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Utilization and management of maternal and child health funds in rural Nepal

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Abstract

Maternal and neonatal mortality rates are highest in the poorest countries, and financial barriers impede access to health care. Community loan funds can increase access to cash in rural areas, thereby reducing delays in care seeking. As part of a participatory intervention in rural Nepal, community women's groups initiated and managed local funds. We explore the factors affecting utilization and management of these funds and the role of the funds in the success of the women's group intervention. We conducted a qualitative study using focus group discussions, group interviews and unstructured observations. Funds may increase access to care for members of trusted 'insider' families adjudged as able to repay loans. Sustainability and sufficiency of funds was a concern but funds increased women's independence and enabled timely care seeking. Conversely, the perceived necessity to contribute may have deterred poorer women. While funds were integral to group success and increased women's autonomy, they may not be the most effective way of supporting the poorest, as the risk pool is too small to allow for repayment default.

Introduction

The Millennium Development Goals call for substantial reductions in maternal and under-five mortality by 2015 (UN, n.d.). Most maternal deaths occur around the time of birth and 38 percent of under-five mortality within a month of it (Lawn *et al.*, 2004). The highest risk falls on the poorest women in South Asia and Sub-Saharan Africa (Ronsmans and Graham, 2006), who tend to give birth in their homes without trained attendants (Victora *et al.*, 2003). Access to adequate health facilities is constrained by lack of transport, infrastructure (Thaddeus and Maine, 1994), and equipment to deal with obstetric emergencies or neonatal problems (Darmstadt *et al.*, 2005; Lawn *et al.*, 2005; World Health Organisation, 2005). Delivery and medical expenses, transportation and time costs can also be prohibitive, requiring levels of expenditure that prove catastrophic for poor families (Fawcus *et al.*, 1996; Nahar and Costello, 1998; Borghi, *et al.*, 2006a; McIntyre *et al.*, 2006).

Community loan funds can increase access to cash in subsistence communities and reduce delays in care seeking. They offer a small-scale means of assisting households with payment for transport or other aspects of care. Loan funds allow contributors to ‘pay what they can’ (there are often no established premiums) and are generally managed by an appointed individual or committee. Loans to service users must be repaid in order to replenish the fund, and interest is often charged to encourage this. Community funds have been used in the context of safe motherhood initiatives, particularly to cover transport costs (Chiwuzie *et al.*, 1997; Essien *et al.*, 1997; Fofana *et al.*, 1997; Macintyre and Hotchkiss, 1999; Neupane, 2004). Their attractiveness may be attributed in part to their similarity to microfinance schemes, which have gained global endorsement as an effective way to alleviate poverty. Evidence of the effectiveness of community loan funds to improve maternal and newborn survival is limited, and, in one of the few studies describing implementation, initiation of a fund in itself was described as an indicator of success (Olaniran *et al.*, 1997). There is also some evidence that community funds are difficult to administer and may be depleted over time (Shehu *et al.*, 1997; Macintyre and Hotchkiss, 1999), although integrating them with existing community microfinance schemes may improve their sustainability (Borghi *et al.*, 2006b).

This paper explores factors affecting the management and utilization of community-based maternal and child health funds by women’s groups in rural Nepal, using qualitative methods. Women’s groups enabled a reduction in neonatal mortality and an increase in care seeking behaviour (Manandhar *et al.*, 2004), and we explore the role of the funds in facilitating this result.

Methods

Setting

Nepal has a high neonatal mortality rate of thirty-three per thousand births (Nepal Ministry of Health and Population, 2006) and an equally high maternal mortality ratio of 539 per 100,000 live births (Pradhan *et al.*, 1997). Most women give birth at home without skilled attendants (Osrin *et al.*, 2002; Mesko *et al.*, 2003). Low-quality services, limited geographical access, and poor infrastructure constrain health service use in rural areas

(Acharya and Cleland, 2000; Jahn *et al.*, 2000; Furber, 2002). Cultural, gender, and cost barriers also prevent women from seeking health care (Manandhar, 2000; Borghi *et al.*, 2006a).

Demand and supply-side factors influence health service use, yet advocacy has focused mainly on the supply of services (Koblinsky *et al.*, 1999). A randomized controlled trial was conducted in rural Makwanpur district, Nepal, to test the effect of a demand-side intervention – participatory women’s groups – on neonatal mortality. Makwanpur has a human development index of 0.479 (UN, 2001) and has both plain and hill topography. Most of the population is engaged in small-scale agriculture. We found that there were more than fifteen different ethnic groups in Makwanpur, the largest of which were Tamang (Osrin *et al.*, 2002) – a Buddhist–Tibeto–Burman group, traditionally occupying middle to low social status. Brahmin/Chhetri was the second largest ethnic (or caste) group – considered to be elevated in the social hierarchy. Although caste discrimination was abolished in 1963, it is still a powerful indicator of social inclusion and empowerment (Bennett *et al.*, 2006).

The intervention consisted of 109 women’s groups convened by locally employed female facilitators. Facilitators led the groups through a participatory action cycle of problem prioritization and community planning to address salient local neonatal and maternal health problems. An analysis of one women’s group meeting revealed that groups tended to consist of the ‘middle poor’ – literate, salaried women were less likely to attend, as were those of the most marginalized ethnic group in the study area (Praja) (Morrison *et al.*, 2005b). Further information about the women’s group intervention and community mobilization has been published elsewhere (Morrison *et al.* 2005a). Birth outcomes improved greatly in intervention areas, where the neonatal mortality rate was 26.2 per 1000 births, compared with 36.9 per 1000 births in control areas – a thirty percent reduction in mortality. There was also statistically significant increases in health care seeking during illness in intervention areas (Manandhar *et al.*, 2004). The trial was conducted by a Nepalese non-governmental organization (MIRA, Mother Infant Research Activities), in collaboration with the Institute of Child Health, University College London.

Maternal and child health funds

During the community planning meetings, women’s group members described priority problems and proposed ways to address them. Communities supported group proposals to create local funds that would be easily accessible in emergencies. Eighty-two out of 109 groups initiated funds. Several non-governmental organizations were promoting access to savings and credit in Makwanpur district, and many communities felt that earmarked maternal and newborn care funds would be useful. In subsequent group meetings, fund management and the nature and frequency of contributions were discussed. MIRA arranged for a representative of a local savings organization (*Chhimek bikas bank*: neighbourhood development bank) to train facilitators in record keeping and fund management. Facilitators then trained elected committee members. Management committee members were usually group members and nearly half of them were involved in another savings and credit scheme. Committee members held funds and kept the books. MIRA did not provide seed money and the funds relied exclusively on community resources to maximize sustainability.

The majority of groups collected monthly contributions in women's group meetings (86 percent, $n = 64$). Contributions were usually NRs 10 – approximately 0.15 USD – or groups collected one-off donations. In 85 percent ($n = 63$) of funds, only group members contributed, and 69 percent ($n = 51$) of funds were only accessible to group members. Management and operation of funds was at group discretion. One to two percent interest was charged for group members, and up to 5 percent for non-members. At the time of this study, the smallest fund credit accrued was NRs 130 and the highest was NRs 12,355. After three years of fund management, the residual credit in groups was NRs 192,350 (average of NRs 2345 per group). At the end of March 2005, NRs 518,831 had been disbursed, and NRs 241,678 had been returned. Reasons for disbursement of funds were not recorded for 33 percent of money disbursed (NRs 168,633). Other disbursements were for treatment of women (26 percent, NRs 134,807), for children's health problems (25 percent, NRs 130,971), and for pregnant women (13.1 percent, 68 120 NRs). Contribution to the fund was never compulsory for group membership.

Qualitative methods

Nepalese trial field employees with training and experience in qualitative methods collected data about fund management and factors affecting utilization. We piloted two group interviews and one focus group to refine methods and tools in areas where we did not subsequently collect data. Data were collected from purposively sampled stakeholders in six village development committees (rural administrative areas) through focus group discussions with women's groups, group interviews with families who had experienced a maternal or neonatal health problem, and unstructured observations of women's group meetings. Stakeholders were selected in order to gain the widest range of opinions, and different methods of data collection enabled triangulation. We collected data from groups with funds (four focus group discussions, three observations), groups without funds (two focus group discussions, one observation), groups with unused funds (two focus group discussions, one observation), fund users (seven group interviews), and potential fund users (seven group interviews). Potential fund users were families identified by trial employees, who had experienced a maternal or neonatal health problem requiring treatment in the previous six months.

The views of men were routinely missing from our data set. Interviews were conducted in family homes, usually with a woman and her mother-in-law who tended to be at home when we visited. In a second phase of data collection, we interviewed one man whose family members went to the group and one man whose family members did not. These interviews did not add new information and therefore sampling to saturation was achieved to the greatest extent possible. Focus groups and interviews were conducted in Nepali and were tape-recorded, transcribed, and then translated into English. A sample was back-translated from English to Nepali to check for quality. Content analysis (Krueger and Casey, 2000) was conducted manually by a UK advisor to the project (J.M.) and a senior member of the Nepalese trial team (R.T.), using the translated transcripts. J.M. then wrote a descriptive report of the preliminary analysis. Thereafter, R.T. and J.M. independently generated themes from the data and came to a consensus through discussion. J.M. coded the data according to these themes in Nvivo qualitative analysis software, version 2.

Chairs of the village development committees provided signed consent and all participants provided verbal consent to involvement. The study received ethical clearance from the Nepal Health Research Council, from His Majesty's Government Ministry of Health, Nepal, and from the ethics committee of the Institute of Child Health and Great Ormond Street Hospital for Sick Children, London.

Results

We conducted four unstructured observations, eight focus group discussions, and fourteen group interviews. Many of the fund users interviewed were group members, but this is not surprising given the number of groups that did not allow access by non-members. We present the emergent themes of trust, flexibility in borrowing, inadequacy of funds, positive progress, and independence and availability.

Trust

Fund management, contribution, and borrowing were usually restricted to women's group members and their close families. The main reason for this appears to be a combination of fear and suspicion that money would be mismanaged and that 'outsiders' (people of uncertain reputation) would make inappropriate withdrawals. 'Insiders' (trusted friends or relatives) felt reassured that they would be trusted not to mispend and would not have to justify their reason for borrowing. All stakeholder groups felt that mutual trust and understanding between friends was important for fund success. In some cases where groups had tried to start funds, people had refused to contribute because of mistrust, saying that the group would 'eat all the money'. Trustworthiness was based on the reputation of the borrower and on her capacity to repay. Outsiders had to convince group members of the validity of their claims and their credit worthiness. As the gatekeepers of funds, management committees were responsible for assuring that disbursements went to trustworthy people, and that money would not be mismanaged within households (Figure 1).

Flexibility in borrowing

Groups were advised to make rules and regulations for joining and leaving, borrowing and repayment, and contribution levels. Data were often inconsistent and contradictory regarding these rules, particularly about the conditions for borrowing. This suggests a lack of clarity and flexibility in lending. Lending was often at the discretion of the committee member holding the fund, and those who did not borrow were usually unaware of any potential flexibility or were uneasy about contravening group rules. Although these rules usually stated that a fund was only for mother and child health, there was a degree of flexibility, particularly for trusted group members and life-or-death situations. Observation indicated the use of the fund as a small saving operation in some groups, with group members taking turns to borrow and return money (Figure 2).

Funds discourage group membership

The fund encouraged some women to join, but there was stronger evidence suggesting that the fund also discouraged group membership. If the fund was raised through regular contributions, all members paid the same amount, regardless of their socioeconomic status.

There were many savings and credit schemes in the study area and women found it difficult to contribute to every group. Another common concern deterring group membership was that the fund was insufficient to meet health needs. The majority of funds were raised through group contributions, and therefore fund capacity was limited by poverty of group members, the existence of multiple savings groups, and low membership, often caused by the scattered nature of the population. Some community members did not contribute because of mistrust of fund management, poverty, or scepticism about the impact of a community fund that did not have seed money or charge substantial interest. The potential for better-off community members to contribute to the fund was perhaps limited by the perception that groups were not for the better off, and they could not access the fund: 'I am not in any group, it is not appropriate for me... they say that (the group) is for poor people, that is why' (fund non-user, interview) (Figure 3).

Positive progress

Group members appeared motivated through the group meetings and fund mobilization process. Participation in a group and the management of their funds demonstrated that they were knowledgeable, confident, and could understand about planning for the future. Group members compared themselves with others who did not understand the value of saving, or of coming to groups. Other stakeholders also felt that groups and saving were a source of personal development, learning, and an opportunity to gain new knowledge (Figure 4).

Independence and availability

All stakeholder groups felt that a fund's main advantage was its local availability and immediacy. This freed people in need from dependence on landlords, friends, and neighbours, and allowed them to make choices and decisions in their own time. Respondents felt disempowered when they had to depend on others for their families' health. They spoke of having to 'beg' or 'butter-up' in order to borrow money. Having the fund and independence gave them a sense of pride and security (Figure 5).

Discussion

We have described the management and utilization of maternal and child health funds by women's groups in a rural area of Nepal. Fund accessibility increased women's independence, enabling them to take timely decisions about their own health and the health of their children. Access was somewhat limited by issues of trust and a fear of defaulting. Stakeholders were concerned about insufficient growth of funds and lack of resources. Despite these concerns, saving for the future, managing funds, and being a member of a group were indications of positive personal development.

Limitations

The qualitative data were collected and analysed by advisors and employees of the non-governmental organization implementing the trial, which may have biased the data collection. External researchers could not collect data because of the security situation and financial constraints. Respondent feedback was not possible due to the commitments of respondents throughout the farming season, and this may weaken the validity of the

qualitative study. Validity was addressed to the greatest extent possible by triangulation through different methods of data collection from different stakeholders. Reliability was strengthened by the independent generation of themes during analysis.

Enabling trust and ensuring sufficient funds

Restricted lending to group members, close friends, and relatives fostered a sense of trust. Autonomy to control distribution and access to money also enabled the funds to be sustained. However, the local nature of funds limited the amount that groups could collect, a concern commonly voiced by stakeholders, consistent with findings from elsewhere (Allegri *et al.*, 2006). Funds were therefore limited in their ability to cover the costs of delivery care which can reach between NRs 700 and 12,000 (Borghi *et al.*, 2006a).

Funds could be centralized at the Village Development Committee level, but this may distance women from their funds and limit access. Large inputs from external institutions may decrease local ownership, increasing the potential for mismanagement and lack of sustainability. In 2005 (after the study), the Nepalese government introduced a cash transfer scheme for maternity care. Although this scheme assists in meeting delivery costs, funds still have a potentially important role, providing immediate cash in hand, in the community, to pay for transport and subsistence. Women's group funds may have gone some way to meet these costs, thus contributing to the observed success of the women's group intervention.

Increasing access to care?

Without access to funds, the time spent looking for money undoubtedly puts the lives of women and newborn infants at risk, particularly in the event of complications. The local availability of funds may have reduced delays to care seeking and enabled women to take independent financial decisions.

However, without an acceptable increase in the quality of health services, individuals may still be discouraged from accessing care even if financial barriers are attenuated (Allegri *et al.*, 2006; Chowdhury *et al.*, 2006). A study in five districts of Nepal found that only 32 percent of fund usage was for emergency obstetric care, as people were unwilling to use services (Neupane, 2004). Although women's groups significantly affected care-seeking behaviour, few families sought trained help (Manandhar *et al.*, 2004). Funds may have been used to access informal care, medicine shops, private clinics, ayurvedic clinics, and traditional healers, which are common in Nepal.

Meeting the needs of the poorest?

We found that funds often discouraged group membership. If fund contribution was perceived to be mandatory, women who were unable or unwilling to contribute left groups or failed to join them. If funds were felt to be insufficient to meet health care costs, women would be reluctant to join the groups. The most marginalized women may have been prevented from joining groups because of the funds, which would limit their access to emergency loans, group support, and health knowledge. This is consistent with findings from another study, which found that the poorest, most marginalized women – and the least poor women – were underrepresented in groups (Morrison *et al.*, 2005b). Even if the poorest

join groups, they may be unable to take loans, as they may not be trusted to repay them. The ability of insurance or community loan schemes to pool risk affects their long-term sustainability and ability to meet the needs of the poorest (McIntyre *et al.*, 2006). In this study, the pool of women participating was too poor and too small to risk lending to the poorest.

Wider benefits of the fund

Funds were not always used for maternal and neonatal health problems, but this is unsurprising given that group members were poor and often in need of cash. A wider remit may increase the appeal of funds to communities and increase their sustainability, as in Nigeria (Chiwuzie *et al.*, 1997). Yet, funds gave women access to money to meet *their* needs, and allowed for independent decisions on how it was spent.

The women's group intervention aimed to improve maternal and newborn health through creating demand for services and enabling social change at the community level. Women's groups sought to enable the empowerment of women through the development of a critical consciousness and through taking action to improve their situation (Freire, 1972). An assessment of the wider social impact of the process was beyond the scope of this study, and evaluations by microfinance researchers have given mixed results (Osami, 1998; Kim and Watts, 2005), but we tentatively conclude that women were empowered through fund holding. It appears that managing the funds, having access to resources, and having autonomy in deciding how money was spent may have empowered women, and therefore gone some way to enabling the behaviour change observed in the trial.

Conclusion

Community loan funds have been suggested as a way to improve access to maternal and newborn health care, particularly for the poorest families, and therefore help to reduce neonatal and maternal mortality. There is a need to rigorously evaluate the effectiveness of community loan funds, particularly among the poorest, and explore issues affecting their utilization. This will enable initiatives to build on previous experience and enable policy makers to make informed, evidence-based decisions about appropriate interventions to improve maternal and newborn health.

This study provides evidence that the management of funds increases women's self-efficacy and autonomy in health care decision-making. Funds were therefore a contributing component to the positive effect of the women's group intervention on neonatal mortality and care seeking. Participatory planning and action by women to improve their health may be effective, not only through the strategies they implement, but also through the broader process of participation, implementation, and management of those strategies. This study has also shown that for the poorest women, funds may serve as a disincentive to joining groups, and therefore they were unable to benefit from the capacity building or empowerment that groups stimulate. Therefore, to enable poorer women to participate in groups, it is important that contributions to community loan funds are not compulsory for group membership, and that funds have the capacity for some defaulting on repayment.

The study suggests that funds have been sustained because they are locally managed, locally accountable, and money was lent to those who were unlikely to default. External support is necessary to enable the poorest to borrow and to allow for some defaulting on repayment. This would also increase the ability of funds to meet costly maternal and neonatal health needs. Unless funds are increased and community management maintained, community loan schemes may not be the most effective way to increase access to care for the poorest.

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"If there is mutual understanding between friends (we) can save five rupees a month" (group with no fund, focus group discussion)

"Everybody in (our community) knows each other but it is difficult to know people on the inside. For example, I know you and you know me but I don't know your internal intention and you don't know mine" (group with unused fund, focus group discussion)

"Up to now no-one has been dishonest because only people from nearby have taken money" (group with fund, focus group discussion)

"I heard that (the group) give money to those who can pay back. It is necessary to give to people who need" (fund non user, interview)

Figure 1.
Trust.

"If there is money in the fund then it should be given because it is not good to let a person die."

"We only give to those who are in the group. Only those who are in the fund use it. But if there is money in the fund and there is a need then (we) should give money"

"If someone is about to die or they are suffering a lot then (we) should give money" (group with fund, focus group discussion)

"The money is collected to save the lives of the mother and children.

Yes...Yes (everyone agrees) it is for that".

"If there is a lot of money it could also be used for other health problems as well"

"If there was an emergency it could be given to men as well, no?" (group with unused fund, focus group discussion)

"While there is an emergency money can be taken from the group with interest added...those who are in the group and need money can take out money...they need to go to the group and ask." (fund non user, interview)

Figure 2.
Flexibility in borrowing.

“(There is money) in one savings organisation and also in another. Because the money is in lots of funds we end up with no money left even to buy salt” (group with no fund, focus group discussion)

“After saying that we should collect money in a fund they stopped coming”. “They said ‘wherever you go, it’s money’ so they stopped coming to the group.” (group with fund, focus group discussion)

“My friends said ‘join the group’ but how many groups can you be in? I am on my own now and I have just given birth to a child. Three of my children go to school and my husband goes out to work. I have to look after the cow, goats and buffalo on my own, so I can’t be in the group ” (fund non user, interview)

“What they said was that we can’t get interest from (the fund). If one person is sick then they will take (the money) again and again” (group with fund, focus group discussion)

Figure 3.
Funds discourage group membership.

"We discussed that if we keep money in the group then it might be useful when we have a problem, so we started to keep some money."

"Before (we went to the group), we couldn't understand and we couldn't speak properly."

"Now...if we go to meetings then we can manage things properly" (group with fund, focus group discussion)

"We have learnt a lot by being in the group. At first we used to say 'what is this? This is just disturbing our work' " (fund user, interview)

"We are all happy when we get to use the fund...If we save money for a whole year, the fund increases. Children may have wounds or pneumonia. At first we didn't know anything (about how to save)." (fund user, interview)

"Now, in comparison with before, (my wife) talks in an improved way. After going (to the group) she says: 'it is necessary to save money. We need to do something for society. Even us, we might need (the fund) tomorrow.'" (husband of group member, interview)

Figure 4.
Positive progress.

"It is good to be in the group. Before we had to butter people up to get a loan in the village. Since being in the group we can take out money when we need it" (fund user, interview)

"When we go to the landlord's house we don't get money straight away when we go to ask. He says 'come tomorrow, come tomorrow', even when the sick person is about to die he doesn't give money. If we have money in our home or in the group we can take the money out and use it" (fund non user, interview)

"(the fund) can be useful later on. Once we are old and we can't work, we may need to use the money we raised. In the future our sons and grandsons might not look after us." (group with no fund, focus group discussion)

Interviewer: What I understand is, (in the other community group) there is no cash to give treatment immediately?

"There is fund but no money."

"What to do if a sick person is crying out with pain in their chest? They will die." (group without fund, focus group discussion)

"If a woman has an emergency where will she go to look for a loan? Will others give to her or not?" (group with fund, focus group discussion)

Figure 5.
Independence and availability.