints regarding positive and negative experiences with access to local outpatient care in the CBHI schemes under study and show what different issues to consider for improving and creating access to local health care practitioners. Although we have investigated CBHI schemes in this specific study, we believe that our findings can be transferred to other forms of HMI, too, as they are not dependent on the involvement of the community in the design and/or management of CBHI.

On a general note, we conclude that for HMI schemes aiming at offering local outpatient services, the inclusion of NDAPs or similar local providers is necessary and generally very attractive for potential insured. However, as we have seen in our data, the specific arrangements can have (perceived) negative consequences for the financial and physical access to such practitioners, specific services and the quality of treatment provided.

Therefore, a careful design of payment mechanisms is necessary, as also commented on by Robyn et al. (2013).

The following specific recommendations are derived from our results, for the CBHI schemes under study and beyond:

1. Allocate sufficient and constant funding to associated NDAPs so that they are able to provide quality care, within the limits of their technical abilities.
2. Clearly define the limits of care to be provided (e.g., exclusion of certain services and referral to qualified practitioners) and communicate these to the associated NDAPs and the insured.
3. Choose NDAPs situated closely to the target group, as distance proved to be an important issue for insured households. Clearly communicate which NDAPs are associated with the scheme.
4. Monitor and supervise associated NDAPs to ensure that they provide the services they are paid for to the satisfaction of the insured.
5. The involvement of the target group in choosing and—if necessary—substituting associated NDAPs is recommended.

5.6 Conclusions

The aim of the CBHI schemes was to ensure and improve financial access to associated NDAPs for minor illnesses while making use of their physical and cultural accessibility and ensuring a certain level of quality. Our data shows that households perceive both positive and negative aspects regarding their access to care through CBHI. On the positive side, they appreciate to have access to treatment without having to pay out-of-pocket and to be able to access treatment for outpatient care immediately. On the negative side, they perceive that the quality of care provided by CBHI-associated NDAPs is low and not suitable for all illnesses, and that they are not always easily accessible. In some ways, the involvement of associated NDAPs in CBHI was a success, because they are situated closely and are familiar to their patients. In other ways, however, advantageous features of NDAPs were compromised by organizational arrangements within the CBHI schemes: it brings about a reduction of medicine dispensed, only limited access to services available and a restriction to selected practitioners within the insurance. The insurance schemes—as external entities—have partly regulated the relationship between associated NDAPs and their communities, with sometimes negative effects.

We argue that the involvement of NDAPs in CBHI/HMI (with limits regarding the services to be offered and conditions to be treated) is necessary because of their popularity

and accessibility for the rural population. However, not all positive features could be sustained and it became obvious that schemes need to be organized carefully to not compromise and thus de-facto reduce the already existing accessibility of (perceived) quality care by NDAPs.

Chapter 6

Overall discussion and conclusion

For the poor in India, access to quality health care has been compromised, especially because of high costs. Health Microinsurance (HMI) schemes have become increasingly popular to improve this situation. The present thesis had posed the question whether the inclusion of NDAPs in HMI can improve access to quality outpatient health care in rural India. To answer this question, I presented evidence from three different studies. In the first study, I reviewed existing qualitative evidence on the impact of HMI schemes on access to care (chapter 3). Chapter 4 studied the health care seeking behavior for outpatient care and the popularity of NDAPs among prospective clients for HMI schemes to be implemented in rural northern India. The final study (chapter 5) included in this thesis addressed the success of integrating NDAPs into the three HMI schemes implemented and the effect on access to outpatient care as perceived by the insured themselves.

I had opted for a qualitative approach to my research question as only a qualitative approach allowed myself to understand *how the insured themselves* perceive the effect of insurance to access and *why* and *how* they make use of their outpatient service options the way they do. Chapter 4 on the access of the target population to care for acute illness episodes provided by NDAPs aimed at understanding the community's preference for these kind of providers by examining their accessibility and role in the health care system. A cross-sectional research design involving FGDs with the Self-Help Groups (SHGs) to be offered insurance was employed. The cross-sectional design was suitable given that the aim of the study was to provide a snapshot of the situation before the introduction of HMI, which could serve as a basis for understanding later changes in access to care through insurance. FGDs were the instrument of choice because they offer the possibility to not only gather information from a larger number of individuals, but also to generate discussion among participants and thus dig deeper into issues of potential disagreement. The broad thematic approach of the overarching research project, which comprised various impact-related topics not addressed in this thesis but covered in the same FGDs, made it necessary to identify a number of respondents large enough to

reach data saturation in each of the three regions. Otherwise, the data would have been at risk of not being rich enough for a meaningful qualitative analysis (Morse, 2000). Our purposeful sampling strategy ensured that SHGs with different physical access to public health care (based on distance to the next public care facility) were taken into account while also ensuring that the groups selected would be responsive to our questions. My co-authors and I analyzed the data using a directed qualitative content analysis approach consisting of deductive and inductive coding which described patterns of health care seeking behavior and “indigenous typologies”, i.e. classifications of health care options developed by the population under study (Patton, 2002). This analysis technique paired with our overall exploratory approach allowed that our results really reflected our target population’s understanding and perception of the health care system, which made clear why it seeks treatment from NDAPs for certain conditions despite their lack of formal education. This understanding would not have been possible with a quantitative approach.

Chapter 5 presented a study on the effect of HMI on access to outpatient care as perceived by the insured. It used a longitudinal qualitative case study approach. The longitudinal approach was chosen as it provided the opportunity to capture and address changes over time (e.g., in the access to care but also in the value perceived from being insured). Individual households were chosen as case study unit because it was necessary to understand in-depth the situation of the household and the interplay/relationship of different factors such as its financial and health situation to properly assess its choices and perceptions. Qualitative in-depth interviews allowed my fellow researchers and myself to understand the households’ health- and insurance-related decisions and their rationale of behavior. Over a period of 16 months, 42 households included into the study (14 at each study site) were visited every four months to gather rich and meaningful information about changes in their situation over time. We purposefully sampled households according to their poverty level, insurance status and willingness to participate to consider different perspectives on insurance, access to care and to ensure long-term participation. The fact that only one household dropped out of the study and that the remaining ones became more and more sharing during the course of data collection showed us their level of trust in our researchers. The analysis of the data involved case description and analysis and explanation of themes and patterns (see Stake (1995)). A combination of within-case and across-case methods registered patterns across households while avoiding negligence of the specific context of the individual case. Our qualitative approach allowed us to not only assess the access of households to outpatient care and their level of satisfaction with it and insurance, but also to explore their rationale for making or not making use of insurance options without limiting ourselves to preconceived ideas.

The most important limitation of my qualitative approach is its lack of representativeness. I cannot assume that my findings are generalizable to the entirety of insured and

previously insured households which form our target group. Nevertheless, our purposeful sampling strategies attenuated the risk of biased sampling even though only a small number of respondents were included into the studies. Although the presence of NGO-representatives—who were involved in the management of HMI schemes—during the interviews could be considered problematic with regard to the openness and sincerity of respondents, I am convinced that this effect was not meaningful as criticism of HMI and its management was voiced regularly.

To answer my overall research question, I combine the results of the three different studies undertaken by myself, partly in collaboration with other researchers. Chapter 3 reviewed the qualitative evidence available on the impact of HMI on access to care (both outpatient and inpatient). It showed that such studies are scarce and that a considerable part of them lack proper reporting to properly assess their quality. The existing evidence demonstrates that HMI-clients in different countries do perceive a variety of benefits from being insured. However, there are also a range of factors which negatively affect this perception. A comparison across countries and schemes showed that these factors can be rooted both in the insurance scheme itself as well as the respective health care system it operates in. They comprise problems such as low quality of care, distance to providers, complicated administrative procedures and lack of familiarity with/trust in providers and negatively affect the positive perception of HMI-coverage. It has become evident that both insurance-related and system-related barriers need to be addressed simultaneously to improve access to care; otherwise, positive results/achievements in one area could be undone by problems faced in the other. For example, faster access to care because of an insurance arrangement is less helpful when the care provided in the facility available is of low quality.

For my research question under study, two findings of this study are especially important: first, it showed that a lack of physical access to care provided under HMI and dissatisfaction with its quality are among the most frequently identified problems with access to care through HMI. This proves the relevance of my research question for different countries and schemes, as the integration of local providers such as NDAPs in combination with an involvement of insurance clients into the selection of these providers tackles just these shortcomings. Second, the review also revealed the limitations of this approach. Given that health system-related barriers to accessing care can compromise the schemes' efforts, it makes clear that complementing measures addressing system-related shortcomings are indispensable.

A closer look at the public health care system in rural northern India (chapter 4) demonstrated that despite governmental efforts to improve access to public care, respondents still perceive themselves as being isolated from quality health care. They have developed an informal three-level hierarchical structure of the rural health care system, which they usually follow from the lower to higher levels for acute illness episodes. Local private, NDAPs are the most popular source of health care due to their accessibility and the lack

of qualified care at the local level. They are close by, offer fast and affordable treatment, flexible prescriptions and payment options and take into account their patients' belief system. Thus, they serve as a first contact point for patients in seek of relief and/or temporary or interim solutions until a more qualified source of care can be consulted. These findings again confirm specifically for the Indian case the relevance of our HMI schemes' decision to include NDAPs into their portfolio for the provision of outpatient care. In line with the evidence from my review in chapter 3, the implementing NGOs involved their potential clients in the selection of the specific providers. Based on a list of providers usually consulted by the communities and a mapping of their distribution, they came to an agreement which NDAPs to include. The expectation was that NDAPs would continue to serve as first contact points, treating minor ailments like cough, cold, viral fever, diarrhea, vomiting, and heat stroke and referring patients with more serious illnesses to formally qualified doctors. Services such as injections and glucose bottles were excluded from insurance coverage. By eliminating out-of-pocket-payments at the time of consultation, financial access to outpatient care should be improved while preserving the physical and cultural accessibility of NDAPs and ensuring (perceived) quality of their care.

The effect of this measure was then examined in the study presented in chapter 5. It revealed that households who had been offered insurance made a variety of positive experiences regarding their access to outpatient care through HMI, like not having to pay out-of-pocket, familiarity with the associated NDAPs and provision of good quality care. However, there were also a lot of negative factors and barriers, especially a decline in quality of care provided due to the limited budget NDAPs received from the insurance. Also, far travel distances to associated providers de facto restricted physical access to outpatient care in comparison to the situation without insurance. While about half of the case study households included into analysis reported the use of HMI-associated NDAPs, a large fraction did not make any use of them for the reasons described above and thus did not benefit from outpatient care through HMI at all. Quantitative evidence from our study HMI schemes showed that only in one site (Pratapgarh) there was a statistically significant effect of HMI-coverage on the utilization of outpatient care: a significant decline in its use, especially from qualified general practitioners/specialists, but also from NDAPs. Apart from this finding, there were no significant effects neither on utilization of outpatient care nor expenditures on outpatient care (Raza et al., 2016a). A possible explanation for the lack of an effect on the utilization of NDAPs could be their general accessibility to the community: As shown in chapter 4, they had already adapted their treatment and payment practices to the needs of their patients so that outpatient care from this source might not have been foregone in the first place. At the same time, as reported in our qualitative data, the medicine dispensed by NDAPs to insured patients declined due to the small budget provided by HMI for each patient. As a consequence, many households stated to pay extra for additional medicines which might explain the lack of an effect on expenditures on outpatient care, too.

In a nutshell, the evidence presented in this thesis showed that HMI can improve *perceived* financial access to quality outpatient health care for the insured by including NDAPs, as shown by the testimonies of a variety of households. However, there is also a risk of restricting especially physical access to services for outpatient care and diminishing its perceived quality through insurance arrangements. Although my findings are not easily generalizable to other regions or countries, they can serve as valuable input for HMI schemes which aim to improve access to outpatient care while confronted with a similar significance of NDAPs. The inclusion of NDAPs into the Indian insurance schemes under study was a justified decision as it had been shown that these unqualified providers are the most important contact points for acute illness episodes in rural India. In the sense of Granovetter (1985), their social embeddedness into their communities shape their economic activities and make them physically, financially and culturally more accessible (see also George and Iyer (2013); Cross and MacGregor (2010)).¹ An additional study on the value of our HMI schemes for their insured clients confirmed that access to care and its quality are essential components of value of HMI, as is the protection for minor illnesses (see the full study conducted by myself and others in appendix B). Not including NDAPs would have meant ignoring health care seeking realities in the field and—most probably—negatively affecting enrollment rates and access to outpatient care through insurance. In many of the cases studied, their inclusion has been welcomed and considered successful by enrolled households. In other cases, however, access to outpatient care from associated NDAPs was restricted by a variety of problems. These were basically the result of the “intervention” of the insurance in exchanges between NDAPs and their patients and the regulation of these, both through treatment guidelines and remuneration by a third party. Households felt that their access to care from NDAPs was restricted by being insured as they did not have free choice of provider and sometimes had to consult associated NDAPs unfamiliar to them. Additionally, their providers would not dispense the quantity of medicines they were used to and did not offer care for major outpatient or chronic outpatient events. Although insureds were free to consult non-associated NDAPs and/or procure additional medicines, they felt that they had to pay double as they had already paid for their insurance (even when the actual amount paid might still have been lower).

One potential countermeasure would be the inclusion of additional providers to increase the number of alternatives for households where possible. Given that the remuneration of NDAPs seems to have been too small to provide insured patients with the usual quantity of medicine, it would either be necessary to increase remuneration or reduce the price of medicine. The former could be associated with an increase in premiums, which could in turn have a negative effect on enrollment and ability to pay. The latter could be reached by purchasing medicine for the HMI-associated NDAPs in bulk to

¹A further interesting aspect to investigate in future studies would be the motivation of NDAPs to join these kind of schemes and how their social embeddedness and/or business considerations might have influenced their decision

obtain cheaper prices. HMI schemes could act as an intermediary here and make use of their bargaining power. Additional studies would be necessary to estimate a possible effect of these measures. As mentioned before, a quantitative study on the effect of the HMIs schemes under study was unable to identify a statistically significant decrease in spending on outpatient care due to insurance (Raza et al., 2016a).

Based on these findings, I argue that the inclusion of NDAPs into HMI schemes for outpatient care is recommendable where these providers play a significant role, and if this inclusion is designed carefully. It should not restrict already existing access as it had happened to some extent in the insurance schemes under study. The role of NDAPs in India and their recognition as legitimate health care providers has been debated for some time. It would certainly be necessary for the insurance schemes to define some rules on what type of illnesses should be treated under insurance and when NDAPs should refer to qualified providers. This is however not sufficient to ensure the quality of health care provision and should thus be accompanied by qualification and formalization efforts by the Indian government which—again—need to be implemented carefully as to not impede access to these providers for the Indian rural population, as it had happened in the past (Rohde and Viswanathan, 1995). A RCT on a training of informal health care providers in West Bengal has shown that they can reach case management quality on a par with formally qualified doctors in primary health care centers (Das et al., 2016). However, it also showed that training of NDAPs had no effect on their tendency to sell unnecessary drugs and antibiotics, presumably because they make a living from selling medication and because of their patients' preference for these drugs.² Efforts for improving access to care in rural areas should thus include the qualification of NDAPs paired with education of their patients on the potentially harmful consequences of excessive and unnecessary use of antibiotics and other medication. Compared to the necessary investments to make public health care accessible even at the local rural level, this would be considerably cheaper (Das et al., 2016). HMI schemes could partner with the Indian government in this endeavor as this would also decrease costs of care. A close monitoring of the effect of these measures on accessibility of NDAPs would be necessary. This should also include the perspective of the NDAPs themselves on HMIs and its effect on their relations with their patients.

To conclude, this thesis has presented the innovative case of inclusion of NDAPs for outpatient care into HMI schemes in India. It has shown that it can be successful to make use of the NDAPs' physical and social embeddedness in their communities for improving perceived access to care among the rural Indian population. However, my studies have also shown that the external regulation of NDAP-patient-relationships can actually decrease perceived access to care if not planned thoroughly. This observation is not only of relevance for HMI schemes wanting to integrate NDAPs, but also for different

²See also George and Iyer (2013), who describe a similar dynamic of patient pressure for specific medications.

programs or interventions intending to benefit from their accessibility, in India but also in other contexts.

Appendix A

“One for all and all for one”; Consensus-building within communities in rural India on their health microinsurance package

The study sheds more light on the specific form of health microinsurance studied in this thesis and illustrates the importance of access to outpatient care for the schemes' target population.

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Author Contributions: DD conceptualized the study and drafted the manuscript. PP and DD prepared the tools for quantitative surveys, and CM and PP prepared the qualitative tools. PP managed the data collection and provided oversight for study implementation. AM, PP and CM conducted the data analyses. DD, PP, RK and CM critically reviewed the manuscript. All authors provided comments (including write-up) and approved the final manuscript.

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A.1 Introduction

In India, as in other low and middle income countries, most of the rural population lives and works in the informal sector. The implied consequence of being informal is that people are often excluded from market or social arrangements through which they might benefit from health insurance (International Labour Organization, 2000). Under these conditions, several development projects have been launched aimed at implementing health microinsurance at village or local level (Biener and Eling, 2012; Borghi et al., 2013; Mahal et al., 2013; McCord et al., 2012b,c; Roth et al., 2007; Tabor, 2005). Health microinsurance has originally been defined as voluntary, contributory, community-based health insurance (CBHI) scheme for which the group designs the benefits, premiums, and/or governance structure, to be relevant and affordable to the local population (Dror and Jacquier, 1999; Dror, 2014). This definition departs from classical demand theory, which views the individual as formulating demand whereas here the group defines the demand and ideally pools both risks and resources in order to provide protection to all members (Dror and Firth, 2014). This formulation of demand relies on mobilization of collective action. The question that begs empirical evidence is whether and how rural poor without prior experience with health insurance can be engaged in a complex process of selecting a coherent benefit-package that will reflect their communal needs and priorities, rather than simply being told to buy cheap insurance. Involving the rural community means empowering them to define the benefit types that would be payable to insured persons, as well as all the rules on deductibles, co-payments or cost-sharing amounts (thresholds) or maxima (caps), and other conditions and limitations which may determine the share of healthcare cost that will be borne by the insurance (and in our context, by the microinsurance or CBHI scheme). The working assumption underlying this research question is that when rural groups are involved, they can reach consensus on the composition and price of the benefit-package that reflects local notions of value-for-money, leading to stronger motivation to enroll.

Literature on consumers’ preferences for health insurance plans has so far concentrated on rich countries (Booske et al., 1999; Chakraborty et al., 1994; Harris and Keane, 1998; Kerssens and Groenewegen, 2005; Mechanic, 1989; van den Berg et al., 2008; Scanlon et al., 1997). Only few publications deal with the health insurance benefit choices of low-income persons in low-income countries (de Allegri et al., 2006; Harms, 2011; Onwujekwe et al., 2010). Dror et al. (2007) and Danis et al. (2007) described simulation exercises (called “CHAT”—Choosing Healthplans All Together) in which rural poor in India were asked to compose health insurance packages by selecting benefit types that should be included within a severe budgetary limitation. The main lessons from those experiments were that rural poor were interested in broad coverage rather than only coverage of rare events.

Following on from those experiments, a five-year EC-FP7 project (2009-2014) on implementation of CBHI was launched by the Micro Insurance Academy (MIA) New Delhi (www.microinsuranceacademy.org) in three locations in rural India (Pratapgarh and Kanpur Dehat districts, Uttar Pradesh; and Vaishali district, Bihar) (Doyle et al., 2011). The MIA implementation model enables prospective members to be involved in decisions on the benefit-package that the CBHI schemes offer (Panda et al., 2013). The prospective members selected pre-composed packages (rather than composing packages from a selection of benefit types, as was done under the earlier CHAT exercises) as well as premium levels that such packages commanded. The project unfolded in cooperation with field-partner non-governmental organizations (NGOs): BAIF in Pratapgarh; Shramik Bharti in Kanpur Dehat; and NIDAN in Vaishali, and the implementation aimed at enrolling rural women that participate in self-help groups (SHGs) facilitated by these field partners. These SHGs aim at economic and social empowerment and capacity building for women through micro-credit and other activities, with the intention to ultimately benefit the whole community (Tesoriero, 2006). Both CHAT and the CBHI schemes also possess empowering features as they allow local communities to exercise more control over decisions relating to the health insurance (Craig, 2002). Additionally, by targeting women in CHAT activities, the implementing partners aim at enhanced participation of women in economic and social spheres. In this context, MIA understands its role as both a catalytic actor and facilitator of the process through which the CBHI is introduced to the communities with the help of field partners, and aiding the establishment of the local schemes (Toomey, 2011).

The setting of the present study was the implementation of these three CBHI schemes. The purpose of this article is to describe the process of involving rural poor in benefit-package design, explaining the underlying reasons for choices they made, and assessing their ability to reach group consensus regarding package composition, against the background of the research question formulated earlier.

The article includes a section describing the data and methods, followed by a section presenting the results from three choice exercises. We then discuss the ramifications of those insurance choices. Finally, we formulate conclusions and policy recommendations.

A.2 Data and Methods

A.2.1 Data

The study is based on four sources of data: a dataset obtained through a baseline study; CHAT exercises; in-depth interviews; and evaluation interviews. In accordance with the guidelines issued by the Indian Council of Medical Research, the overall study as well as the specific data collection tools used were checked and approved by the Ethics

TABLE A.1: Treatment and control households by location (2011).
Source: Own illustration.

	Treatment*	Control	Total HHs
Pratapgarh (Uttar Pradesh)	433	850	1,283
Kanpur Dehat (Uttar Pradesh)	378	661	1,039
Vaishali (Bihar)	524	839	1,363
Total HHs	1,335	2,350	3,685

* Treatment hhs are the SHG households that were offered to join the CBHI in 2011, and control households are the remaining SHG households who were not offered the option to join at that point in time.

committee of the University of Cologne, Germany (Indian Council of Medical Research, 2006).

Baseline study The source data for actuarial calculations of premiums of different benefits originates from a baseline survey of the five-year project, conducted in March-May 2010 in three locations in rural India. The selection criterion of households for inclusion in the sample was that at least one female member was enrolled in a SHG, affiliated with the field partner NGO in March 2010. The calculation of incidence of illness and premiums for each location was based on the entire sample at that site. Table A.1 contains the detailed information on the sample, by location. More information on the context of the study is provided in Table A.5 at the end of the annex.

CHAT exercises data Group choice exercises were conducted in which women SHG groups were invited to play CHAT with the help of pictorial boards showing different benefit-packages and the related premium (a picture of a CHAT board is reproduced in Figure A.1).

CHAT involved different benefit-packages in each of our three study sites, developed in benefit-package selection workshops that are described in detail in section 3. The premiums for each of the benefit options were calculated by using the baseline data. The group discussions were led by 6 to 8 facilitators in each location (some chosen from the SHG members and some from the field partner organization). These facilitators received training from the MIA. The CHAT games were conducted in three rounds: during the first round (CHAT 1) female participants from the SHGs were asked to select the benefit-package that met their and their families’ needs (using colored stickers to denote their first and second priority). At the end of this individual round, each participant could take home a personal copy of the CHAT board to discuss the choices with family members. Next day, during the second round (CHAT 2) a facilitated group discussion was convened, in which each women SHG discussed the consequences of the choices, and the entire group was requested to select the one option that reflected the

FIGURE A.1: CHAT board used in Kanpur Dehat.

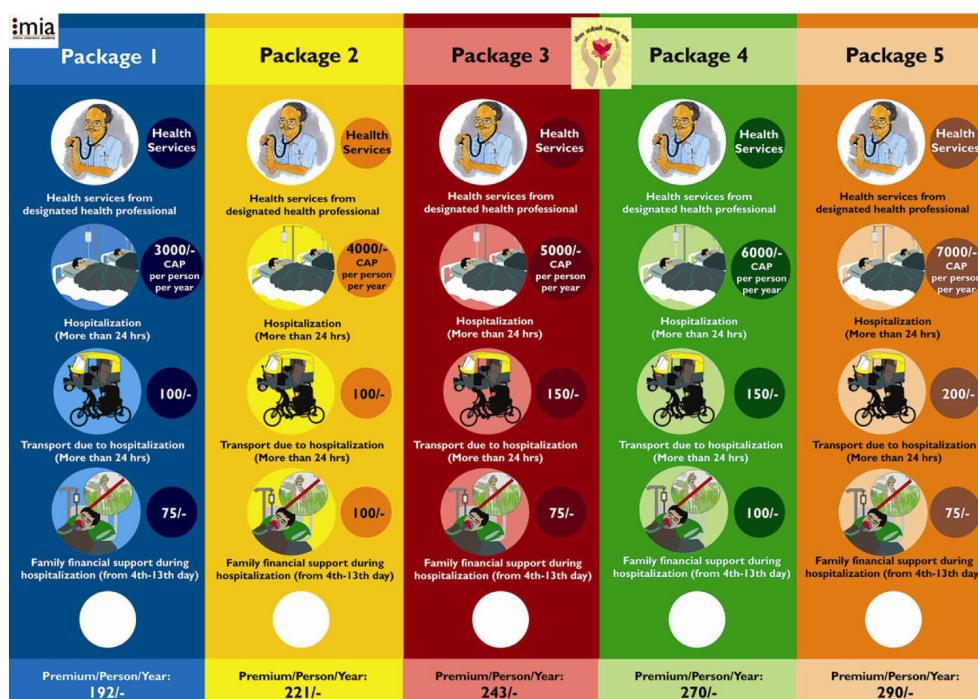


TABLE A.2: Number of groups and individuals that participated in the CHAT exercises. Source: Own illustration.

		Pratapgarh	Kanpur Dehat	Vaishali
CHAT 1	Individual	383	272	436
CHAT 2	Group	47	29	49
CHAT 3	Group	47	29	49

group’s first choice, and an alternative second choice. The facilitators kept a record (on a predesigned “CHAT Data Capturing Form”) of both individual and consensus choices made in CHAT 1 and 2. The third round (CHAT 3) took place about 15 days later, and its purpose was to select a single package that would be offered by the CBHI to all its potential members; the decision-rule was that each women SHG selected one package (similar to what was done in CHAT 2), and the package that was chosen by most groups was retained in each location. All the community members that facilitated the CHAT rounds did not get any pay or incentive for participating; and the facilitators from the field partner NGOs conducted the sessions as part of their normal work duty. Table A.2 provides the number of groups and individuals who participated in CHAT exercises in each site.

Individual in-depth interviews With the view to understanding the motivations

underlying CHAT choices, we followed a mixed-methods methodology using both qualitative, open-ended in-depth interviews, and quantitative, closed-ended evaluation questionnaires (explained below). By doing that, we not only get a better picture on the reasons for the choices made, but also an understanding of the underlying processes. In-depth interviews were conducted with 6 women SHG members (in their households) in each of the three sites (Pratapgarh in November 2010; Vaishali in December 2010; Kanpur Dehat in March 2011). At each site, we picked 3 SHGs which had been selected to be offered insurance and to participate in CHAT, and interviewed 2 of their members each. We decided to use individual interviews instead of group interviews to enable the women to openly voice negative impressions related to the group’s decision-making process. Additionally, we conducted interviews with 2 CHAT facilitators per site to understand the facilitators’ perspectives on the CHAT process and decision-making in the groups. In total, we conducted 24 interviews $((6+2)*3)$. All interviews were conducted in the local language (Hindi), tape-recorded, later transcribed and translated into English. The interviewers were trained in using two different sets of semi-structured questionnaires (one for SHG members, one for CHAT facilitators) that contained both exploratory and targeted questions inquiring, among other things, about experiences with and perception of CHAT, problems encountered during CHAT, decision-making processes in group and household and reasons for particular choices. Answers to these questions were then compared using NVivo software (V.8). We followed the method for directed qualitative content analysis described by Hsieh and Shannon (2005), combining deductive and inductive coding of data.

Evaluation questionnaires We additionally conducted structured, closed-ended evaluation interviews with about 20% of the households that participated in CHAT. The main purpose of these interviews was to evaluate the awareness campaign, wherein CHAT was one component (Panda et al., 2015a).

A.2.2 Identification of benefit-package options

The first step in the process of benefit-package design entailed preparing a limited set of options which would be presented to the groups for selection through the CHAT exercise. This was done through an interactive exercise (called Benefit-package selection workshop) facilitated by MIA, in which representatives of the field partners and of the communities (the SHG federation, SHG members, community leaders e.g. teachers, panchayat members, and community health workers) reviewed all the pertinent information about morbidity, costs of care, health seeking behavior and availability of healthcare facilities (obtained through the baseline study). The discussions revolved around several benefit-package options and the premium that each package would command (community rated per person per year). The output of each workshop was 4 to 6 packages that would be presented to the entire target population for selection.

A.2.3 Method of measuring consensus: Coefficient of Unalikeability

We define consensus as general agreement/resolution arrived at by most of those concerned, after everyone’s opinions are heard and understood, and a solution is created that everyone agrees to. This definition is in line with the approach used by Sultana and Thompson (2004) and Mohammed and Ringseis (2001). We apply Unalikeability, meaning “how often observations differ from one another” to measure the consensus reached within each location (Kader and Perry, 2007). Unalikeability is expressed as a Coefficient that measures variability of the categorical variable “the package that people chose”. Each package was numbered (see package numbers in Table A.3). The choices of every participant was noted in each session, and compared to those of other individuals in the same location; individuals were matched to others through a random process of pairing. For each pair, we noted whether the choices were identical (denoted 0) or not (1). By using the techniques of combinatorics we counted all the observations that differed (by excel 2010). The value of the coefficient lies between 0 and 1, where 0 indicates that all observations within the set are identical and 1 means that all observations differ from each other. If the coefficient of unalikeability decreases over consecutive sessions, we conclude that the differences within the cohort are decreasing, and the zero value of the coefficient of unalikeability means that complete convergence was reached on a particular package. We preferred this method over Kappa statistics, which is used for measuring reliability of judgment (especially useful when agreement is sought on something rare). Kappa statistics usually involve agreement or disagreement of observers on one event, which is different from the CHAT exercises where many persons need to select one item from a set of multiple items. Annex III contains the table that shows the computation of the coefficients with first and second choices in the three locations.

Kader and Perry did not discuss any statistical properties of the Coefficient of Unalikeability (Kader and Perry, 2007), but since the coefficient is calculated from the frequency distribution of choices, we calculated the significance of differences of the coefficients by estimating the significance of difference between the distributions under different settings, by employing the Chi square test.

A.3 Findings

A.3.1 The benefit-package options considered

The options that were retained in the benefit-package selection workshops were presented to the target population in the different CHAT rounds and drawn as “CHAT Boards”. The data is shown in Table A.3.

TABLE A.3: Options retained at the benefit-package selection workshops, and the package selected during CHAT (prices in INR).
Source: Own illustration.

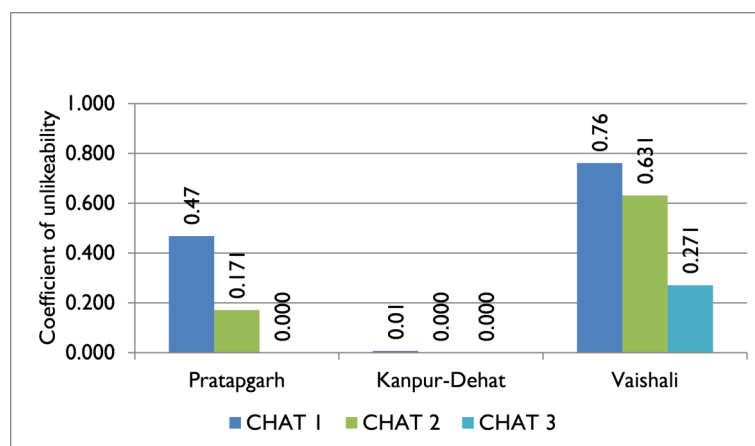
Benefit type/package	Pratapgarh				Kanpur Dehat						Vaishali					
	1	2	3	4	1	2	3	4	5	6 ^a	1	2	3	4	5	6
Lab test (PPPY)											200	200	100	200	200	100
Imaging (PPPY)											300	300	200	300	300	200
Wage loss (per day)	100	100	100	75	100	75	100	75	100	0	100	100	0	100	100	
From day (numbers=days)	3	3	3	4	4	4	4	4	4	4	4	4	4			
To day (numbers=days)	8	8		8	3	13	13	13	13	13		9	9		9	9
Consultation with medicine					Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hospitalization																
PPPY	5,000	5,000	6,800	6,000	3,000	4,000	5,000	6,000	7,000	4,500			2,000			2,000
Per family per year										25,000						
Hospitalization for C-section	3,000	3,000	3,000	5,000												
Deduct (payable by govt)	1,400	1,400	1,400	1,400												
Transportation		200		100	100	100	150	150	200	100						
Life																
Natural death														30,000	30,000	30,000
Accidental death														75,000	75,000	75,000
Disability due to accident														37,500	37,500	37,500
Premium PPPY																
PPPY family up to 5	157	162	176	176	192	221	243	270	290	192	187	197	236	1,287	197	236
PPPY family 68	157	162	176	176	192	221	243	270	290	192	178	188	225	1,278	188	225
PPPY family 9+	157	162	176	176	192	221	243	270	290	192	160	169	203	160	169	203
Life premiums																
PPPY 1 person														100	100	100
PPPY 2 persons														50	50	50
PPPY 3 persons														67	67	67
PPPY 4 persons														50	50	50
PPPY 5 persons														40	40	40
PPPY 6 persons														33	33	33
PPPY 7 persons														29	29	29
PPPY 8 persons														25	25	25
PPPY 9 persons														22	22	22
PPPY 10 persons														20	20	19
Package chosen				*						*		*				

^aPackage number 6 in Kanpur Dehat district was not designed in the original workshop; instead, it was created after feedback from the community, which wanted a higher cap for individual hospitalizations. Based on the package originally chosen by the groups in CHAT (package 1) a new package entailing basically the same benefits and the same price but a family floater instead of an individual cap was designed and then agreed to by the community. Abbreviations: CHAT, Choosing Healthplans All Together; govt, government; PPPY, per person per year; INR, Indian Rupee.

We use the Coefficient of Unalikeability to measure the variability of choices made. We observed that the coefficient of unalikeability decreased over consecutive CHAT rounds in all locations, indicating that groups gradually adopted a consensus on one package. Incidentally, groups in all three locations converged towards consensus also on their second priority package (data not shown). The differences in the values of the coefficients of unalikeability were significant ($p < 0.000$).

The data in figure A.2 clearly shows that consensus was higher in CHAT 2 than in CHAT 1, and increased further in CHAT 3. CHAT 3, like CHAT 2, was a group choice, which took place 15 days after CHAT 2, and following discussions that each individual had with others in her household and community. One might have expected that external influences from people that did not participate in the deliberations in the SHGs would reduce consensus; however, the coefficient of unalikeability decreased, implying that consensus had actually increased after interactions with outsiders. This finding clearly indicates that the consensual choice was not limited only to persons that participated in the CHAT exercises, but reflects the views of the entire target population in each location on the desirable benefit-package for them.

FIGURE A.2: Coefficient of unalikeability in three CHAT rounds and three locations.
Source: Own illustration.



After the CHAT rounds, we conducted structured closed-ended evaluation interviews with about 20% of the participants, who were asked about the main reason for their choice in CHAT 2 and in CHAT 3. The results are shown in Table A.4. Interestingly, at the CHAT 2, about one quarter of the respondents in all locations said that they wanted to be part of a group choice and therefore chose the package that “other SHG members liked”. The three other reasons (cheapest, best, or most benefits) had different weights across the locations. But in CHAT 3, the consensus was dominant in all locations. When all three cohorts are aggregated, increase in the preference for consensus choice was significant ($p = 0.037$, chi squared test).

TABLE A.4: Why did people choose the package they did?
Source: Own illustration.

	Pratapgarh	Kanpur Dehat	Vaishali
No. of Respondents	115	72	104
CHAT 2			
Participated in CHAT 2 ^a	80.9	72.2	72.1
<i>Reasons for choosing the final package (among participants)^b</i>			
Other SHG members liked it	25.8	25.0	24.0
Cheapest	20.4	32.7	26.7
Best	21.5	21.2	25.3
Most Benefits	22.6	3.8	14.7
Other	9.7	17.3	9.3
CHAT 3			
Participated in CHAT 3 ^a	73.9	62.5	62.5
<i>Reasons for choosing the final package (among participants)^b</i>			
Other SHG members liked it	35.3	33.3	33.9
Cheapest	24.7	28.9	27.7
Best	12.9	24.4	21.5
Most Benefits	25.9	8.9	12.3
Other	1.2	4.4	4.6

^aPercentage of the respondents.

^bPercentages of those that participated in CHAT 2 or 3, respectively.

We conducted in-depth interviews with female SHG members that participated in CHAT and with a few facilitators and cite here their testimonials, as addition to the quantitative information.

In general, respondents expressed their satisfaction with the benefit-package selection process:

“I like that type of game. Everything in that game was to be praised.” (SHG member 5, Kanpur Dehat)

“We liked the method, we liked pasting the stickers.” (SHG member 2, Vaishali)

“[The CHAT exercise] was very good and we all liked it very much.” (SHG member 2, Pratapgarh)

According to one facilitator, CHAT encouraged the participation of all SHG members and their families in the decision-making process:

“Usually in our group meetings (...), people listen to these things silently and nod their heads, but in this CHAT game, there was participation from

all women. (...) The family members also joined, so this is indeed a good method.” (Facilitator 1, Vaishali)

People enjoyed the participatory nature of the CHAT exercises, liked the deliberations and liked to make their own decisions:

“The best thing in the CHAT was that the women were free to choose any package that they liked. It was not imposed on them, and there were no restrictions or obligations to choose a particular package.” (Facilitator 2, Pratapgarh)

The data from our in-depth interviews also confirm that group decisions reflected a consensus rather than majority decision. Respondents described the discussions that occurred and how their opinions were considered:

“[The choice] was a consensus and our opinions were entertained.” (SHG member 2, Vaishali)

“We all discussed and everyone agreed to it.” (SHG member 3, Vaishali);

“It was a collective decision.” (SHG member 5, Vaishali)

“They [the other SHG members] were discussing (...) which package should be chosen and which one is better for us. Every person decided that there would be one insurance for all.” (SHG member 2, Kanpur Dehat)

“There was discussion in which some said that package number 4 is best. Then we all favored it as well. (...) After the discussion (...) we all agreed.” (SHG member 1, Pratapgarh)

Corresponding to the evaluation interviews, which showed that respondents chose packages other SHG members liked, we found qualitative evidence in all locations that people often looked up to trusted peers in their groups and considered their choices. For instance, in Pratapgarh, one member said:

“Knowledgeable people know their benefits; what is right or what is wrong. Everyone selected the same package.” (SHG member 4, Pratapgarh)

And in Vaishali, one facilitator explained:

“Everybody believes in the secretary of the group. Whatever the decision the secretary will take, that will be important. Anyhow everybody gives her opinion but the chairman’s opinion is most important.” (Facilitator 2, Vaishali)

However, respondents did not simply copy the decisions or opinions of administrative officers. Everyone’s opinion was entertained and considered as important, as explained in the following testimonial:

“Everyone’s suggestion has equal importance in the groups. This is all about the groups, that everyone has to go together and [has to take] care of each other’s interest.” (Facilitator 2, Kanpur Dehat)

It is recalled that as part of the decision-making process, participants in the CHAT 1 took home a copy of the CHAT boards in order to validate choices and obtain support from family and friends. Several interviewees mentioned the value of these consultations:

“After CHAT 1, we gave everybody the CHAT board to discuss all the possibilities with family members. (...) They showed the board to the male members of the family. After that, heads of different families discussed how to deal with it. As the women cannot do all the work, they rely on the head of the family or those who they consider the head of the locality like the teacher or the doctor. (...) When they approve the same, then the women can pursue the matter.” (Facilitator 2, Kanpur Dehat)

Nevertheless, this interaction was not always easy and sometimes necessitated additional explanations from other SHG members or NGO staff to convince family members:

“[During CHAT in the group] everything was good, (...) but when they shared with their respective homes, they were criticized by some family members. (...) It was resolved when the person who criticized was convinced by others, so they understood everything about it.” (SHG member 1, Kanpur Dehat)

Clearly, even though the women were empowered to make choices in the CHAT exercises, it was essential to also secure the agreement of the men in order to enable the women to actually confirm the choice and later actually enroll and pay:

“[T]he decision is taken by the male guardian or the husband in the family, since it is a matter of money. Unless [they] were not told by the family guardian [women] cannot pay the installments. They said that the way in which they are conducting the meetings with the women of the group, in the same way there should be meeting with other family members, guardians and head of the family, to convince them.” (Facilitator 2, Pratapgarh)

In summary, our evidence shows that in all locations, the target population was keen to converge towards consensus. Local leaders, knowledgeable persons and male household heads influenced the discussion and the decision-making process, and wanted to be involved in more detail.

A.3.2 The benefit-packages chosen

The pre-selectors in the three locations seemed to have different perception of the main issues that the population was facing; In Vaishali, the pre-selectors suggested three patterns: one that included hospitalization and outpatient care, another which focused mainly on outpatient care, and the third which included these health packages plus life insurance. The community rejected the life insurance option, and of the two health options it favored the outpatient model but included wage-loss compensation in case of hospitalization, and chose the option commanding higher premiums. This community could take advantage of government-provided hospitalization insurance for people below the poverty line (Rashtriya Swasthya Bima Yojna (RSBY)), which probably explains why they did not retain hospitalization benefits.

In Pratapgarh, the pre-selectors retained benefit-packages covering hospital related care: hospitalizations, wage-loss during hospitalizations, and transportation to hospital, as well as coverage of delivery with C-section. In this region, RSBY was almost nonexistent when the CBHI was implemented. This group enhanced the likelihood of claims by many members when it added a benefit related to maternity which is not otherwise available free of charge.

In Kanpur Dehat, the pre-selectors proposed a combined set of benefits covering both hospitalizations and outpatient consultations; the target population reached consensus on the premium level, but wanted a different set of benefits that would enhance intra-household cross-subsidization.

A.3.3 The intention to choose a package that will benefit many members

We observed that both the pre-selectors and the community employed different strategies to enhance the likelihood that many households would benefit from CBHI.

In Vaishali, the pre-selectors proposed a decreasing premium per person as household size increases. This arrangement was a de-facto cross-subsidy from smaller households to larger ones, and the groups in Vaishali confirmed their agreement to this intra-group subsidy. Indeed, 14% of the enrolled families, which actually comprise 24% of the total enrolled individuals, benefited from this discount in Vaishali. 13% of the families with family sizes between 6 and 8 (average 6.35) got a discount of 5%, and 1% of the families

with family size 9 and above (average 9.33) paid 15% less than the base premium. As for package composition, this community chose mainly outpatient care benefits that are more likely to be claimed by many members.

In Kanpur Dehat, the group accepted the benefit types proposed by the pre-selectors, but requested a change in the terms applying to hospital benefits, so that the cap would apply to a household rather than to each individual separately. This was labelled family floater which means that within a cap per family and per event (rather than a cap per person per year) one household member can claim for more than one event per year. This arrangement institutionalizes intra-household cross subsidization, and adds welfare to the most vulnerable members, as well as to the non-claiming household members (that are released from the obligation to pay for repeat hospitalization of close relatives). In addition, the combination of inpatient and outpatient benefits increased the likelihood of claiming a benefit by many insured members.

As already mentioned, some respondents chose a particular package because it was “cheapest” or had “most benefits” (A.4). We bring a few testimonials to shed more light on the considerations that influenced the choices made, especially in Kanpur Dehat and Pratapgarh:

“I was going for [the more expensive package] but which may be difficult for other members. Hence I joined the collective decision to accommodate others, as all the others have to benefit.” (SHG member 4, Kanpur Dehat)

This indicates that when discussing the price, the participants were concerned not merely about their ability to pay, but of other members as well. The two facilitators in Kanpur Dehat observed the same behavior pattern:

“Everyone selected packages for themselves keeping in mind their own benefits (...) But when they met among themselves and were informed that a single package is applicable for the whole group they realized that (...) they all should select a package that is affordable for all.” (Facilitator 2, Kanpur Dehat)

Additionally, SHG members in Kanpur Dehat chose to go for the cheapest option to test CBHI, which was a new concept for the community, as explained by a facilitator:

“Wherever we visited, everyone used to say that they want to opt for the minimum one for the first year. If we benefit then we may look for the better one next year.” (Facilitator 2, Kanpur Dehat)

In Pratapgarh, our in-depth interviews revealed that CHAT participants often set benefits in relation to price and opted for package 4 after realizing that it cost only slightly more but offered more benefits than other packages. It was especially important for them that packages 4 and 2 (their first and second choice) were broader than the other packages, i.e. offered a higher variety of benefits. This shows that they did not simply assume that the most expensive package would provide the most benefits. Otherwise, they would have chosen package 3 over 2. Instead, they preferred a package with most benefit types with lower caps over few benefit types with higher caps.

In Kanpur Dehat, the selection emphasized insuring minor illnesses and outpatient care. A facilitator in Kanpur Dehat described how households which had experienced hospitalization in the past first favored expensive packages with more hospital coverage. However, the community chose cheaper packages, reflecting that most would not need to be hospitalized but would need coverage of outpatient care for minor but frequent illnesses:

“The people selected the packages keeping in mind their own experience. (...) Though there were some people who wanted to get more benefits with the large packages, most people wanted to start with the small package, keeping in mind that very few people do visit the hospitals and most of the people prefer to visit the local doctors.” (Facilitator 1, Kanpur Dehat)

In Pratapgarh, where outpatient care was not included in any of the packages offered, some interviewees criticized the choice of the pre-selectors to include only inpatient coverage:

“There are several issues here (...) they have not included minor ailments and the benefits in case of Caesarian section only. If one is delivering normally, then nothing will be paid.” (SHG member 2, Pratapgarh)

Generally, respondents in all three sites expressed their satisfaction with the final package chosen

“We are fully satisfied with [our choice].” (SHG member 2, Pratapgarh)

“Everybody is satisfied [with the package we have chosen].” (SHG member 1, Vaishali)

“We are very satisfied with [package we have chosen].” (SHG member 5, Kanpur)

A.4 Discussion

This article deals with benefit-package design for CBHI in rural and informal settings in India. The CBHI model discussed here is characterized by voluntary and contributory affiliation, in which the entire group is encouraged to join en bloc. These new conditions of introducing health insurance include a more meaningful and engaging experience of customers directly with the design of the benefit-package, based on exchanges with others rather than deciding in isolation, and emphasis on a group solution which addresses perceived priorities of the target group that the community is best placed to validate collectively rather than any individual alone. This process is much more sophisticated than expecting a decision merely on the merit of an unverifiable claim that premiums are low, and the relationship with the insurance to end, not begin, once people pay the premium.

The implementation model relies on collective action to select the benefit-package, which determines the share of health care costs borne by the CBHI. We explored previous studies of how collective action was mobilized effectively. Ostrom (2000) pointed to extensive fieldwork that established that individuals voluntarily organize to provide, *inter alia*, mutual protection against risk. She added that typically when people engage in direct communications with each other, they can generate cooperative behavior or create a social norm that has a certain staying power in encouraging the growth of cooperative behavior over time. Cooperative behavior thrives on a process that leads to implementation of changes (which in our study entailed a decision on a benefit-package that would be implemented by the CBHI schemes). Consensus magnifies the buy-in of decisions, but there is some debate on whether consensus means unanimity of opinions or involving everybody in the same process (with possibly a large majority of identical opinions). We have shown that consensus can be expressed quantitatively rather than just categorically (as a binomial Y/N), and that the degree of consensus improved through an iterative process of decision-making. The salient lesson from this study is that the wish to be part of the consensus was the most important motive for choice of benefit-package (A.4), more than the price or the composition of the package. Another important insight is that there is no contradiction in saying that each community can agree on the application of one and only one package to everybody in that community, while also saying that communities living in different conditions choose different packages. The three communities reached consensus, which was to select a package that reflected different morbidity patterns, socio-economic statuses or available health care services. The similarity was the process of consensus building, and the difference was the actual package. This finding corroborates previous claims that one size cannot fit all locations but a similar decision process can (Dror, 2007). The similarity was in a descending value of the coefficient of unalikeability over subsequent iterations of the facilitated choice exercise (see Tables A.6 and A.7) and in the motivation mentioned by many to join a consensus (see Table A.4).

The finding that individuals chose packages that can enhance benefits to their community is interesting from a perspective of theory of demand. Conventional insurance demand theory posits that demand decisions are made by individuals on the basis of their perceived marginal utility from the purchase of insurance (Nyman, 2003; Pauly et al., 2009). In the CBHI model described, the balance between self and community interests was achieved by starting the process with a phase of individual choice of package, followed by face-to-face exchanges with other community members in small groups. The consensus of small groups (composed of women that participate in SHGs) was then shared with their family members, and the facilitation given to women to discuss their choices with family and community members created an opportunity to discuss why other participants preferred different choices, recognize the legitimacy of other opinions, and seek a way to devise a compromise consensus. The discussions were then repeated with members of other groups in the same community that also elaborated their consensus in a similar process, and the follow up discussions led to higher consensus. Our evidence corroborates the results of Mohammed and Ringseis (2001) that consensus building is gradual and requires multiple iterations with frequent face-to-face informal exchanges between community members. Our participatory process generated high satisfaction with the process and with the resultant benefit-package, as attested by the testimonials. More importantly, participation in the CHAT process was instrumental in enhancing understanding of the insurance process in the context of CBHI, which was positively associated with higher enrollment (Panda et al., 2015a). As such, the process can serve to scale penetration of insurance in rural settings in India, by creating more awareness, leading to more trust, which in turn leads to higher enrollment.

An important common denominator of the choice process in all three locations was its inclusive nature, and the intention to enhance the likelihood that many members of the community should benefit from the CBHI. Additionally, community leaders who participated in the benefit-package selection workshop enhanced the probability that households will be able to cope with multiple episodes within the household (Vaishali) and ensured that poorer households would be able to participate in CBHI by offering discounts for large households (Vaishali) or by choosing cheaper packages affordable to everyone, with the “family floater” cap (Kanpur Dehat). Some of these novel provisions have been either initiated or confirmed by consensus of the large grassroots groups, so that there can be no doubt that they were able to understand the welfare enhancing potential of these arrangements. We therefore conclude that the demand for CBHI in the informal sector in rural India is based in large part on collective priorities, and on the general understanding that if most people did not like the package on offer, there would be no CBHI at all for anybody.

The CHAT process specifically involved women organized in SHGs. In CHAT 1, they made their choices independently from other family members. Although it was reported that men would finally decide whether to join CBHI or not, our data also shows that

when male household-heads provided feedback on choices women made in CHAT 1, most men generally agreed. On the other hand, when women had difficulty explaining their CHAT choices to their family or getting agreement, they were supported by the NGO staff to convince family members. Clearly, different women commanded different degree of authority and empowerment within their household. Baily (2014) reported that women needed male guardian consent to participate in SHG activities, and the expectation of male villagers’ that such participation would benefit both the women themselves and their families and communities.

Within SHGs, there are issues of power relations. Although our groups are usually quite homogenous, some differences may exist in education and socio-economic status. Each group elected a president, secretary and treasurer. It was reported in our interviews that the opinion of these women was often followed because they were trusted. At the same time, CHAT facilitators and participants stressed that the opinion of all women was considered when reaching consensus. A similar process was observed by Seshagiri et al. (2012) when small groups were asked to solve specific tasks (in a village in the Indian Karnataka state): the more educated members and those that were more articulate had more influence solving the tasks, who nonetheless tried to actively engage “weaker” members in the activity. We conclude that although more educated SHG members had an influence on the group’s decisions in our study, they did not hijack the decision-making process, as decisions were taken with consent of all group members. On the whole, interactive and continuous engagement in three rounds of CHAT exercise and exposure to insurance education have provided the SHG women an opportunity to be socially empowered.

Limitations of the study The small number of in-depth interviews conducted does not allow to claim that they were generally representative; we therefore also triangulated this source with the findings from the CHAT exercises and exit questionnaires. The interviews were conducted by researchers employed by the partner NGOs; this might have affected respondents’ comments on the CHAT process facilitated by these NGOs. On the other hand, respondents’ might have been more responsive during the interviews, because they were familiar with the local researchers and the NGO.

Most of the SHGs in which we conducted CHAT have been operating for years, and are used to collaborating and taking decisions in group settings. This could have facilitated the CHAT process.

A.5 Conclusions and policy ramifications

This study offers clear empirical evidence that people living in rural informal settings, some of whom are illiterate and innumerate and with no prior experience with health insurance, and live in rural informal settings can reach consensus on the choice of their

health insurance benefit-package. The subject matter is quite complex, but when presented in a game-like way, without compromising the actuarial accuracy, people can select packages within their willingness to pay and their perceived priorities for health care coverage. The evidence suggests that group consensus can be harnessed to enhance demand for health microinsurance in the informal economy. Moreover, the people chose the benefit-packages with a clear intention that as many members of their community as possible should benefit. This suggests that people are sensitive to enhancing equity within the group and that CHAT enables them to make inclusive choices. The packages that were chosen by the three groups were in fact implemented in the three locations in the form of CBHIs that captured solvent demand, and created the supply of health insurance, neither of which existed previously. The question might be raised whether it is necessary to conduct CHAT exercises and consensus building in each village separately. The evidence from our field experiments points that when a population group is introduced to the concept of CBHI for the first time, following this process is important as it creates the basic sense of empowerment and relevance that cannot be achieved in another way. However, in a region where CBHI has been introduced and is perceived as successful, neighboring villages may well wish to join the same scheme without elaborate preparations. Such villages would be involved in the entire process, along with others, when major changes in the benefit-package are contemplated.

It is noted that harnessing the collective action in a manner described in this article did not occur spontaneously. It required catalytic facilitation by devoted and knowledgeable persons that guide the process at village level from inception, who first collected relevant information in the field, translated it to actuarial estimates of premiums for different benefits, and then guided the community discussions. This process can be replicated anywhere in the informal sector, provided that the similar catalytic actor / change-maker can lead communities to assume the role of market-makers of their own health insurance.

TABLE A.5: Socioeconomic and demographic profile of the CHAT participants.
Source: Own illustration.

	Pratapgarh	Kanpur Dehat	Vaishali	All sites
Average age, years (SEM)	41 (0.59)	39 (0.65)	36 (0.50)	39 (0.33)
Married, %	88.0	86.4	94.1	90.0
Hindu, %	86.6	92.9	97.9	92.8
Scheduled caste and scheduled tribe, %	41.5	26.0	41.8	37.5
Average years of education (SEM)	2.2 (0.19)	3.5 (0.22)	2.3 (0.16)	2.6 (0.11)
Self-employed, %	15.5	19.0	13.9	15.8
Wage employment, %	19.0	6.0	14.1	13.5
Average monthly per capita expenditure, INR (SEM)	1,147 (30.45)	1,776 (71.02)	1,377 (43.47)	1,408 (28.53)
N	432	352	525	1,309

Abbreviations: CHAT, Choosing Healthplans All Together; INR, Indian Rupee; SEM, standard error of the mean.

TABLE A.6: Computation of coefficient of unalikeability, 1st choice.
Source: Own illustration.

Location	Session	Number of participants who played CHAT	Total number of possible pairs	Number of pairs in which observations differed	Coefficient of unalikeability
Pratapgarh	CHAT 1	383	73,153	34,238	0.468
	CHAT 2	510	129,795	22,157	0.171
	CHAT 3	510	129,795	0	0.000
Kanpur Dehat	CHAT 1	298	44,253	297	0.007
	CHAT 2	332	54,946	0	0.000
	CHAT 3	332	54,946	0	0.000
Vaishali	CHAT 1	536	143,380	109,176	0.761
	CHAT 2	659	216,811	136,723	0.631
	CHAT 3	659	216,811	58,824	0.271

TABLE A.7: Computation of coefficient of unalikeability, 2nd choice.
Source: Own illustration.

Location	Session	Number of participants who played CHAT	Total number of possible pairs	Number of pairs in which observations differed	Coefficient of unalikeability
Pratapgarh	CHAT 1	383	73,153	49,688	0.679
	CHAT 2	510	129,795	40,581	0.313
	CHAT 3	510	129,795	5,976	0.046
Kanpur Dehat	CHAT 1	298	44,253	5,925	0.134
	CHAT 2	332	54,946	9,807	0.178
	CHAT 3	332	54,946	0	0.000
Vaishali	CHAT 1	536	143,380	103,817	0.724
	CHAT 2	659	216,811	158,852	0.733
	CHAT 3	659	216,811	134,506	0.620

Appendix B

Clients’ perceived value in health microinsurance—some insights from community-based health insurance in rural northern India

This study on the value of the HMI schemes for insured clients confirms that access to care and its quality are essential components of value of the schemes studied in this thesis, as is the protection for minor illnesses.

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Authors’ contributions: KR analyzed the data and drafted the manuscript. CG participated in initial steps of data analysis. CG and PP helped in drafting the manuscript. PP managed the data collection and provided oversight for study implementation. All authors contributed to the design of the study and read and approved the final manuscript.

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B.1 Introduction

Despite the potential benefits that Health Microinsurance (HMI) could bring to its clients, enrollment figures are still low for many voluntary schemes (Matul et al., 2013). When obligatory, e.g. by being offered in a bundle with other microfinance products, it can decrease the usage of these latter products, as pointed out by Banerjee et al. (2014). Banerjee et al. hence concluded for HMI that “even those who would need it are not willing to sign up for it, potentially at the cost of losing a valuable resource.” For sustainability of the schemes, it is important to understand what motivates households

to enroll in HMI schemes as well as factors that make them remain in the scheme or drop out. In a systematic review on the enrollment of voluntary and community-based health insurance programs, Panda et al. (2015b) find that enrollment decisions are associated with factors from both supply and demand side, while for renewal decisions, supply side factors (e.g., quality of healthcare) are more important. The results of their systematic review are restricted by the fact that only six studies are available which examine renewal for community-based health insurance, showing the necessity for more studies in this area. Looking at microinsurance in general, Matul et al. (2013) find in their systematic review on demand that trust, liquidity constraints, the quality of the client value proposition and behavioral constraints are important determinants for enrollment while increasing understanding of insurance, improving client value proposition and overcoming behavioral constraints are major determinants for renewal.

Against the background of low enrollment and renewal rates of microinsurance products among the poor, the value that clients place on such products has recently become of increasing interest in research (e.g., Giesbert and Steiner (2015); Matul et al. (2012); Magnoni and Zimmerman (2011a); McCord et al. (2012a); McGuinness (2011); Nghiem and Duong (2012)). However, evidence on client value of HMI is limited so far (Magnoni and Zimmerman, 2011b).

Most existing studies follow a multi-dimensional approach, understanding perceived value not as a mere trade-off between benefits and costs for the client, but also taking into account affective aspects.¹ Giesbert and Steiner (2015) used qualitative focus group discussions to study these aspects of micro life insurance in Ghana. They identified three dimensions of perceived value for microinsurance: functional (costs and quality), emotional and social. Magnoni and Zimmerman (2011b) separated client value into three broad categories, i.e., “expected”, “financial”, and “service” value. Matul et al. (2012) developed a client value assessment tool called “PACE” which looks at aspects of product and process design, demand, product use and impact. McGuinness (2011) focused on dimensions like financial protection, access to health care, and improved health awareness for understanding perceived value for microinsurance.

The majority of studies examining client value of microinsurance are designed as cross-sectional studies, neglecting possible dynamics and developments over time. Giesbert and Steiner (2015) stressed the possibility that the value that clients perceive from a microinsurance scheme might change based on the experiences they have with it. As Sanchez et al. (2006) put it in the context of marketing, perceived value can be understood as a “dynamic variable, experienced before purchase, at the moment of purchase, at the time of use and after use”, which can vary between customers, cultures, and times.

¹This multi-dimensional approach of perceived client value has been adopted from marketing research. See e.g. Sanchez et al. (2006).

If we consider client value as a subjective, dynamic and context-dependent concept shaped by experiences with the respective product (Giesbert and Steiner, 2015), we cannot use “objective” methodological approaches for its assessment (Morsink and Geurts, 2011). Client value is not the value for the client, but the value from the point of view of the client. Therefore, we consider a qualitative longitudinal approach to be best suited to examine subjective and context-dependent factors as well as their dynamics.

This paper presents results from qualitative, longitudinal case studies undertaken in three sites in rural northern India. The study investigates the value that clients perceived from newly implemented Community-Based Health Insurance (CBHI) schemes. Due to a step-wedge enrollment approach (caused by a randomized controlled trial run parallel to the case studies) and an eighteen-month period of data collection, we were able to include data collected before and after the first purchase for participants. The objective of the study is to provide insight into the dynamics of clients' perceived value of the scheme, in particular changes between the pre-purchase and post-purchase phases. We aim to contribute to a comprehensive understanding of perceived value in health microinsurance, in particular in CBHI, and to formulate policy recommendations on how to improve the perceived value of CBHI products. Since perceived value is an important component of purchasing decisions, improving it will facilitate higher enrollment and renewal rates.

B.2 Research context

The study took place at three sites in rural northern India and included three community-based health insurance schemes. One study site is located in Vaishali district (state of Bihar), while the other two sites are located in Kanpur Dehat district and Pratapgarh district (both state of Uttar Pradesh). The CBHI schemes were “docked” to existing microcredit Self-Help Groups (SHGs) with only female members. CBHI was offered exclusively to these members and their households. These potential enrollees (i.e. the self-help group members) selected their preferred benefit packages, via a so-called “CHAT” process (Choosing Healthplans All Together) (Dror et al., 2014), and the most popular package in each site was then offered for purchase.

The schemes began in spring/summer 2011 at all three sites. The original benefit packages were adapted in 2012 and 2013 to respond to the changing preferences of the insured (see Tables in Appendix D).² For the scheme in the Kanpur Dehat district, outpatient care provided by local, formally unqualified medical practitioners and one qualified doctor as well as hospitalization (24 hours or more) were included in all three years, among other benefits. For the scheme in the Pratapgarh district, hospitalization

²At the time of insurance years given in the table, one US \$ equaled about 65 Indian Rupees (Rs.). Taking into account 2005 purchasing power parity, one \$ (Purchasing Power Parity (PPP)) equaled Rs. 4.15.

(24 hours or more) was included in all three years, while outpatient care provided by local unqualified medical practitioners was included from 2012 onwards. For the scheme in the Vaishali district, hospitalization was not included, while outpatient care provided by local unqualified medical practitioners was included in all three years, among other benefits.

Since a randomized controlled trial took place simultaneously, a step-wedge approach was used for offering the microinsurance schemes to the self-help group members and their households.³ Each year, insurance was newly offered to one third of the self-help groups. After a period of three years, every self-help group member and her household had been offered insurance. Overall, 1436 households joined the CBHI schemes in the three years from 2011-2013 (enrollment rate: 39%), and 621 households dropped out (dropout rate: 43%). At the individual level during the same period, 4,665 individuals joined the CBHI schemes (enrollment rate: 22%), and 2,189 dropped out (dropout rate: 47%).

A premium was paid in advance for the whole insurance year. The insurance scheme was partly managed by the community with the help of local non-governmental organizations NGOs. A claims committee consisting of representatives appointed by the community decided on the legitimacy of claims and the amount of reimbursements. Other community members were engaged in awareness activities.

B.3 Methods

Our case study approach was inspired by the “financial diaries” developed by Collins et al. (2009) for their study on financial behavior of the poor. Analogous to their interest in financial management, we intended to get a detailed understanding of health-related incidences, behaviors and decisions within our study households especially with regard to the health microinsurance package offered to them. By visiting the households about every four months over an 18-month period (February 2012 to August 2013, i.e., five visits per household), we gained a deeper understanding of every single household and the changes occurring over time.

Our study followed households through different insurance statuses (pre-purchase and post-purchase). These qualitative, longitudinal case studies allow us to look in detail at different aspects of perceived value, such as context and changes in perception. Based on the purposive sampling strategies described by Patton (2002), we used a mixed sampling strategy applying a combination of stratified purposeful sampling and purposeful random sampling. In a first step, we applied stratified purposeful sampling by including households from different poverty strata and insurance statuses into our study. To identify a group of potential respondents from all potential households (1,039 households

³See Doyle et al. (2011) for more details on the study design of the randomized controlled trial.

in the Kanpur Dehat district, 1,284 households in the Pratapgarh district, and 1,363 households in the Vaishali district), we grouped the households at each site into three poverty strata (extreme poverty, poverty and non-poverty).⁴ In a second step, we then chose 20 households at random from each stratum, following a purposeful random sampling approach. In a third step, we again used stratified purposeful sampling by selecting both households, who had decided to purchase and decided not to purchase insurance in the first year when it was offered (2011) as well as households to which insurance had not yet been offered, due to the step-wedge approach. We chose 14 households at each study site, summing up to a total of 42 for all three sites. One of these households dropped out of the study, however (Vaishali district). With five rounds of interviews planned for each household, this added to a total of 205 interviews which seemed to be a good compromise between a manageable data amount and a reasonable sample size, in particular since we did not aim for statistical representativeness with the data.⁵

Every four months, we visited the households and asked them about their family and financial situation, illness episodes and treatment of these illnesses as well as management of expenditures for treatment, and if applicable experience with the insurance. There was particular focus on how the households used the services offered by the microinsurance schemes (as well as any corresponding problems). Our meetings were usually with the female self-help group members, but occasionally we also talked to their husbands or other household members. Participation in the study was voluntary and confidential, based on informed consent. The frequent visits enabled us to develop a bond of trust, which made households become more willing to share private information.

We used semi-standardized questionnaires. Interviews were conducted by a qualitative researcher from the Micro Insurance Academy (MIA) in New Delhi (India) together with a local researcher from the local partner organizations. Usually, a local facilitator well-acquainted with the household was also present. Interviews were conducted in Hindi—with clarifications in the local dialect where necessary—and audio-recorded. Additionally, the researchers noted their observations after interviews. Recordings were

⁴The grouping of the households into three poverty strata was based on household consumption reported in a household survey from 2010. The category “extreme poverty” refers to an average consumption of \$ 1.25 and below per person per day (purchasing power parity (PPP)), “poverty” to an average consumption between \$ 1.25 and \$ 2 (PPP), and “non-poverty” to an average consumption of \$ 2 (PPP) and more.

⁵Although sometimes sample sizes of at least 20 are suggested for case studies (e.g. Creswell (2009)), many researchers refrain from giving minimum or maximum numbers for sample sizes in qualitative case studies and there is a wide range in that in practice. Moreover, as Morse (2000) points out, sample size depends on several factors like “the quality of data, the scope of the study, the nature of the topic, the amount of useful information obtained from each participant, the number of interviews per participant, the use of shadowed data, and the qualitative method and study design used.” This holds also true for the skill of the interviewer which affects the quality of data (Morse (2008)) and therewith indirectly the required sample size (Guest et al. (2006)). In a review article, Guetterman (2015) reports sample sizes ranging from two to 420 for case studies in the health sciences. Collins et al. (2009) used similar sample sizes as we did for their “portfolios of the poor” in India and Bangladesh, namely samples of 48 and 42, respectively, arguing that they “wanted to focus on getting a depth of information on a single household rather than a breadth across many”

transcribed and translated into English. Based on the information from previous interview rounds, we personalized the tools for the respective next round of data collection to follow-up on interesting issues.

Based on Stake (1995), our analysis of the data consisted of case descriptions and the analysis of themes and patterns, both within-case and across-case. To ensure that we capture patterns across households without neglecting the specific context of the individual case, we used matrices for easy comparison, as have also been applied in other case studies (Ayres et al., 2003; Knafl and Ayres, 1996). This qualitative approach enabled us to extract what were the most important aspects of CBHI and its effects from the point of view of our respondents, i.e., the dimensions of the CBHI's value as perceived by their clients.

B.4 Findings

As explained earlier, we aim to go beyond mere identification of the various aspects of clients' perceived value and also explore their changes over time. This is mainly based on research conducted by Sanchez et al. (2006), who understands perceived value as a dynamic variable. Therefore, the findings are organized into two sections, one presenting findings pointing to the pre-purchase phase and one with respect to the post-purchase phase (i.e., after having purchased the CBHI product for the first time). Both sections are separated into sub-sections, presenting results on the different aspects of the clients' perceived value of the CBHI schemes.

For the purpose of this study, 33 households enrolled for a minimum of one year over the course of the study have been included. Eight households that never enrolled in the scheme are not included in the analysis. Findings belonging to different persons of the same household are subsumed under the latter since the household is treated as the unit of analysis in this study. For the quotes, it is indicated whether they come from male or female household members, however.

B.4.1 Pre-purchase phase

For pre-purchase phase, we identified four dimensions of the clients' perceived value: financial aspects, quality of healthcare services, access to healthcare, and peace of mind. Applying the value dimensions of Giesbert and Steiner (2015), the first three aspects can be assigned to a functional dimension, while peace of mind corresponds to an emotional dimension.

B.4.1.1 Financial aspects

In the pre-purchase phase, 13 households see saving money as a value of the CBHI scheme. This is stated for their general situation or for particular minor illnesses that frequently occur (e.g., cough or cold).

“I like it that the annual expenditures for the treatment used to be Rs. 2,000-30,00 earlier and now [with CBHI] the treatment for the complete year is made in Rs. 200.” (Female SHG member, Kanpur Dehat site)

Five households in the pre-purchase phase see value in CBHI as a financial protection tool in case of severe illness.

“The expectation was that if we would fall ill, then we would get the whole of the expenses reimbursed.” (Female SHG member, Kanpur Dehat site)

“It is a benefit. There is a long life ahead and sometime someone will fall ill. (...) If there is an illness then the expenditures will be reimbursed [by CBHI]. One will not have to take a loan.” (Female SHG member, Pratapgarh site)

B.4.1.2 Quality of health care services

The quality of services provided under the CBHI scheme is perceived as an aspect of value in the pre-purchase phase by four households. These households expect “quality treatment” or “to get cured (...) through a reliable doctor giving good treatment”.

“The doctor [medical practitioner associated with CBHI] is good and reliable, and we will get cured there.” (Male household head, Kanpur Dehat site)

“The change is that with insurance, good medicines are given.” (Female SHG member, Pratapgarh site)

B.4.1.3 Access to health care

About 17 households see value in improved access to healthcare by CBHI in the pre-purchase phase. While for some households, special value lies in access to medicines and treatment of minor illnesses, others see particular benefit in getting tests done or get severe illnesses treated in hospital.

“That is the reason why we have got the insurance: (...) If we don't have money in the house and somebody gets ill, we can go to the doctor (...) and will get the medicines from there.” (Female SHG member, Pratapgarh site)

“The expectation was that in being associated with it [CBHI], then if there is an illness then we can take medicines for Rs. 25-30 for that and if there will be cold and cough then we will take it.” (Female SHG member, Vaishali district)

Access to healthcare is a value that is also mirrored in the household's selection strategies of whom to insure. Very often, the household members who have fallen ill most often in the past are insured, since they are the ones most likely to need health care services in the future.

“We associate the ones who get ill more often. (...) Why associate those who do not fall ill?” (Male household head, Kanpur Dehat site)

B.4.1.4 Peace of mind

Eleven households expect peace of mind by the CBHI schemes in the pre-purchase phase. For most of them, the main value lies in the fact that with the health microinsurance, they have access to health care, without paying out-of-pocket. Also, having immediate access to healthcare and no need to borrow money or sell assets in case of illness were mentioned as important aspects for why they feel peace of mind.

“The benefit is (...) that we neither have to sell the wheat nor the hay. The only thing that we have to do is to go to the doctor (...). We do not have to worry for the money.” (Female SHG member, Kanpur Dehat site)

“By just giving two hundred rupees annually, there are no worries. Whether you have the money or not, you'll get the medicines.” (Female SHG member, Kanpur Dehat site)

B.4.2 Post-purchase phase

For the post-purchase phase, while we identified similar responses to some of the aspects demonstrated in the pre-purchase phase, we also identified additional aspects of the perceived value. With respect to the functional dimension, we could identify that clients perceive value in financial aspects, quality of health care services, and access to healthcare, just as they do in the pre-purchase phase. For the emotional dimension,

besides the aspect of peace of mind that was also present in the pre-purchase phase, we could identify the reliability of service and processes in scheme operations as being an additional aspect that we could not identify in the pre-purchase phase. Another additional dimension that was found in the post-purchase phase was the clients' value associated with social cohesion that can be assigned to the social dimension of client value.

B.4.2.1 Financial aspects

Financial value aspects are manifold in the post-purchase phase. In total, about 15 households perceived financial value from CBHI. Nine out of these stated that they save money for outpatient treatment through CBHI.

“Earlier I had severe health problems but since the start of CBHI, I do not have any such problem. Cold, cough, fever (...) I used to spend a lot for this (...). I think at least Rs. 10,000 would have been spent [in a year]. (...) Now, everything is going on smoothly—we do not spend for the illnesses.”
(Female SHG member, Kanpur Dehat site)

Ten households perceive value in CBHI with respect to inpatient care and tests in the post-purchase phase.⁶ Out of these, only two households did not experience such an event of illness and corresponding financial benefits during our study period while being insured. For the other eight households, household members were hospitalized (for more than 24 hours) or needed medical test, and parts of these expenditures were reimbursed by CBHI. These expenditures in most cases were considerably higher than the premium the households paid. However, for most reimbursements, the amount claimed—and therewith the expenditures of the households for the treatment—was higher than the amount reimbursed. In some cases, this led to dissatisfaction and mixed feelings although households nevertheless perceived value in CBHI for severe illnesses.

“It was good that I got Rs. 500, but it was bad that I worked for so many days for insurance and I did not even get help of Rs. 2,000 [i.e. the whole expenditures].” (Female SHG member, Vaishali site)

Seven households feel that CBHI was a “loss” or “waste of money”. In particular, if none of the insured household members falls ill, this view is present.

⁶The sum of households perceiving general financial value, financial value for outpatient services and financial value for inpatient services/tests is higher than the total number of 15 households since some households state value perception for both outpatient and inpatient services (or tests) and are hence double-counted.

“Loss is in the case that one does not fall ill, which is a good thing, in itself. But if one does not fall ill, then the [premium] money is wasted.” (Female SHG member, Pratapgarh site)

Almost all of these households have never made a claim for hospitalization or tests. Although many of them used outpatient services provided by the scheme, they feel that they have “no benefit” from insurance. Among them, however, is also one household which has received reimbursements but nevertheless perceives CBHI as a loss and thus dropped out of the scheme:

“Being associated with it I was incurring loss. (...) This was because in any illness Rs. 5,000-10,000 is spent but I only got Rs. 500.” (Female SHG member, Vaishali site)

As stated in the quote, for this household, reimbursement was relatively low and the household did not perceive financial value.

B.4.2.2 Quality of health care services

For 22 households, the quality of services provided by the microinsurance schemes constitutes an important aspect of value. Although the households agree about the importance of this aspect, their opinions on whether the CBHI scheme is able to supply the required quality of services or not are manifold.

For this, it has to be taken into account that, for outpatient care, selected local medical practitioners (as well as one formally qualified MBBS doctor at Kanpur Dehat site) were associated with the scheme whose services could be used by the insured for minor illnesses for free.⁷ In contrast to this, for inpatient care and tests, expenditures needed to be borne by the patients first and were then reimbursed by the CBHI.

Six households are satisfied with the services provided by the local medical practitioners (and one MBBS doctor) associated with the CBHI schemes. They hence see value in the quality of health care services provided.

“He is a good doctor. (...) Whenever you call him, he comes.” (Male household head, Kanpur Dehat site)

However, nine households had expected a good quality of services but were not satisfied with it.

⁷For Vaishali site, however, inpatient care was not included in the benefit package.

“We didn’t go [to the CBHI practitioner] as we didn’t get relief. We get some relief for a few days, but then after that there is no relief.” (Female SHG member, Kanpur Dehat site)

“Neither he [the local medical practitioner] took any money nor was there any relief; I mean he [the husband] didn’t get well.” (Female SHG member, Vaishali site)

Some feel restricted in their choice of medical providers, while others feel that for insured patients inferior treatment is provided as opposed to those patients paying out of pocket.

“If we have insurance then they [the local doctors associated with CBHI] say that there is no fever, and due to insurance, we could not get the treatment from somewhere else. This time [after drop out of CBHI] two kids fell ill, and quickly (...) they went and got the treatment done in Rs. 20, and they got alright.” (Female SHG member, Kanpur Dehat site)

“As I was not getting good medicines, I did not take my [insurance] card along.” (Female SHG member, Pratapgarh site)

Seven households are partially satisfied with the quality of care provided. For these, dissatisfaction is mostly caused by the type and dose of medicines given by the practitioners. Many households perceive the medicine as low quality and the dose as too little.

“They [the practitioners associated with CBHI] were not able to give good medicines.” (Female SHG member, Pratapgarh site)

“He [insurance doctor] used to give medicines, but no benefit used to be there.” (Male household head, Vaishali site)

“They [the CBHI-associated practitioners] are giving less. (...) [T]wo doses of medicine are brought and consumed in one day. Every day you need to go for medicine.” (Male household head, Pratapgarh site)

B.4.2.3 Access to health care

For 25 households access to health care is perceived as a value. Many households state that it is important for them to have immediate access to health care even without money as has been described in the passage on peace of mind already. This embraces two aspects: prompt access to health care, as there is no need to provide money in advance, and better financial access.

“With insurance, if one gets fever then we immediately refer to the doctor. If one doesn't have insurance then one will need to sit at home [without getting treatment].” (Male household head, Kanpur Dehat site)

“We have joined only for benefit (...) so that the medicines for the children are done.” (Female household member (daughter-in-law), Pratapgarh site)

However, the CBHI schemes under study do not always meet the demands of the households with respect to access to care: many of our study households feel restricted in their access to health care, since only selected local practitioners are associated with the health insurance scheme and provision of medicines by those practitioners is restricted in type and dose.

“We don't go there as he gives two doses of medicine and not more than that. And we don't get any benefit; we get it [the medicine] a day and the next day we won't and it would be out of stock. So we didn't get any benefit from that.” (Female SHG member, Pratapgarh site)

If households prefer other medical practitioners for outpatient care, they have to pay in private for this, which makes them perceive that the scheme does not have great value for them.

“Although associated with the insurance, we had to get the treatment done from other medical practitioners, money got spent.” (Female SHG member, Vaishali site)

Many households also state that the local practitioners associated with the schemes are able to treat minor illnesses only. For more severe cases, the households have to visit other, more qualified practitioners and pay in private for this.

“Improvement is there for minor illnesses. And if [the illness] gets more [severe], then we go out [to other medical practitioners] to get the treatment done.” (Female SHG member, Vaishali site)

Furthermore, physical access is sometimes restricted, due to long traveling distances to the associated practitioners or long waiting times and non-availability of the practitioners.

“How would we go that far in the night? (...) The time when the insurance started, all the [SHG] members said that if the doctor is from the village, then it would be fine and if the doctor is 2-3 km away, then it causes trouble.

Now if some problem comes up, then a person can't reach there so quickly. (...) That is why we get troubled." (Male household head, Kanpur Dehat site)

"He [the insurance doctor] told us to come on Wednesday at around 11 o'clock. So we reached there at 10 o'clock. We left at 3 o'clock [without having consulted the doctor]. As we stepped out, the doctor came." (Male household head, Kanpur Dehat site)

B.4.2.4 Peace of mind

17 households expressed that they have "peace of mind" with CBHI in the post-purchase phase. Similar to the pre-purchase phase, this embraces manifold aspects. Numerous households point to the fact that they usually do not have money for health care expenditure the whole year and see value in having paid once for CBHI and getting access to treatment for the rest of the year. Others focus more on the aspect that they can now access health care "even without money" and do not need to worry about the provision of money for this, while others feel peace of mind since CBHI offers a first contact point in case of emergency for them. Also, some perceive that CBHI supersedes the need to borrow for health care expenditures (both formally and informally) and feel peace of mind because of this.

"We have peace due to this insurance. (...) Whoever fell ill, we quickly got the treatment. And if this insurance won't be there, then we have to go here and there [to collect money] at the time of illness. Now [with insurance], we don't have any trouble whether we are ill today or tomorrow." (Male household head, Kanpur Dehat site)

With the exception of two households, all 17 of these households feel peace of mind with respect to outpatient services, first aid and medicines.

"I am content that I can call up the doctor anytime to get medicines for cough, cold or fever." (Female SHG member, Vaishali site)

Nine of the 17 households expressed peace of mind with regard to inpatient services and tests.⁸ Five out of these 17 households, experienced a reimbursement for hospitalization or tests, i.e., protection from higher expenditures. Interestingly, other six households that received a reimbursement for such expenditures did not state peace of mind as a

⁸The sum of households feeling peace of mind for inpatient and outpatient services is higher than the total number of 17 households since some households feel peace of mind both for outpatient and inpatient services (or tests) and are therefore double-counted.

perceived value, although CBHI had protected them from higher health care expenditures. Possible reasons for this might be that CBHI mostly covers only a part of the costs involved and that there exist caps or limits at all sites for reimbursement. Hence households with higher health care expenditures did receive some financial protection through CBHI, but at the same time experienced that this protection was not complete because they still had to bear a big part of these health care expenditures themselves.

“It cost us Rs. 5000. What to do with that Rs. 600 [the money reimbursed]?”
(Female SHG member, Vaishali site)

In one case, even the opposite of peace of mind was perceived by the household. Before enrollment, the female SHG member of the household never fell ill. But just after enrollment, she fell severely ill and the household had to spend more than Rs. 15,000 for health care expenditures. In the year after, the household dropped out of the scheme, since they thought that CBHI had caused the illness.

“Once when I got the insurance, then I fell ill. Before this, I never used to fall ill. I left it [the insurance scheme] then.” (Female SHG member, Vaishali site)

B.4.2.5 Reliability of service and processes in scheme operations

In the post-purchase phase, the reliability of service within the scheme became of value to some clients. Since clients pay the premium in advance, it is important for them that they can rely on what has been agreed upon. In our study, this holds particularly true for reimbursements for health care expenditures.

For the households under study, the majority perceived the scheme and its services as reliable.

“There is no problem in expectation, per month medicines for Rs. 20 is given and in between the tests would be done, ultrasound would be done or admittance [in hospital] would be done (...); all this facility is being provided. So in this there is no problem.” (Female SHG member, Vaishali site)

However, some households claiming money for health care expenditures complained that the reimbursement took too long—sometimes several months—or that only part of the money was reimbursed.

“My father’s operation that took place, we were supposed to get a reimbursement of Rs. 1600 for that. I have not gotten that amount till now. Yes, I have trouble with that. (...) The operation took place three months ago.” (Male household head, Pratapgarh site)

“I was hospitalized for 2 days and the bill was over Rs. 5,000. Then we went there [to the CBHI’s administrative unit] and they gave a check for around Rs. 2,400. (...) How can we be satisfied?” (Adult son of the household, Pratapgarh site)

For the households, it is not easy to predict how long a claim is being processed and why sometimes less than the full amount is reimbursed, even though this might be due to the insurance scheme’s rules. This sometimes causes trouble for the insured if they have borrowed the money for the health care expenditures from someone else and need to pay it back soon:

“From the place where I had borrowed a loan [for expenditures related to inpatient care] most of the people started asking for [their] money. I had borrowed so much money, so I would have [needed] the reimbursement earlier. But it was postponed too long, for a month.” (Female SHG member, Pratapgarh site)

B.4.2.6 Social cohesion

Since the CBHI scheme is “docked” onto microcredit self-help groups, the scheme may have effects on the group as well. Some households under study perceive these “side effects” as a value of the scheme (either positive or negative).

On the one hand, some households perceive value in the solidarity that is present in CBHI among the self-help group members.

“All other [SHG members] took benefit from it like X-ray, blood test. (...) I have not used [the services provided by CBHI] but others have, so that is good.” (Female SHG member, Vaishali site)

On the other hand, some households experience trouble and arguments in their groups caused by the microinsurance schemes, as some members are in favor of it and some are against it.⁹ This sometimes even leads to the group splitting up.

“They [some SHG members] will not get insurance. (...) 4-5 people have left [the SHG because of this].” (Female SHG member, Kanpur Dehat site)

⁹The initial planning of the CBHI schemes included en-bloc enrollment of the whole SHG. However, this was abandoned after experiencing diverse opinions in some groups.

B.5 Discussion

Our study shows that clients' perceived value of health microinsurance is a complex construct. Clients not only value the functional benefits of microinsurance, but they also perceive social and emotional benefits (e.g., peace of mind or reliability of the scheme). This is in accordance with the findings from Giesbert and Steiner (2015), who also identified functional, emotional and social dimensions of perceived value for a life microinsurance product in Ghana. Our findings complement earlier studies of Matul et al. (2012) and Magnoni and Zimmerman (2011a) who also stress the multidimensionality of perceived client value in microinsurance.

We identified dynamic changes of perceived value, in particular a differentiation of perceived value by the clients in the post-purchase phase. As the results show, perceptions on aspects of healthcare quality provided by the scheme and access to this health care became more prominent in the post-purchase phase when households already had experience with these services. Moreover, additional aspects of the emotional and social dimensions emerge in this phase. This is true for the reliability of services rendered in the scheme, like payment modalities of reimbursements, as well as for social dynamics within the self-help groups. The former in particular confirms the findings of Panda et al. (2015b) that supply-side factors are more important for renewal. Financial aspects are present for value creation both in the pre-purchase and post-purchase phases. The differentiation of value as well as the emergence of additional aspects might also be a possible explanation for the relatively high drop-out rates in the scheme of 43% on a household basis and 47% on an individual basis.

When looking in detail at the financial aspects, access to health care, quality of health care and peace of mind, we can draw the conclusion that households value insurance services for minor illnesses over risk protection for severe cases. From our data, it seems that it is more the day to day fight with illnesses and their consequences that the households worry about than the consequences of "most striking but unlikely-to-happen" health events which health microinsurance was originally meant to protect against.

There are many potential reasons to explain this phenomenon. Firstly, there often exist sufficient informal risk protection mechanisms that come to play when severe health care events occur with high out-of-pocket expenditures. In particular, in our study, the participating households all belonged to microcredit self-help groups constituting a social network of risk protection. Secondly, the microinsurance products under study were combinations of products for outpatient and inpatient care (and also included other services like tests or transport). Experiences with inpatient care were by nature less than experiences with outpatient care which might make the insured value the latter more. Thirdly, medical expenditures were not fully covered under the scheme, as thresholds and caps exist. The latter in particular could be one reason that households did not feel protected from the financial consequences of severe cases of illness since expenditures for

hospital bills often exceeded the coverage given by the insurance scheme. With respect to enrollment in microinsurance products, several authors find that risk-averse households insure themselves less than risk-loving households, as opposed to what utility theory would predict (e.g., Giné et al. (2008); Cole et al. (2013); Ito and Kono (2010)). A proposed explanation for this “inverse effect” is that households perceive the investment in microinsurance as a risk in itself because it includes the risk of loss if no claim is paid out (e.g., Karlan and Murdoch (2009)). Our findings confirm this explanation of avoidance of insecurity, as study participants value benefits with secure or likely payouts (i.e., payouts or services for outpatient care) more than insecure or unlikely payouts (i.e., payouts for inpatient care) and perceive insurance as a loss in case they do not fall ill and thus do not make use of its services.

The results presented here are from a qualitative longitudinal case study with 33 households in three districts in northern rural India. The results cannot automatically be generalized to the entirety of the districts, regions and states or even other countries. But they show some aspects of clients' reasons to value particular benefits of health microinsurance over others and how perceptions and value assessments change over time. More studies, both qualitative and quantitative, that examine these aspects from the clients' perspective are necessary to find out whether our results are generalizable to other regions, countries or types of households. Also, the design of the scheme as community-based health insurance causes restrictions for generalizability. This holds in particular for the findings related to the social dimension which mainly refer to the microcredit self-help groups which have been used as basic organization units for the CBHI schemes. Moreover, due to the combination of covering low-probability and high-probability health care events, the results may not be generalizable to insurance schemes only covering one of these products. Other aspects, such as the functional aspects as well as the aspect of peace of mind, might be more easily transferable to other schemes. We therefore think that our findings can be of use in examining the perceived value of those as well.

B.6 Conclusions

This study has enabled us to expand existing knowledge of the perceived value of health microinsurance in general and of CBHI in particular. To our knowledge, it is the first study in the context of microinsurance that examines perceived value at different points in time, i.e., pre-purchase and post-purchase. It therefore contributes novel knowledge to the dynamics of perceived value in health microinsurance.

We show that the perceived value of the CBHI scheme is exposed to dynamic factors from the pre-purchase to the post-purchase phase. As these are factors which can hardly be assessed by the clients before purchase, e.g., reimbursement times, it is important

for the implementing parties and donor organizations to keep track of this while the scheme is running. Also, with the knowledge of which aspects might gain value over time, implementing parties can adapt the scheme's features accordingly. This holds especially true for the aspects of access to and quality of health care services where dynamics between expectations in the pre-purchase phase and their fulfillment (or lack thereof) in the post-purchase phase need to be considered. Besides mere financial and service related factors, social and emotional dimensions also need to be considered before, during and after scheme implementation. As the study has shown, short reimbursement periods constitute a value for the clients as well as reliability of service and processes in scheme operations.

Based on this, a good balance must be struck between attractive premiums and the factors described as creating value for the clients. This is a challenging task for all health microinsurance schemes, but even more so for those that are unsubsidized.

Appendix C

C.1 Appraisal of studies included into systematic review based on the CASP tool

Kennedy A. Alatinga and Nicholas Fielmua. The impact of mutual health insurance scheme on access and quality of health care in northern Ghana: the case of Kassena-Nankana East scheme. *Journal of Sustainable Development*, 4(5):125-138, 2011..

Was there a clear statement of the aims of the research? Yes: “this paper seeks to examine the impact of these novel schemes on the beneficiaries in terms of financial protection against economic cost of illness and access to quality health care services” (p. 126).

Is a qualitative methodology appropriate? Yes; together with a quantitative approach, it is appropriate for triangulation purposes.

Was the research design appropriate to address the aims of the research? Yes, partly, cross-sectional comparison of insured and uninsured households based on probability sampling, though the qualitative data was only collected from insured households. Ideally, the study should have included a before-after-comparison to account for unobserved factors. The authors do mention that they decided to use a mixed methods approach: “the rationale for choosing this strategy is that the weakness of one will be complemented by the strengths of the other”; however, they do not explain what these weaknesses are; also, there is no explanation why specifically FGDs were chosen.

Was the recruitment strategy appropriate to the aims of the research? Not possible to assess: recruitment strategy for FGDs was not explained.

Was the data collected in a way that addressed the research issue? Not possible to assess: not much report on data collection or the tools used.

Has the relationship between researcher and participants been adequately considered? Not possible to assess: no reporting.

Was the data analysis sufficiently rigorous? Not possible to assess: no explanation of data analysis approach for qualitative data; use of some quotes from FGDs, but no discussion of potential contradicting views; there is some triangulation of data by comparing qualitative and quantitative findings.

Is there a clear statement of findings? Yes; but the discussion in the conclusions falls a bit short on elaborating issues with the quantitative data collection identified before: the qualitative data contradicts the quantitative data with regard to quality of care maybe because the quantitative questions were too direct.

How valuable is the research? Of limited value: the authors do discuss policy implications, but strangely not with regard to one of their central findings, i.e. that the quality of care provided to the insured is poor; this might be because they “dismiss” their qualitative evidence in the conclusions (though they earlier explain why the quantitative findings could be problematic).

Have ethical issues been taken into consideration? Not possible to assess: no report on ethical issues.

Chris Atim and Madjiguene Sock. An external evaluation of the Nkoranza community financing health insurance scheme, Ghana. Bethesda, MD, 2000..

Was there a clear statement of the aims of the research? Yes; terms of reference of the study are cited and additional topics covered..

Is a qualitative methodology appropriate? Yes; they use FGDs to follow-up findings from a quantitative survey, to capture perceptions and examine in-depth reactions of the community to certain measures implemented. They also use qualitative evidence to triangulate findings from a quantitative household survey.

Was the research design appropriate to address the aims of the research? Yes, mixed methods design with qualitative component to triangulate and examine specific issues in depth; cross-sectional design which is appropriate for the research questions.

Was the recruitment strategy appropriate to the aims of the research? Yes; groups were to be constituted taking into account gender, age and occupation, and the proportions of each of these in the community or group concerned. If there was male dominance in one group, an additional female one was conducted. Potential respondents were identified randomly. The fact that people did not know one another could have been both positive or negative, but the issue was not discussed.

Was the data collected in a way that addressed the research issue? Partly; topic guides used for FGDs are included. *Has the relationship between researcher and participants been adequately considered?* Not really; it is only mentioned that the facilitators were already familiar with the community because they had been involved in the quantitative survey, too.

Was the data analysis sufficiently rigorous? No reporting on how data was analyzed; no quotes to back up finding. The authors also tried to quantify the results from their qualitative data.

Is there a clear statement of findings? Yes.

How valuable is the research? Valuable for the scheme itself, but there is no discussion beyond the scheme as it was an evaluation exercise.

Have ethical issues been taken into consideration? Yes, partly: anonymity was ensured.

Anaclet Baza, Ali Hakizimana, Kara Hanson, Fidele Kwizera, and Sjaak van der Geest. Health insurance and the Bamako Initiative in Burundi: value for money? *The International Journal of Health Planning and Management*, 8(2):129-135, 1993..

Was there a clear statement of the aims of the research? Yes.

Is a qualitative methodology appropriate? Yes, the study wants to identify perceptions by the insureds; however, this is not clearly stated.

Was the research design appropriate to address the aims of the research? Difficult to assess: there is not much information on the research design, but it can be assumed that it was cross-sectional which is appropriate for the research questions identified. The use of mixed methods makes sense for triangulation purposes.

Was the recruitment strategy appropriate to the aims of the research? Not possible to assess: no information on sampling.

Was the data collected in a way that addressed the research issue? Not possible to assess: besides mentioning the data collection methods (semi-structured interviews, household survey, patient exit poll, FGD, observations) there is not any additional information on how the data was collected.

Has the relationship between researcher and participants been adequately considered? Not possible to assess: no information.

Was the data analysis sufficiently rigorous? Not possible to assess: no information on data analysis approach; no data given to back up findings presented (no numbers, no quotes etc) and it is not very clear what results come from which data source.

Is there a clear statement of findings? Partly: findings are explicit and are discussed, the connection to the Bamako initiative is also made; but given the poor reporting of data analysis and the lack of backup with evidence it is questionable.

How valuable is the research? Relevant: shows that the strategies in the Bamako initiatives are probably not sufficient to solve the problems because of which people do not utilize public health services and the insurance scheme.

Have ethical issues been taken into consideration? Not possible to assess: no information.

Christina Blanchard-Horan. *Malaria treatment-seeking behavior in Kisiizi, Uganda: health microinsurance among Engozi groups.* PhD thesis, Walden University, Minneapolis, MN, 2006. .

Was there a clear statement of the aims of the research? Yes: “(a) how do users versus nonusers of health microinsurance compare in their interpretations of health care seeking experience? (b) are there patterns in the decision-making models of health microinsurance users seeking biomedical treatment that are similar or different when compared with nonusers? And (c) how are the different malaria treatment options, including health sectors, interpreted by users versus nonusers of health microinsurance?; relevant for theory, social change, practitioners”.

Is a qualitative methodology appropriate? Yes; wants to explore contextual factors health microinsurance brings into treatment-seeking process and identify patterns, has exploratory character.

Was the research design appropriate to address the aims of the research? Yes, cross-sectional case-comparison design, comparison of insured and non-insured households and their treatment-seeking.

Was the recruitment strategy appropriate to the aims of the research? Partly, difficult to assess completely; contacts to Engozi groups part of MHI schemes and people not part of it through Engozi secretary responsible for all groups; one Engozi group was selected so that respondents would be comparable (but not clear how this group was selected and how members from this group were selected); from the archived data which was used, the cases were selected on the basis of inclusion and exclusion criteria; use of amenities scale to ensure comparability of insured and uninsured cases selected from archived data; assignment to groups based on perception of respondents: when they thought they were not covered by insurance—although they were—they were treated as comparison cases.

Was the data collected in a way that addressed the research issue? Yes, interview guides are included.

Has the relationship between researcher and participants been adequately considered? Yes, mentioned to have built rapport to reduce deference, distortion, expectancy; discussion on researcher-participant relationship in methodology section.

Was the data analysis sufficiently rigorous? Yes, analysis with qualitative data analysis software, detailed description of the process; consideration of discrepant cases; narratives for illustration.

Is there a clear statement of findings? Yes; discrepant cases are mentioned and potential explanations given; findings are contrasted with theory and other studies.

How valuable is the research? Valuable; also discusses potential implications for theory, further research and policy-makers.

Have ethical issues been taken into consideration? Yes, database for archived data complies with guidelines of National Institutes of Health; informed consent before interview; visits before data collection to build rapport with community; approvals for study obtained before.

Bart Criel and Maria Pia Waelkens. Declining subscriptions to the Maliando Mutual Health Organisation in Guinea-Conakry (West Africa): what is going wrong? *Social Science & Medicine*, 57(7):1205-1219, 2003. .

Was there a clear statement of the aims of the research? Yes; “The research team formulated six hypotheses, which might explain why the insurance scheme failed to attract more subscribers: (i) Perception of poor quality of care in the public health services contracted by Maliando, despite efforts to offer a Consensual Package of Activities. (ii) Poor understanding and/or acceptance of the concepts and principles underlying health care insurance (pre-payment of an insurance premium, risk-pooling, redistribution of financial resources beyond family or clan). (iii) Lack of confidence in the management of the system. (iv) Hostility towards institutionalised associative movements (because of previous negative experiences with other, similar projects). To validate these hypotheses, a qualitative study was commissioned and carried out”.

Is a qualitative methodology appropriate? Yes, appropriate since it is an exploratory study, though guided by some hypotheses about the reasons for low subscription rates.

Was the research design appropriate to address the aims of the research? Yes, cross-sectional, non-experimental design which is appropriate for exploring low subscription rates.

Was the recruitment strategy appropriate to the aims of the research? Yes, though not entirely clear how the specific respondents were chosen (were chosen from a list); but the purposive sampling looks good and also that they tried to include people who did not know each other (also discussed that even when this did not work out, they do not think it influenced their findings much).

Was the data collected in a way that addressed the research issue? Yes; topic guides are included; the difficulty in taping the FGD sessions is also discussed and how they tried to make sure it would not affect much (two stenographers who compared their notes).

Has the relationship between researcher and participants been adequately considered? No reporting on that.

Was the data analysis sufficiently rigorous? Yes, second researcher checked codings and findings and external evaluators also had a look at some samples; explanation of different approaches to analysis and triangulation through them; also validation with additional FGDs.

Is there a clear statement of findings? Yes.

How valuable is the research? Valuable, for the specific scheme but also beyond.

Have ethical issues been taken into consideration? No reporting on ethical issues.

Yann Derriennic, Katherine Wolf, and Paul Kiwanuka-Mukiibi. An assessment of community-based health financing activities in Uganda. Bethesda, MD, 2005..

Was there a clear statement of the aims of the research? Yes: “purpose of the assessment is to identify () impact on quality of life of members (p. 3).

Is a qualitative methodology appropriate? Yes: quality of life as subjective construct; but no explanation why these methods were chosen.

Was the research design appropriate to address the aims of the research? Yes: cross-sectional, non-experimental approach, comparison of insured and formerly insured FGDs, though no explanation why; longitudinal design would have been even better to compare changes over time, comparison with non-insured might have been interesting, too.

Was the recruitment strategy appropriate to the aims of the research? Mixed: not clear why FGDs only in four sites and how these were chosen (are they “representative” for the whole sample of CBHFs?); also not clear where there were FGDs with insured and where with formerly insured; recruitment through scheme managers and community leaders, first ones could be problematic; comparison of insured and formerly insured members is positive.

Was the data collected in a way that addressed the research issue? Mixed: FGDs make sense and comparison of insured and formerly insured, too, but the presence of scheme managers during the interviews who also served as interpreters at times is a problem and is not discussed; information on number of participants and duration of interviews is given.

Has the relationship between researcher and participants been adequately considered? No: there is especially the problem of recruitment through scheme managers and their presence during the interviews which is not discussed.

Was the data analysis sufficiently rigorous? Mixed: there is no description of how the analysis was done, however, triangulation with statistics from quarterly reports was done; findings from different FGDs are juxtaposed; questionnaires are included.

Is there a clear statement of findings? Mixed: findings are explicit, but could have been discussed more critically, especially in the light of possible influence due to presence of scheme managers during the interviews.

How valuable is the research? Relevant: policy implications are drawn from the findings, good practices and obstacles.

Have ethical issues been taken into consideration? Mixed: questionnaires with statement of voluntary participation are included, but informed consent is not asked directly; ethical concerns are not discussed or reported on in the report.

Matthew R. Jowett. *Voluntary health insurance in Vietnam: a theoretical and empirical exploration.* PhD thesis, University of York, York, UK, 2002..

Was there a clear statement of the aims of the research? Yes, research questions are stated and motivation explained.

Is a qualitative methodology appropriate? Yes, are used exploratory and to address questions of perception.

Was the research design appropriate to address the aims of the research? Yes, cross-sectional non-experimental design; data from insured and non-insured households for comparison; longitudinal and experimental design would have been preferable.

Was the recruitment strategy appropriate to the aims of the research? For main data collection; Chose respondents from original random sample, ensuring inclusion of insured/non-insured, different communities, male and female; but not clear how they finally chose the individual respondent (could be randomly); but not clear how they chose respondents for exploratory part.

Was the data collected in a way that addressed the research issue? Not clear: used topic guide and tape-recorded interviews for interviews but not clear how exploratory interviews and discussions were held.

Has the relationship between researcher and participants been adequately considered? No, not really clear in how far the researcher was present during interviews at all.

Was the data analysis sufficiently rigorous? No details on data analysis methods used.

Is there a clear statement of findings? Yes: the evidence for the different research questions posed in the beginning is discussed thoroughly and connected to theoretical considerations.

How valuable is the research? Very valuable for the scheme itself, but also interesting for other schemes.

Have ethical issues been taken into consideration? No, not discussed at all. Even informed consent is not mentioned.

Elizabeth McGuinness. A fine balance: a case study of the client value of health microinsurance-Uplift I.A., 2011..

Was there a clear statement of the aims of the research? Yes: identify the client value of the product, especially the financial value (at least that is what the research questions suggest); later it is explained that this also encompasses access to health care.

Is a qualitative methodology appropriate? Yes, there is no real justification for a qualitative approach to the research questions (at least not in the methodology section); but there are some hints that they understand client value as “client wants”, which would make it a subjective concept and thus a qualitative approach would be justified and appropriate.

Was the research design appropriate to address the aims of the research? Yes, cross-sectional case comparison of insured and uninsured households as well as key informant interviews; there is no real justification for a case study methodology; but they do explain that they want to compare insured and uninsured households and why they decided to include interviews with staff and healthcare providers as well as financial data from the NGOs.

Was the recruitment strategy appropriate to the aims of the research? Yes; it makes sense to focus on one illness (malaria) only; there are some flaws in the sampling procedure which are addressed, justified and discussed in the methodology section; they also explained why they interviewed the different types of respondents.

Was the data collected in a way that addressed the research issue? Yes; interviews were also conducted in a confidential and private environment; the problem that mostly women were interviewed was addressed.

Has the relationship between researcher and participants been adequately considered? Not clear: It is not clear who conducted the interviews: the researchers themselves or local facilitators which could have caused a bias in the responses.

Was the data analysis sufficiently rigorous? Partly, they employed several techniques to enhance validity and reliability of the data: multiple data collection methods, cross-referencing research questions across interview guides; solicit variety of perspectives; documentation of data collection tools in English and Marathi (p. 33); however, it is not really clear why they used a qualitative method when they quantify most of their data and apparently did not discuss with their respondents WHY they did or did not use certain services; there is no description of the analysis process.

Is there a clear statement of findings? Partly, findings are clearly stated, but not sufficiently discussed at least when it comes to health seeking behavior issues.

How valuable is the research? Valuable, they do discuss some important implications for the HMI under study as well as some findings of general interest (e.g. that the definition

for client value should be broader and that the community did indeed understand risk pooling and tried to spread the payouts among many members instead of giving high payouts to a few members only).

Have ethical issues been taken into consideration? Partly, interviews were conducted in a confidential and private environment; there was a small gift as token of appreciation; but there is no information on any ethical clearance or informed consent.

M. Kent Ranson, Tara Sinha, Fenil Gandhi, Rupal Jayswal, and Anne J. Mills. Helping members of a community-based health insurance scheme access quality inpatient care through development of a preferred provider system in rural Gujarat. *The National Medical Journal Of India*, 19(5):274-282, 2006..

Was there a clear statement of the aims of the research? Yes: describe and analyze the experience of piloting a preferred provider system (PPS) for rural members of Vimo SEWA (p. 1).

Is a qualitative methodology appropriate? Yes: is used for exploring reasons for using, or not using, PPS and identifying problems; discussions of pros and cons of PPS.

Was the research design appropriate to address the aims of the research? Yes: combination of quantitative and qualitative methodology makes sense for these research questions; for both methods they employ a “comparison group” and for the quantitative part also some kind of “pre-test-post-test study”, though they also admit that their data limitations prevented them from using more appropriate statistical analysis tools.

Was the recruitment strategy appropriate to the aims of the research? Yes; purposive sampling: claimants who used PPS and claimants who did not use it 2 months before interview from different districts for geographical representation (makes sense because of distance to facilities); in-depth interviews with representatives and administrators; FGDs with aagewans.

Was the data collected in a way that addressed the research issue? Yes; topics covered in interviews are mentioned; video-recordings later translated into English and transcribed.

Has the relationship between researcher and participants been adequately considered? Not clear: no reporting on these aspects; e.g. no discussion how affiliation of researchers to Vimo SEWA might have influenced interviews.

Was the data analysis sufficiently rigorous? Yes: Analysis process is explained: coding using Word, categories emerged from data, transcripts read at least twice by first two authors; quotes from interviews are used as illustrations.

Is there a clear statement of findings? Yes; implications of findings for SEWA and other insurance schemes are discussed at lengths; weaknesses of the methodology are also addressed.

How valuable is the research? Valuable; quality of care is an important issue and the findings are interesting for other insurance schemes, too; it is very policy-oriented, not contributing to any theory.

Have ethical issues been taken into consideration? Partly: it is mentioned that permission for video-recording was obtained; other than that, no discussion of ethical issues.

Tara Sinha, Sapna Desai, and Ajay Mahal. Hospitalized for fever? Understanding hospitalization for common illnesses among insured women in a low-income setting. *Health Policy & Planning*, 29(4):475-482, 2014. .

Was there a clear statement of the aims of the research? Yes: aim of this article is to understand the factors that lead to hospitalization and use of insurance for common illnesses among adult women; relevance because could have been treated as outpatient care, what is the role of insurance in encouraging hospitalization? esp. relevant when considering sustainability of schemes.

Is a qualitative methodology appropriate? Yes: exploration of why women were hospitalized and how insurance cover might have influenced the decision.

Was the research design appropriate to address the aims of the research? Yes: cross-sectional non-experimental design, “use of mixed methods allows for understanding the issue from both population trends and in-depth individual insights (p. 7).

Was the recruitment strategy appropriate to the aims of the research? Yes; purposive sampling case studies: from claims database, short stay in hospital, urban and rural areas, 2 months recall; purposive sampling providers: from hospitals where women had been admitted; triangulation of data sources.

Was the data collected in a way that addressed the research issue? Yes: in-depth interviews, tape recording and local language.

Has the relationship between researcher and participants been adequately considered? Not clear: no reporting on these aspects.

Was the data analysis sufficiently rigorous? Yes; description of analysis approach: inductive categorization and coding; extensive use of quotes as examples; discussion of contradictory findings; framework derived.

Is there a clear statement of findings? Yes; strengths and limitations of study are discussed; triangulation of data sources is done.

How valuable is the research? Valuable: implications of findings for SEWA and other insurance schemes are discussed and areas for further research pointed out.

Have ethical issues been taken into consideration? Yes: private settings for respondents, informed consent.

Tara Sinha, M. Kent Ranson, Mirai Chatterjee, Akash Acharya, and Anne J. Mills. Barriers to accessing benefits in a community-based insurance scheme: lessons learnt from SEWA Insurance, Gujarat. *Health Policy and Planning*, 21(2):132-142.

Was there a clear statement of the aims of the research? Yes: exploring the barriers faced by members in benefiting from a HMI scheme, to understand these barriers in context of specific steps a person as to take in order to benefit from scheme (p. 135).

Is a qualitative methodology appropriate? Yes; they explicitly argue that their issue is poorly understood and needs to be explored, which makes open-ended and wide-ranging discussions necessary.

Was the research design appropriate to address the aims of the research? Yes; cross-sectional, non-experimental design.

Was the recruitment strategy appropriate to the aims of the research? Yes: purposive sampling was applied; less developed and more developed regions, urban and rural representation, villages with claims, inclusion of poor members because likely that they face more barriers; it is also discussed that they might have missed out those who did not even submit a claim.

Was the data collected in a way that addressed the research issue? Yes; it was justified why FGDs and how: video-recoding, Gujarati language.

Has the relationship between researcher and participants been adequately considered? Yes; in the discussions they refer to a potential bias due to the participation of insurance staff but also how they tried to avoid this bias.

Was the data analysis sufficiently rigorous? Yes; analysis approach is described; transcriptions were read at least twice by three researchers to cross-check and triangulate; findings were validated with FGDs with aagewans and administrators; a lot of quotes from the data are used to exemplify barriers identified.

Is there a clear statement of findings? Yes; findings are explicit and answer the research question; potential bias due to presence of insurance staff is discussed.

How valuable is the research? Valuable both for the specific scheme but also beyond because of novelty of research question.

Have ethical issues been taken into consideration? Not clear: no report on ethical issues.

Janestic M. Twikirize and Constance O'Brien. Why Ugandan rural households are opting to pay community health insurance rather than use the free healthcare services. *International Journal of Social Welfare*, 21(1):66-78, 2012. .

Was there a clear statement of the aims of the research? Yes: why poor rural households are opting to pay through community health insurance when healthcare is provided free in all government facilities; relevance beyond this specific questions is also illustrated (p. 67).

Is a qualitative methodology appropriate? Yes, clearly stated that qualitative approach is included to “gain a deeper understanding of the meanings that respondents attributed to questions raised”.

Was the research design appropriate to address the aims of the research? Partly; they say they use a cross-sectional case study approach but do not explain why and how; use mixed methods to triangulate; though the specific research question would have allowed for a purely qualitative approach as well (quantitative data is more for triangulation and for background what differences there are between insured and non-insured).

Was the recruitment strategy appropriate to the aims of the research? Not clear: recruitment strategy for qualitative interviews is not completely reported; members, non-members and former members are included (which is good), but there is no information how they were selected.

Was the data collected in a way that addressed the research issue? Not clear: not sufficiently reported; FGDs and KIIs make sense, but there is no information on what kind of questionnaires were used or how these interviews were conducted.

Has the relationship between researcher and participants been adequately considered? Not clear: no reporting on this issue.

Was the data analysis sufficiently rigorous? Partly reported; “thematic analysis” of data with identification of themes emerging from data; but no information how done exactly, whether software used, who did the analysis; triangulation of data from different sources and different kind of data (quantitative and qualitative); some quotes are given to exemplify findings, but especially the obstacles in access care in HMI are not described in detail (but is also not focus of paper).

Is there a clear statement of findings? Yes, there is also a long discussion about the relevance for policy-makers.

How valuable is the research? Valuable, as it explains why people do not use government facilities and it shows how HMI could be used to both improve access to care from other sources and indirectly improve government care.

Have ethical issues been taken into consideration? Not clear: no report on ethical issues.

C.2 Overview of studies included into the systematic review

TABLE C.1: Overview of studies included into systematic review.
Source: Own illustration.

Author and Title	Country	Insurance scheme	Method of inquiry
Kennedy A. Alatinga and Nicholas Fiel-mua. The impact of mutual health insurance scheme on access and quality of health care in northern Ghana: the case of Kassena-Nankana East scheme. <i>Journal of Sustainable Development</i> , 4(5):125-138, 2011.	Ghana	Kassena-Nankana East Scheme	Mixed methods
Chris Atim and Madjiguene Sock. An external evaluation of the Nkoranza community financing health insurance scheme, Ghana. Bethesda, MD, 2000.	Ghana	Nkoranza community financing health insurance	Mixed methods
Jonathan Bauchet, Aparna Dalal, Parimal Mayasudhakar, Jonathan Morduch, and Ralf Radermacher. Can insurers improve healthcare quality? Evidence from a Community Microinsurance SCHEME in India, 2010.	India	Uplift India Association, Pune	Mixed methods

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TABLE C.1: Overview of studies included into systematic review (continued).

Author and Title	Country	Insurance scheme	Method of inquiry
Anaclet Baza, Ali Hakizimana, Kara Hanson, Fidele Kwizera, and Sjaak van der Geest. Health insurance and the Bamako Initiative in Burundi: value for money? <i>The International Journal of Health Planning and Management</i> , 8(2):129-135, 1993.	Burundi	Carte d'Assurance Maladie (National insurance system)	Mixed methods
Christina Blanchard-Horan. <i>Malaria treatment-seeking behavior in Kisiizi, Uganda: health microinsurance among Engozi groups</i> . PhD thesis, Walden University, Minneapolis, MN, 2006.	Uganda	Microcare health insurance	Qualitative
Bart Criel and Maria Pia Waelkens. Declining subscriptions to the Maliando Mutual Health Organisation in Guinea-Conakry (West Africa): what is going wrong? <i>Social Science & Medicine</i> , 57(7):1205-1219, 2003.	Guinea	Maliando Mutual Health Organisation	Qualitative

Continued on next page

TABLE C.1: Overview of studies included into systematic review (continued).

Author and Title	Country	Insurance scheme	Method of inquiry
Yann Derriennic, Katherine Wolf, and Paul Kiwanuka-Mukiibi. An assessment of community-based health financing activities in Uganda. Bethesda, MD, 2005.	Uganda	Variety of community-based health financing schemes	Mixed
Matthew R. Jowett. <i>Voluntary health insurance in Vietnam: a theoretical and empirical exploration</i> . PhD thesis, University of York, York, UK, 2002.	Vietnam	Government-implemented voluntary health insurance	Mixed
Elizabeth McGuinness. A fine balance: a case study of the client value of health microinsurance-Uplift I.A., 2011.	India	Uplift India Association, Pune	Mixed
M. Kent Ranson, Tara Sinha, Fenil Gandhi, Rupal Jayswal, and Anne J. Mills. Helping members of a community-based health insurance scheme access quality inpatient care through development of a preferred provider system in rural Gujarat. <i>The National Medical Journal Of India</i> , 19(5):274-282, 2006.	India	VIMO SEWA	Mixed

Continued on next page

TABLE C.1: Overview of studies included into systematic review (continued).

Author and Title	Country	Insurance scheme	Method of inquiry
Tara Sinha, Sapna Desai, and Ajay Mahal. Hospitalized for fever? Understanding hospitalization for common illnesses among insured women in a low-income setting. <i>Health Policy & Planning</i> , 29(4):475-482, 2014.	India	VIMO SEWA	Mixed
Tara Sinha, M. Kent Ranson, Mirai Chatterjee, Akash Acharya, and Anne J. Mills. Barriers to accessing benefits in a community-based insurance scheme: lessons learnt from SEWA Insurance, Gujarat. <i>Health Policy and Planning</i> , 21(2):132-142, 2006.	India	VIMO SEWA	Qualitative
Janestic M. Twikirize and Constance O'Brien. Why Ugandan rural households are opting to pay community health insurance rather than use the free healthcare services. <i>International Journal of Social Welfare</i> , 21(1):66-78, 2012.	Uganda	Microcare health insurance	

Appendix D

Benefit packages offered and overview of utilization types of different households

TABLE D.1: Benefit package Kanpur Dehat district.
Source: Own illustration.

Benefit types		2011	2012	2013
Hospitalization	per event	Rs. 3.000	Rs. 3.000	Rs. 4.000
	per family per year		Rs. 25.000	Rs. 30.000
Health services from identified medical provider*		✓	✓	✓
Fracture that requires plaster	per event		Rs. 400	Rs. 100
	per family per year		Rs. 1.000	Rs. 500
Transport	per event	Rs. 100	Rs. 250	Rs. 300
Wage loss	per day per event	Rs. 75 <i>4th to 13th day</i>	Rs. 50 <i>3rd to 6th day</i>	Rs. 50 <i>3rd to 7th day</i>
Premium	per person per year	Rs. 192	Rs. 192	Rs. 199

* In 2011, local medical providers (unqualified doctors) responsible for assigned villages and chosen with input from the community were included into the scheme. From the second insurance year on (2012), a MBBS doctor who visits the office of the local partner NGO and other previously identified places came once a week for consultation.

TABLE D.2: Benefit package Pratapgarh district.
Source: Own illustration.

Benefit types		2011	2012	2013
Hospitalization	per event	Rs. 6.000	Rs. 4.000	Rs. 4.000
	per year	Rs. 6.000		
	per family threshold	Rs. 30.000	Rs. 30.000 Rs. 500	Rs. 500
Health services from identified medical provider		-	✓	✓
Transport	per event	Rs. 100	Rs. 100	Rs. 100
Wage loss	per day per event	Rs.100 <i>3rd to 8th day</i>	Rs. 100 <i>4th to 7th day</i>	Rs. 100 <i>4th to 7th day</i>
Delivery (Caesarean only)	per event	Rs. 5.000		
	per year	Rs. 5.000		
	threshold	Rs. 1.400		
Premium	per person per year	Rs. 176	Rs. 250	Rs. 250

TABLE D.3: Benefit package Vaishali district.
Source: Own illustration.

Benefit types		2011	2012	2013
Health services from identified medical provider		✓	✓	✓
Imaging	per event	Rs. 300	Rs. 300	Rs. 500
	per annum	Rs. 300	Rs. 300	
	per family			Rs. 2.000
Lab Tests	per event	Rs. 200	Rs. 200	Rs. 400
	per annum	Rs. 200	Rs. 200	
	per family			Rs. 2.000
Wage loss	per day per event	Rs.100 <i>4th to 9th day</i>	Rs. 100 <i>4th to 9th day</i>	Rs. 100 <i>4th to 9th day</i>
Premium	per person per year	Rs. 197	Rs. 197	Rs. 197

TABLE D.4: Utilization types of different households.
Source: Own illustration.

Case Study	Kanpur Dehat district					Pratapgarh district					Vaishali district				
	Poverty Stratum	Insurance Status			Type	Poverty Stratum	Insurance Status			Type	Poverty Stratum	Insurance Status			Type
		2011	2012	2013			2011	2012	2013			2011	2012	2013	
1	Poverty	✓	✓	✓	2	Extreme Poverty	✓	✓	✓	2	Poverty	x	x	✓	1
2	Non-Poverty	-	✓	x	1	Poverty	✓	✓	✓	2	<i>Not included into analysis</i>				
3	Non-Poverty	✓	✓	✓	2	Non-Poverty	-	-	✓	3	Poverty	✓	✓	x	1
4	<i>Not included into analysis</i>					Non-Poverty	✓	✓	✓	2	<i>Not included into analysis</i>				
5	Non-Poverty	x	✓	✓	2	<i>Not included into analysis</i>					Poverty	✓	✓	x	1
6	<i>Not included into analysis</i>					<i>Not included into analysis</i>					Non-Poverty	✓	✓	✓	2
7	Poverty	✓	✓	✓	2	<i>Not included into analysis</i>					Extreme Poverty	✓	✓	✓	2
8	Non-Poverty	-	✓	✓	3	Extreme Poverty	✓	✓	✓	2	Non-Poverty	✓	✓	x	1
9	Extreme Poverty	✓	x	x	1	Poverty	x	✓	x	1	Non-Poverty	✓	✓	✓	1
10	<i>Not included into analysis</i>					Poverty	✓	✓	✓	1	<i>Household dropped out of study</i>				
11	Non-Poverty	✓	x	x	2	Extreme Poverty	-	-	✓	1	<i>Not included into analysis</i>				
12	<i>Not included into analysis</i>					Poverty	✓	✓	✓	2	Non-Poverty	-	-	✓	2
13	Non-Poverty	✓	x	x	1	<i>Not included into analysis</i>					Poverty	✓	x	x	1
14	<i>Not included into analysis</i>					Non-Poverty	✓	x	✓	2	Extreme Poverty	✓	✓	✓	2

✓: household insured in the respective year

x : household did not insure in the respective year

- : household was not offered insurance in the respective year (control group)

type 1: no utilization; type 2: combined/integrated utilization; type 3: exclusive utilization

Appendix E

Index of files on enclosed data carrier

- Tools
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 - Questionnaire case studies - third visit
 - Questionnaire case studies - fourth visit
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- Case study analysis documents
 - Case study profiles
 - Analysis matrix for access to health care

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