

Managing Health and Financial Risk in Rural Micro-Health Insurance: Conceptualizing Community Health Workers as Risk Intermediaries

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Abstract

Rural households continuously facing significant health and financial vulnerabilities. Though the expansion of micro-health insurance and government financed health insurance schemes are well performed, while these programmes aim to provide financial risk protection, their effectiveness is often limited by certain aspects like insurance awareness, inadequate insurance literacy, administrative complexities, and poor healthcare service among rural populations. The Existing literature has extensively showed community health workers (CHWs), health insurance utilization, and financial risk protection individually; however, limited attention has been given to merge all these domains into one and to make it as a unified conceptual framework.

By Addressing this gap, the present conceptual paper introduces Community Health Worker Risk Intermediation (CHW-RI), a multidimensional construct that conceptualizes CHWs as intermediaries acting for both health and financial risk management in rural communities. Drawing upon the literature on micro-health insurance, community health systems, insurance literacy, and health-service brokerage, the proposed framework comprises eight interrelated dimensions: risk identification, insurance awareness, insurance literacy, trust-building, enrolment facilitation, healthcare navigation, claims assistance, and preventive risk management.

The framework proposes that CHW-RI enhances effective participation in micro-health insurance, which subsequently strengthens financial risk protection, improves healthcare access, and contributes to household well-being. By combining the essence of theoretical perspectives into a comprehensive model, this paper extends the traditional role of CHWs beyond health promotion they must include financial risk intermediation also too. The study offers a fundamental for future empirical research, scale development, and structural equation modelling while providing practical insights for

policymakers and programme managers seeking to strengthen community-based health insurance systems and advance universal health coverage in rural settings.

Keywords: Community Health Workers (CHWs); Community Health Worker Risk Intermediation; Micro-health Insurance; Financial Risk Protection; Insurance Literacy; Healthcare Navigation; Rural Health; Universal Health Coverage.

Introduction

Healthcare expenditure can create a significant financial burden for low-income households, particularly in developing countries where out-of-pocket (OOP) payments remain an important source of healthcare financing. Such payments may force households to reduce consumption, borrow money, or sell productive assets, thereby increasing the risk of poverty. Micro Health Insurance has potential to provide financial risk protection, particularly when schemes are designed according to the economic, cultural and geographical characteristics of low-income communities. (Habib et al., 2016; Reshmi et al., 2021).

Although publicly financed health insurance schemes in India have increased healthcare utilization, evidence regarding their ability to provide financial risk protection remains inconclusive. Several studies have reported little or no reduction in out-of-pocket expenditure, indicating that insurance coverage alone may not be sufficient to protect vulnerable households from healthcare-related financial risks. This highlights the importance of complementary support that can improve awareness, access, enrolment and effective utilization of insurance benefits, particularly among rural and underserved households (Reshmi et al., 2021).

Awareness was often incomplete, since many respondents knew that PM-JAY covered hospitalization, 31.8% could not recall any special features of the scheme. The authors say that awareness campaigns need to provide clear and complete information about scheme benefits, especially to rural and underserved population (Musiega et al., 2023)

some of the Evidence from rural Kancheepuram district in Tamil Nadu found that only 51% of participants were aware of health insurance, who are significantly associated with socioeconomic and educational characteristics. Moreover, even among those aware of the Chief Minister's Health Insurance Scheme, knowledge regarding eligibility, benefits and other scheme features remained incomplete. These findings indicate that information and awareness gaps may prevent rural households from fully utilizing available health-risk protection mechanisms. (Raja et al., 2019).

By considering the background matters, the paper asks: How can Community Health Workers function as risk intermediaries between rural households and micro-health insurance systems? so therefore this paper's contribution is to integrate health-risk management, insurance literacy, community brokerage and financial-risk protection into one conceptual framework.

Conceptual Information

Health risk and financial risk

Health risk refers to the possibility that an individual or household may experience illness requiring healthcare. Such health events can generate financial risk when the associated healthcare costs place a substantial economic burden on the household. In developing countries, reliance on out-of-pocket payments can expose low-income households to catastrophic health expenditure, borrowing, depletion of savings and assets, and impoverishment. Micro-health insurance addresses these financial consequences by providing financial protection against healthcare costs through risk pooling. However, the availability of insurance does not necessarily ensure that vulnerable households can effectively access and utilize the available protection. Thus, the micro-health-insurance literature provides an important financial-risk foundation for the present framework (Reshmi et al., 2021).

Insurance availability and effective financial protection

An important concept which differentiation is proposed: where it start from insurance availability → participation → benefit realization → financial protection. Evidence from India shows why this differentiation matters. Reshmi et al. (2021) found that publicly funded health insurance was associated with increased healthcare utilization, but regarding financial risk protection has remained incomplete.

Insurance Awareness and Insurance Literacy

Awareness is the fundamental variable of insurance engagement, but insurance literacy is wider. It includes understanding eligibility, benefits, inclusion and exclusions, networks providers, documentation process, claims settlement, renewal and grievance mechanisms Parisi et al. (2023) show that awareness of PM-JAY was incomplete and unequal across social groups. In Tamil Nadu, Raja et al. (2019) similarly found gaps in rural health-insurance awareness. These findings support a community-level information function, but they also imply that simply giving information may be insufficient: households need interpretation and support.

Chws As Community–Health-System Intermediaries

CHWs are explicitly framed between communities and health systems.(LeBan et al., 2021) emphasize that this intermediary position creates an opportunity to improve community health but requires effective relationships with both community and health-system actors. (Scott et al., 2018) similarly demonstrate that CHW programme effectiveness depends on programme design and system support. The ASHA literature shows that India has an established community-health workforce through which additional navigation and information functions could potentially be organized (Scott et al., 2019)

Research Gap

The literature reveals a fragmented research landscape. Micro-health-insurance studies focus mainly on risk pooling, utilization and financial protection; CHW studies focus primarily on health promotion, prevention, referral and health-system linkage; insurance-awareness studies focus on knowledge and enrolment; and brokerage studies focus on access to health services. These streams are rarely integrated into one framework that treats CHWs as health-and-financial-risk intermediaries.

Therefore, the gap is not the absence of any prior CHW–insurance interaction. Rather, the gap is the absence of a clearly specified, multidimensional construct that explains how CHWs may reduce informational, relational, administrative and navigation barriers between rural households and health insurance. The proposed construct, CHW Risk Intermediation, addresses this conceptual gap

Conceptual Model

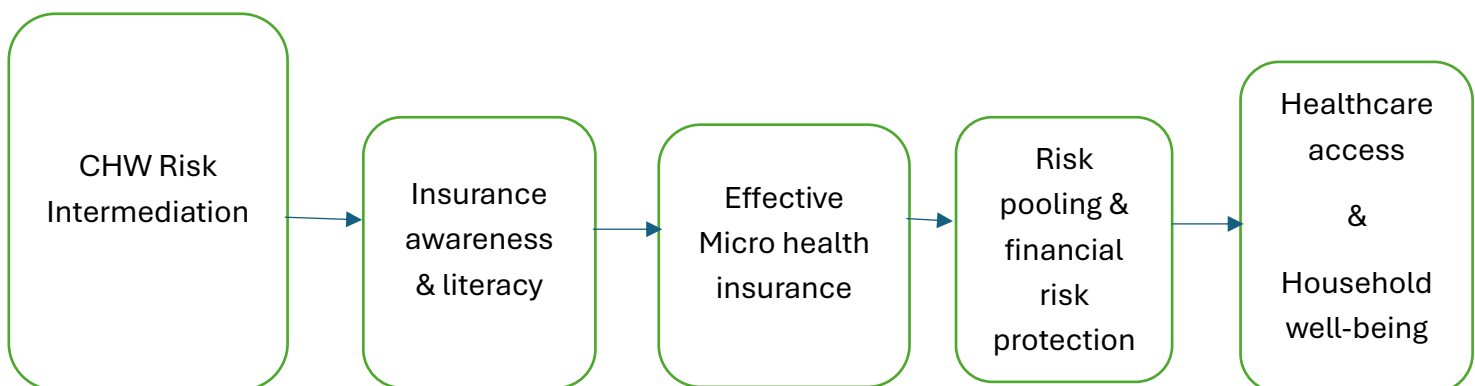


Figure 1. Proposed conceptual framework. The arrows represent relationships to be tested empirically.

Propositions

- P1.** Rural health-risk vulnerability positively increases the perceived need for micro-health insurance and financial risk protection.
- P2.** CHW risk identification positively influences household awareness of available health-insurance schemes.
- P3.** CHW-led insurance awareness positively influences insurance literacy.
- P4.** Higher insurance literacy positively influences perceived usefulness and understanding of micro-health insurance.
- P5.** CHW trust-building positively influences willingness to participate in micro-health insurance.
- P6.** CHW enrolment facilitation positively influences effective insurance participation.
- P7.** CHW healthcare navigation positively influences utilization of insured healthcare services.
- P8.** CHW claims assistance positively influences households' ability to realize insurance benefits.
- P9.** CHW preventive health promotion contributes to improved health-risk management.
- P10.** CHW Risk Intermediation positively influences effective micro-health insurance participation.
- P11.** Effective micro-health insurance participation positively influences financial risk protection.
- P12.** Financial risk protection positively influences healthcare access and rural household well-being.
- P13.** CHW Risk Intermediation strengthens the relationship between insurance availability and effective financial risk protection.

Policy and Managerial Implications

Insurance programmers and government could consider by incorporating insurance literacy, eligibility guidance, referral pathways and claims awareness into appropriate CHW training. However, CHWs should not be treated as sales agents and of course their role should emphasize accurate information, consumer protection and access. Evidence on CHW programmed design shows that training, workload, supervision, financing and role clarity matter for programme sustainability (Abdel-All et al., 2019; Lewin et al., 2021; Masis et al., 2021; Schleiff et al., 2021). Any insurance-intermediation function should therefore be accompanied by clear responsibilities, supervision, digital support and appropriate incentives.

Future Research

Future research can operationalize CHW Risk Intermediation as a higher-order construct. By using a quantitative study can empirically test the proposed pathway CHW-RI → Insurance Awareness and Literacy → Effective Micro-Health Insurance Participation → Financial Risk Protection → Healthcare Access and Household Well-being. The framework proposes that CHW risk intermediation can strengthen households' insurance awareness and literacy, build trust in insurance mechanisms, and facilitate enrolment and effective utilisation of micro-health insurance. Effective participation in micro-health insurance can, in turn, contribute to risk pooling and financial protection against health-related expenditures, thereby supporting healthcare access and improving household well-being. In analysis part may use Structural Equation Modelling (SEM) that would be appropriate for examining the proposed direct and mediated relationships and for empirically validating the multidimensional CHW-RI construct.

Limitations

This is a conceptual paper and does not empirically validate CHW-as risk intermediary. CHW roles vary across health systems, so the construct requires contextual adaptation and empirical scale development. Further, by extending the CHW responsibilities may increase workload this concern is consistent with evidence that CHW motivation and performance depend on workload, supervision, remuneration and programme design.

Conclusion

Micro-health insurance can pool financial risks, but insurance availability does not guarantee effective financial protection. Rural households may remain excluded from benefits because of limited awareness, insurance literacy, trust, enrolment difficulties, navigation barriers and claims complexity CHWs are already positioned at the community–health-system interface and can potentially reduce these barriers. This paper therefore proposes Community Health Worker as Risk Intermediation as a multidimensional construct connecting rural vulnerability, insurance participation and financial risk protection. The framework provides a for future empirical studies and offers a pathway for integrating community-level workers into rural health-insurance risk management.

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