INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE
IFPRI

aighd | AMSTERDAM INSTITUTE FOR GLOBAL HEALTH & DEVELOPMENT

PharmAccess FOUNDATION

PROJECT NOTE NOVEMBER 2019

Gender and resilience to health shocks

Evidence from financial and health diaries in rural Kenya and Nigeria

Wendy Janssens, Berber Kramer and Mike Murphy

Health shocks (unpredictable illnesses and injuries) are an important source of risk for individuals in developing countries. In the absence of formal financial products such as health insurance or health savings accounts, unexpected illness or injury can have severe consequences. The burden of responding to health shocks often falls disproportionately on women, since they usually act as primary caregivers in households, and as a result are responsible for managing the health of children or elderly dependents. Despite this, much research around the uptake of health insurance or other risk-management products focuses on households instead of individuals, without considering how gender may affect individual preferences for, and access to, these products.

To address this issue, this policy brief uses a unique dataset on individuals from rural households in sub-Saharan Africa to demonstrate how the financial lives of men and women differ in important respects, and how these differences may have important implications for policy on universal access to health services.

The dataset comes from the called 'Financial and Health Diaries' project. The project, which was funded by the Netherlands Ministry of Foreign Affairs through the non-governmental organization PhamAccess, collected data from individuals in a sample of rural households in Kenya and Nigeria in 2012-2013. This was done in the context of PharmAccess-implemented health insurance projects in both countries, including both enrollees and non-enrollees (see References below for related research).

While a lot of data in international development rely on annual household surveys, the high-frequency nature of our diaries data gives us a much more detailed and accurate view of the financial interactions

and health events that respondents experience, allowing us to look in detail at how individuals respond to health shocks. A collaborative research team from the Amsterdam Institute for Global Health and Development (AIGHD) and the International Food Policy Research Institute (IFPRI) explored how users of mobile money in Kenya were able to smoothen their consumption following a health shock through informal transfers from other members of their social network (Geng, Janssens, Kramer & van der List 2018). Building on this work, an important next research priority was to explore the relationship between gender and strategies to manage health shocks, exploiting the unique feature of our data collected at the individual level within households. In our surveys both male and female respondents were interviewed on a weekly basis and asked to report all the financial transactions they had undertaken in the previous week, as well as any illnesses or other health events they and their family members had experienced since the last interview.

As a first step, this policy brief explores descriptively a number of key differences in the financial lives of men and women in the sample. Every week, all economically active adult members of the household were asked to report all their financial transactions. Figure I plots two broad categories of these events: income and purchases. The graphs are split by gender, with data from male respondents identified with blue circles, while data from female respondents are identified with red circles. The top row shows the mean number of transactions carried out for each category in each of the two countries, while the bottom row shows the median value of each transaction (converted to US dollars).

In terms of gender, both countries demonstrate similar dynamics. Women report more transactions, both receiving income more frequently, and making many more purchases than male respondents. Conversely, for both income and purchases the average value of the financial flow is greater for men than for women. Hence, we observe women making a relatively large number of small transactions, while men make relatively fewer transactions, but for larger amounts. This reflects a division of responsibilities within households where women manage small day-to-day transactions such as food purchases while men take care of larger infrequent expenditures such as for utilities or agricultural investments. It also indicates that women generate income at shorter intervals but lower amounts, affecting the money they can set aside. As a result, women typically have smaller amounts of cash on hand, which may make them less able to cover the cost of an unexpected healthcare expense.

Financial & Health Diaries Project

Aim: To collect high frequency data on income, spending and health-seeking behaviors in low-income rural households

Countries covered:
Kenya
Nigeria

Data overview:
54 Interviews (Weekly)
241 Households
1416 Individuals
>390k Transactions

Key Questions

What are the health needs of these households?

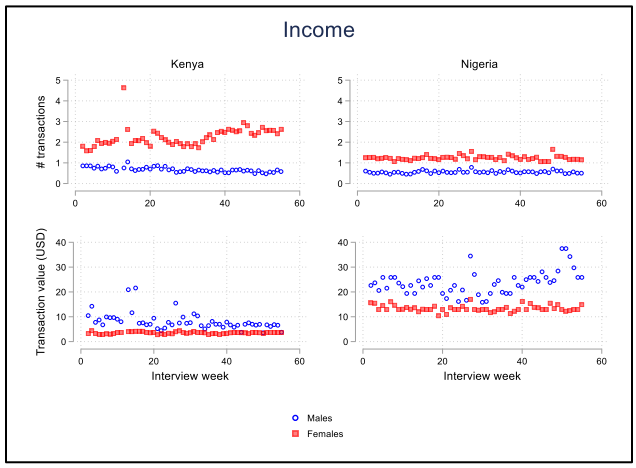
What determines whether people seek health services?

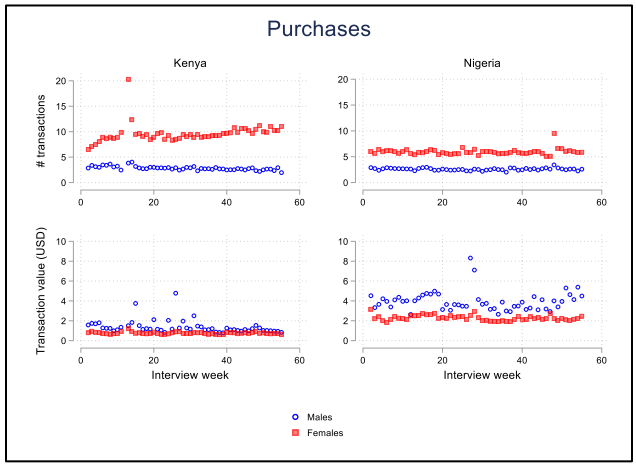
What stops people from enrolling in health insurance schemes?

How do people without insurance cope with health shocks?

Figure 1: Income and purchase transacts, by gender and week

Mean number of transactions per individual, median transaction value (USD)



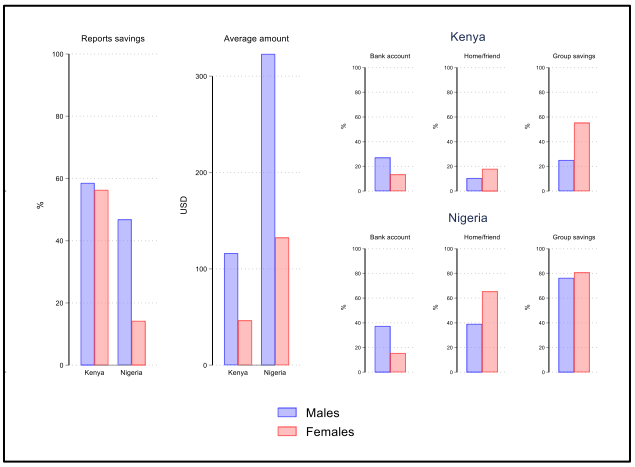


The issue of savings is an important one in this context, given the widespread lack of access to formal financial services in these rural areas. Unexpected illness or injury may require costly treatment and can also prevent economically active individuals from working for a prolonged period. Without access to insurance and credit products, savings can act as a crucial buffer to prevent people from having to dramatically lower their short-term consumption in order to pay for medical costs. Building on the intuition from the Figure 1 above, the diaries dataset can be used to explore savings behavior by gender and offer insights on the differences between men and women in terms of their preparedness for health shocks. Figure 2 provides an overview of how much our respondents had saved using data from stock-taking interviews conducted throughout data collection.

As Figure 2 demonstrates, a substantial share of respondents in both samples reports having some savings (including informal savings) at the time of the interview. In Kenya, the savings rate is similar for women and men (73% of women report having some savings; 70% of men). Savings rates are slightly lower in Nigeria, with 62% of women reporting having savings, relative to 56% of male respondents. While a similar share of men and women report any savings in both countries, men report having saved considerably larger amounts than women. The median male saver in Kenya reports savings equivalent to 75 US dollars, compared to 38 USD for the median female saver. In Nigeria the gap is even more pronounced: the median male saver reports having 284 USD in savings, compared to 100 USD for the median female saver.

Figure 2: Savings status, by gender

Mean savings rate, median amount saved (if any savings) and usage rates by savings type



While both the rate of saving and the amount saved conditional on saving are higher for men, the mechanisms that respondents use to save also have an important gender dimension. In both Kenya and Nigeria, men are more likely to use a formal savings device such as a bank account, while women are more likely to rely on informal strategies, particularly group savings schemes. These savings may be more difficult to

access in an emergency (in many informal savings groups, participants 'take turns' in receiving the pot and may incur social costs if trying to withdraw savings outside of the agreed sequence). They are also more likely to be vulnerable to a common local shock, such as a crop failure, since depositors are often concentrated geographically and exposed to the same risks. Finally, saving money through informal savings groups is inherently risky as funds may be more vulnerable to theft, or the group may prematurely fall apart before all members have received the pot at their turn.

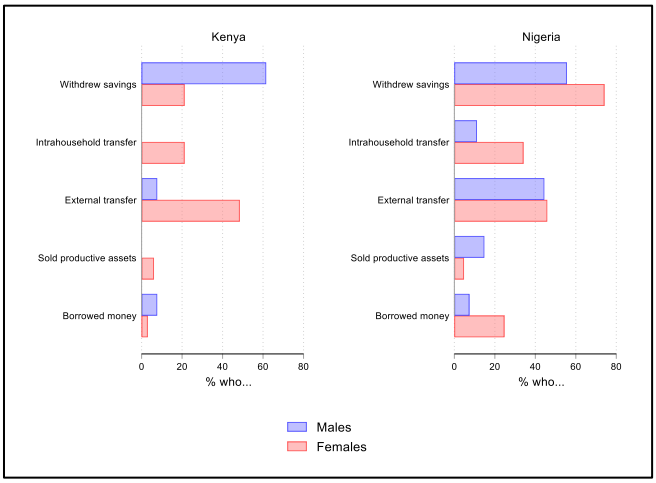
These analyses demonstrate the importance of recognizing that within households, different individuals may not have equal ability to access financial resources. We also know from a large body of research that household members often do not fully share their income with each other (see Quisumbing & Smith, 2018, for a review in the context of health and nutrition). As a result, individuals from the same household may not be equally well-placed to respond to an illness or injury by seeking and paying for health care of sufficient quality. To explore this, Figure 3 looks at reported actions undertaken by adults in the sample who actually experienced an acute health shock but did not have health insurance at the time of the shock occurring. It distinguishes between taking money from own savings, receiving money from another household member, receiving a remittance from outside the household, borrowing money, and selling a productive asset.

For the Kenyan sample, there appears to be a clear pattern of responses by gender. Men are more likely to report having withdrawn savings or borrowed money within two weeks of experiencing an acute health shock. By contrast, women are more likely to report having received a financial transfer, either from another household member (typically their spouse) or from a friend or relative outside of the household.

In Nigeria, gender differences are less pronounced. Women are again more likely to receive a within-household transfer, but also to draw down own savings or borrow money. In this context, men and women are equally likely to receive transfers from outside of the household during weeks with health shocks.

Figure 3: Coping with health shocks by uninsured adults

Percentage of adults who experienced an acute health shock in the past two weeks reporting a given action



We focused above on acute illnesses and injuries reported for individuals without health insurance at the time of the shock. In a recent paper using the Nigeria dataset, Okunogbe and co-authors (2018) look in detail at a wider range of coping strategies to explore how health insurance mediates health shocks, finding that compared to insured households, uninsured households rely more on withdrawing savings and borrowing to smooth household consumption following a health shock. Here, we find that a large share of these actions are undertaken by women, which could be indicative of women playing an important role in Nigerian households' ability to cope with health shocks.

Next Steps

The analysis presented in this policy brief suggests that gender is an important dimension when considering policies and interventions around health risks. What this analysis has not done so far is to look at why this is the case, and how gender interacts with risk mitigation strategies, particularly health insurance. Our next research priority is to answer this question. Using experimental data on respondents' risk and time preferences, along with insights from the economic literature around intra-household resource allocation, we will explore how men and women differ in their ability to access, and in their relative demand for, different strategies to manage health risks. It is our aim to deliver actionable findings which policy-makers can utilize to improve the design and targeting of health insurance schemes in low-resource contexts. Digital technologies might offer innovative solutions in this respect. Women's resilience could for example be harnessed through providing mobile health wallets that empower them to save and manage their expenditures for health directly.

Summary Findings

- Women generally engage in high-frequency low-value transactions, while men transact less often but for much higher amounts.
- Women are less likely to have cash on hand than men, hence less liquidity to cover unexpected health (or other financial) shocks
- Large shares of both men and women in both contexts report having zero savings at baseline, meaning they had no cash on hand to cover an emergency
- In both Kenya & Nigeria, men are more likely to use formal savings mechanisms, while women rely on informal networks which may be more vulnerable to local shocks

ABOUT THE AUTHORS

Wendy Janssens is a senior research fellow with the Amsterdam Institute for Global Health & Development (AIGHD) and an associate professor in development economics at Vrije Universiteit Amsterdam.

Berber Kramer is a research fellow with IFPRI's Markets, Trade and Institutions Division.

Mike Murphy is a senior research analyst with IFPRI's Markets, Trade and Institutions Division and a PhD candidate in economics at the University of Bordeaux.

ACKNOWLEDGMENTS

Funding for this work was provided by the Netherlands Ministry of Foreign Affairs through the Health Insurance Fund, for projects executed by PharmAccess Foundation. This work was undertaken as part of the CGIAR Research Program on Policies, Institutions and Markets, and the Financial and Health Diaries research program of AIGHD.

REFERENCES

Bonfrer I, Van de Poel E, Gustafsson-Wright E, van Doorslaer E. 2018. Voluntary health insurance in Nigeria: Effects on takers and non-takers. *Social Science & Medicine (1982)* **205**: 55–63.

Geng, Xin, Wendy Janssens, Berber Kramer & Marijn van der List (2018), "Health insurance, a friend in need? Impacts of formal insurance and crowding out of informal insurance", *World Development*, 111(196-210), DOI: 10.1016/j.worlddev.2018.07.004.

Gomez GB, Foster N, Brals D, Nelissen, HE, Bolarinwa OA, Hendriks ME, et al. Improving Maternal Care through a State-Wide Health Insurance Program: A Cost and Cost- Effectiveness Study in Rural Nigeria. PLoS ONE. 2015; 10(9): e0139048. doi:10.1371/journal.pone.0139048.

Gustafsson-Wright E, Popławska G, Tanović Z, van der Gaag J. 2018. The impact of subsidized private health insurance and health facility upgrades on healthcare utilization and spending in rural Nigeria. *International Journal of Health Economics and Management* **18**: 221–76.

Hendriks ME, Wit FWNM, Akande TM, *et al.* 2014. Effect of health insurance and facility quality improvement on blood pressure in adults with hypertension in Nigeria: a population-based study. *JAMA Internal Medicine* **174**: 555.

Okunogbe, A., B. Kramer, M. Pradhan and W. Janssens (2018), "Health shocks, health insurance, household welfare and informal coping mechanisms: Evidence from Nigeria", *mimeo.*

Quisumbing, Agnes & Smith, Lisa, C. (2012) "Intrahousehold allocation, gender relations, and food security in developing countries" in "Food Policy for Developing Countries: Case Studies" (eds. Pinstrup-Andersen & Cheng). Ithica: Cornell University Press.

Funding for this work was provided by the PharmAccess Foundation. This work was undertaken as part of the CGIAR Research Program on Policies, Institutions and Markets. This publication has been prepared as part of the Financial & Health Diaries project operated by the Markets, Trade & Institutions Division and has not been independently peer reviewed. Any opinions expressed here belong to the author(s) and are not necessarily representative of or endorsed by IFPRI.

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE
A world free of hunger and malnutrition

1201 Eye Street, NW, Washington, DC 20005 USA | T. +1-202-862-5600 | F. +1-202-862-5606 | Email: ifpri@cgiar.org | www.ifpri.org | www.ifpri.info