# Why Rely on Friends Instead of Family? The Case of Intergenerational Relations and Civic Engagement in Malawi

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**Abstract**

In our paper, we examine why rural Malawians would potentially rely on friends, instead of family members, if a crisis were to fall upon them. We consider how intergenerational transfers, civic engagement, and perceived HIV/AIDS status impact these hypothetical decisions by using the 2008 and 2010 waves of the Malawi Longitudinal Study of Families and Health (MLSFH). The decision to potentially rely on a friend, in a crisis, and the rank of the first would-be friend sought out for help, are seemingly determined by activities outside of the family, rather than by the dynamics within these rural Malawians' families.

Keywords: civic engagement, friends, HIV/AIDS, intergenerational transfers, Malawi

## Introduction

Claude Fischer (1982a; 1982b) was one of the first sociologists to break ground on the roles of friends. He suggests that friends are typically non-kin and used for socializing purposes, whereas relatives are sources of both financial and non-financial support. He summarizes this distinction by noting: "We typically have a good time with friends but turn to relatives in a crisis" (Fischer 1982a, p. 132).

In this paper, we explore this distinction between friends and kin in the context of Malawi, a sub-Saharan African country with strong cultural norms guiding the financial and non-financial resource exchanges amongst its inhabitants as seen throughout sub-Saharan Africa (Evans-Pritchard 1951; Kuper 1963; Radcliffe-Brown and Ford 1950) and in other places with traditional societies (Lévi-Strauss 1969). Like in other parts of the world, families are often a crucial potential source for financial and other forms of support. Yet, Malawians also claim their country to be "The Warm Heart of Africa", which manifests itself in its overtly friendly and helpful national mantra. Given this context, we focus on instances where friends supersede the supportive roles that families play. We examine the circumstances that may explain why rural Malawians turn to friends in times of need.

Our paper provides insights into ongoing sociological discussions on the role of friendship, through an African context. We look at the role differences between family and friends, the types of respondents who would rely on friends instead of family in a crisis, the types of respondents who would only rely on family members in a crisis, and lastly, how far down a ranked list of individuals whom they would seek out for help in crisis, would a friend first appear. We find that respondents who would rely on at least friend, in a crisis have many traits and/or social circumstances that are often the opposite of those who would only rely on family.

This signals that there is indeed something unique about both types of people to go against or adhere to culture norms. Similar factors are also associated with the likelihood of relying on a friend higher up in a hypothetically ranking of who respondents would seek out in a crisis.

By conducting this research in an atypical setting we provide insight into how intergenerational transfers and civic engagement may push individuals to rely on friends instead of their families.

**What is a Friend? A Look at the Sociological Literature on Friendship Support**

Friends and family members both offer financial and non-financial help to individuals, but the extent to which they provide either depends on a variety of circumstances. With many possibilities surrounding what friends do for others, we cannot say there is just one meaning for friendship. Maybe we "get by with a little help from our friends" as The Beatles suggest, but "getting by" and "receiving help" can take on more than one meaning. The most common findings, however, suggest that friends indeed provide non-financial support and certainly less financial support relative to family. Friends help improve one's subjective and objective well-being through socializing, engaging in leisure activities, supplying positive feedback, and providing emotional support in challenging times (Larson, Mannell, and Zuzanek 1986). Friends also offer advice on personal matters, and provide a sense of intimacy or emotional comfort (Gerner and Wilson 2005). However, friends can, at times, be sources of "practical daily support", which more often than not is a responsibility of kin (Van Der Gaag and Snijders 2005). Such practical help includes child care and housework, as well as more logistical support during times of illness or poor health (Cantor 1979; Roseneil and Budgeon 2004). These types of non-financial support will likely change along with friendship patterns, depending on the stage of

one's life though. For example, an individual may start relying on friends for child care after having a baby (Bost et al. 2002). As individuals age and grow distant from friends whom they once asked for personal advice, they may seek out friends simply for companionship (Armstrong and Goldsteen 1990) or even morale support (Hoschild 1973). Despite rarely providing financial support, the varying forms of non-financial, practical, or emotional support that friends provide are still quite important to individuals (Bellotti 2008).

A smaller body of research has uncovered evidence on the ways financial exchanges can take place between friends, noting such exchanges tend to be less substantial and of a different quality than the kinds of financial exchanges that occur amongst most family or other kin (Clark 1981; Uehara 1990). Examples include lending small amounts of money, giving gifts, or even buying one another lunch. However, some research has shown how friends can occasionally also act as "fictive kin" by providing financial support, such as substantial loans and/or offers to share the financial burden of home ownership. These forms of financial support are more commonly associated with kin (Allan 2008). Financial exchanges can even be considered "expressive of the friendship bond" (Walker 1995, p.286), in the sense that a friendship may be defined by these exchanges. Such instances are less normative in the literature, however, and the reasons for such exchanges are not clearly stated.

Another body of literature shows evidence that friends are quite flexible in the kinds of support they offer; they provide both financial and non-financial support, depending on the circumstances (Unger and Powell 1980). Such flexibility in types of support may have stemmed from friends seeing the support they offered as freely chosen and not constrained by traditional norms (Litwak and Szelenvi 1969). Types of support among friends can differ by gender too, in that men are more likely to give other male friends emotional support rather than financial

support, and women are more likely to provide financial support compared to emotional support (Roberto and Pearson Scott 1986); although women still tend to provide greater levels of emotional support than men (Carbery and Buhrmester 1998). Non-kin, like friends and neighbors (who were not considered friends) have even been seen to make up nearly half of individuals' supportive relationships (Wellman and Wortley 1990). Such supportive relationships included *both* financial and non-financial forms of aid. Further, geographical proximity of these friends and neighbors, as compared to kin, may account for respondents' reliance on these non-kin sources of help (Wellman and Wortley 1990).

When taken together, these findings indicate that friendship can be the source of many kinds of support, and that contextual factors such as family structure, intergenerational relationships, the nature of the circumstances when help is needed, and demographic factors such as age and gender, can all play differing roles in defining what kinds of support friends offer one another.

**Who Seeks Help?**

Although context and social structures can influence whether and when a person might seek help from a friend, psychological research on why individuals seek help from friends also provides insights into the factors guiding such exchanges. The evidence shows that help-seekers typically have positive attitudes towards asking for assistance but often must be under a situation of distress in order to do so (Cramer 1999). The presence of a social support system has intuitively positive effects on an individual, but it is the *perceived* presence of others who are willing to help out that act as a buffer to reduce mental stresses (Cohen and Wills 1985; Zimet et al. 1988). Thus, being able to hypothetically or potentially rely on someone—whether or not that

individual is ever needed—is a critical component to this type of support. Consequently, those who do not seek help in stressful situations put themselves at risk of severe livelihood consequences (Brown 1978).

Perception and social setting can interact however, as an individual who may potentially seek help might be influenced by his/her social setting to weigh the costs and benefits of seeking help or relying on one's self (Pescosolido 1992; Shapiro 1980); one's networks and "lay" consultants are crucial in the choice to seek various kinds of help (McKinlay 1973). These apparently rationally constructed individual choices are undoubtedly influenced by social structure (Friedman and Hechter 1988) more than traditional psychologists would lead us to believe; this is not a surprise to sociologists though. Ultimately, it would seem that the key to understanding help-seeking behavior is through a social-cognitive approach (Boldero and Fallon 1995) if such methods are available to researchers.

**Intergenerational Transfers**

Immediate and extended families—which vary in terms of sizes and the gender, age, social status and wealth of its members members—are often seen as the ultimate source of support for individuals in non-market transactions. Family members become financial and non-financial safety nets in contexts where financial market and insurance markets are not readily accessible (Ben-Porath 1980). They offer each other informal insurance which is conditioned upon physical or economic shocks (ie. becoming HIV-positive or experiencing a crop failure in Malawi). But transfers are like gifts—time, energy, services, and goods are exchanged between individuals with no formal institutions requiring repayment of transfers (unlike loans). Transfers may be reciprocated though, but the direction of transfers between individuals often ends up net

in one direction and not completely reciprocal. Families—especially in traditional societies like those found in rural Malawi—are also usually tightly bound and members can keep an eye on one another and essentially "prevent them from becoming lazy or careless, and in other ways taking advantage of the protection provided by their kin" (Becker 1991, p.343). Intergenerational transfers are especially important for a family's survival and prosperity given the range of economic shocks that children, drought, HIV/AIDS, death and other events bring upon those with little disposable income or access to facilities to alleviate these problems. Thus, the younger generations—who are more physically capable and likely to be financially productive—are expected to provide financial and non-financial help to older generations in sub-Saharan Africa (Caldwell 1976). Although African parents may invest more in their children now than before the removal of colonial regimes, children remain a key type of insurance for extended families (Caldwell 2005). Young and adult children will likely remain in this role until states devise and implement old-age support schemes (Lee 2000).

It is obvious that both financial and non-financial forms of support are crucial in sub-Saharan African contexts. However, the constraints of these types of support are based on whether parents, adult children, and young children are alive and not, or how the presence of HIV/AIDS in the family or its stigma may impact these types of transfers is relatively unknown. New evidence suggests that HIV/AIDS does not impact intergenerational transfers—indicating that norms regarding transfers in sub-Saharan Africa are strongly rooted—and that intergenerational transfers are indeed multi-directional (as suggested by Caldwell [2005]) but are often influenced by the number of parents and children alive in a family (Kohler et al. 2012). Continued analyses of the context of financial and non-financial help is clearly needed in sub-Saharan African given the complex dynamics between traditional family and cultural norms,

alongside contemporary phenomena such as HIV/AIDS and the diffusion of "Western" values (Watkins 1987) which would seemingly impact traditional practices, such as who individuals rely on for help.

**Social Capital**

The salient sociological concept of social capital is not directly related to the meaning of friendship or why people seek help, but its essence—that one's connections are generally valuable and potentially useful—is tangentially crucial to understanding why someone would rely on friends or family when in need. Social capital researchers have evaluated the potential for certain actors to benefit an individual based on their broadly defined resources (Bourdieu 1986). In some cases, having close and extended family members nearby and being able to rely on them for financial or non-financial support is the crux of social capital (Coleman 1988; Massey and Espinosa 1997; Palloni et al. 2001). In other cases though, individuals without such strong familial bonds, such as friends and acquaintances, end up permitting individuals to vastly expand their range of connections and improve their livelihoods (Burt 1992; Lin 1999). This process is known as *bridging* social capital and can develop through formal civic engagement—participation in the workplace or community organizations—or informal civic engagement—participation in social activities like going to a local pub to watch a football game (Putnam 2000). In Malawi, participation in formal and informal groups has been seen to affect individuals' knowledge about protective strategies against HIV/AIDS, as well as behavioral change (Gerland 2006). Therefore, members of these groups are quite valuable resources, and participation in such groups could be life saving.

Social capital can lead individuals to find new potential sources of support. If social capital indeed were to affect one's likelihood to seek out a type of person for help, it would add emphasis to the argument that social structure is an important component of help-seeking behavior, and ultimately that the meaning of friendship may be grounded in the context of these connections.

**Setting Matters**

Virtually all friendship studies inadvertently tend to disregard whether the friendship relations and exchanges being studied take place in low income countries (LICs), middle-income countries (MICs) or high income countries (HICs)[1]. More particularly, the most influential research on friendship (reviewed above) has taken place in HICs such as Italy, Canada, the United States, and Netherlands. Given that there is already some variation within these countries as to the role of friendship, it is plausible to think that friendship may play different roles, offer different kinds of support, and be sought out for different reasons in other countries. For instance, research in sub-Saharan Africa has documented friendship roles that are not common in other contexts. This includes anthropological research on "funeral friends" in Central Africa describing how friendships are used mainly for assistance in planning funerals. Only occasionally do these friendships also provide informal and/or small financial-based exchanges, such as traditional beer and food (Stefaniszyn 1950; Tew 1951). Funerals are portrayed as inherently social activities conducive to developing and maintaining friendship ties in Africa. Other studies have shown that in elite African friendship networks, social reciprocity—that is, mutual, recurrent social exchanges not involving financial transfers—is extremely important in maintaining friendship ties (Jacobsen 1968; Jacobsen 1973). Only Adams

[1] These terms are based on 2012 World Bank classifications.

and Plaut (2003) have attempted to bridge continents when they discovered that the rationale in the selection of friends in the US and Ghana actually significantly differed. Americans acquired a wide network of friends who were expected to provide emotional support, whereas Ghanaians friendship networks were considerably smaller since they were more carefully chosen and under the premise that these friends would provide practical assistance such as money or advice. This example implies the caution we must take when assessing what friends provide in different contexts.

Other research that has examined friendship in other parts of the world does not solely seek to understand the meaning of friendship but rather the influences that friends have on various behaviors. For example, the number of friends in Taiwan (Freedman 1987) or Kenya (Kohler, Behrman, and Watkins 2001) differentially impact individuals' fertility decisions based on their attitudes and behaviors towards contraception, although family members and community members are important actors in this process too. And of course, as a result of the HIV/AIDS epidemic, there has been significant research on the friendships involving sexual relationships, and the risks that these sexual relations imply in terms of exposure to HIV infection (Helleringer and Kohler 2005; Helleringer and Kohler 2007). But there is still an ominous lack of analysis directly relating to friendship in such contexts and how applicable the findings in this small body are within other mainstream theories.

**Other Uncertainties in Friendship Studies**

It is also not clear in much of the above literature whether friendship ties are conceptualized as "strong" or "weak"[2]. Friends may be viewed as strong ties in elite business

[2] Granovetter (1973) conceptualized a strong tie as a social relation consisting of high emotional intensity, intimacy, and reciprocity, which has existed over a considerable period of time. In contrast, a weak tie has essentially the

networks (Frank and Yasumoto 1998) or in comparison to acquaintances (Totterdell, Holma, and Hukin 2008; Völker and Flap 1999). Alternatively, they can be viewed as weak ties (Hansell 1984) in comparison to family members (Wellman 1979; Kreager and Haynie 2011), or based on their role flexibility (Litwak and Szelenyi 1969; Bellotti 2008); the last findings, in particular, appear to align with the way that friends and family have been described in the literature on financial and non-financial exchanges. Finally, friendship studies tend to pit friends in contrast to family but because of the known role flexibility of friends, it is quite plausible that not all friends are created equal and certain friends may be used or contacted instead of family members.

**Friendship in Malawi: Our Predictions**

This study will therefore explore friendship through financial and non-financial intergenerational transfers, civic engagement, and the impacts of one's perception of their HIV status. We begin by describing the traits of respondents in our study and the kinds of support offered by family and friends in a cohort of sub-Saharan African respondents over a two year period. More substantively, we seek to understand whether there are potential differences in the *type* of person who would seek help from a friend, in a crisis instead of family members. Further, we analyze what may lead someone to rely on a friend, in a crisis if they generally provide little support in their day-to-day lives. We also consider the order in which family and friends are ranked (1 through 10) as potential forms of support. Given the reviewed research, we explore one proposition and four hypotheses.

opposite traits and is alienated compared to a cluster of strong ties. Strong ties generally constitute an individual's immediate personal network but weak ties *bridge* across otherwise disconnected segments of a network, and they are therefore valuable for accessing information or other valuable resources not possible via strong ties.

*Proposition 1*:

The literature suggests overall that friends will tend to provide non-financial support to respondents while family will provide both financial and non-financial support. In comparison to family, friends will therefore *seem* like weak ties based on less extensive non-financial and financial support provided to respondents.

*Hypothesis 1*:

The more family members that a respondent has, the lower the odds of indicating he/she would potentially rely on a friend, in a crisis, over time, and the lower the odds of potentially relying on a friend closer to 1st than 10th in a ranking of potential supporters.

*Hypothesis 1a*:

If respondents give more financial and non-financial intergenerational transfers towards parents, young children, and adult children than they receive (meaning that respondents give more than they receive), the respondent will have higher odds of indicating he/she would potentially rely on a friend, in a crisis, over time, and the higher the odds of potentially relying on a friend closer to 1st than 10th in a ranking of potential supporters. These transfers are conditioned upon the presence of family members.

*Hypothesis 2*:

Individuals who are more engaged in civic activities will have higher odds of relying on a friend, in a crisis, over time, and have higher odds of potentially relying on a friend closer to 1st than 10th in a ranking of potential supporters. It is possible that individuals who rely on friends

instead of family simply are more engaged in the community through formal and informal events; thus having this type of social capital or not could be associated with different help seeking behaviors. The formation and utilization of non-family ties, through these activities, could result in more diverse networks available to respondents.

*Hypothesis 3*:

The higher the self-perceived probability of being HIV-positive, the higher the odds of relying on a friend, in a crisis, over time, and the higher the odds of potentially relying on a friend closer to 1st than 10th in a ranking of potential supporters. Since HIV/AIDS is a highly stigmatized epidemic in Malawi, we believe that there should be differences in who respondents seek help from given their perceived HIV/AIDS status.

In sum, we describe the roles of friends and family to begin uncovering the meaning of friendship. We then evaluate why individuals would go against cultural norms by seeking out friends instead of family in a crisis, in efforts to provide an initial answer to Muhammad Ali's sociological question in this unusual, but theoretically valuable, sub-Saharan African setting. We find that families, instead of friends, indeed are relied upon more bear the brunt of financial and non-financial support for respondents, and that intergenerational transfers, civic engagement, and one's perceived HIV/AIDS status all help us uncover the mystery of why Malawians would even potentially rely on friends in crises, when families are situated as the undoubtedly normative supporters in this context.

## The Malawian Setting and Data

Since Malawi is one of the poorest nations in the world, it provides an excellent contrast to the likes of wealthier nations, which are the sites of most of the literature on friendship. The data in this study come from the 2008 and 2010 waves of the Malawi Longitudinal Study of Families and Health (MLSFH), which was formerly known as the Malawi Diffusion and Ideational Change Project (MDICP) between 1998 and 2006. The project's goal was to create a representative sample of rural Malawians across its three main regions—North, Central, and South. Approximately 1500 individuals in the respective districts of Rumphi, Mchinji, and Balaka were sampled in each wave with roughly 20-30% turnover among respondents between waves (Anglewicz 2009). Respondents have been continually surveyed in their preferred mother-tongue (chiTumbuka, chiChewa, or chiYao) on a variety of topics including household composition, wealth, HIV/AIDS, sexual activity, economic shocks, mortality, reciprocity, and hypothetical response to crises among a host of other topics. Given that roughly 85% of Malawians live in rural areas (Malawi National Statistical Office 2011), the MLSFH captures the livelihoods of the vast majority of Malawians.

## Questionnaire

We center our study on two sections assessing financial and non-financial exchanges over a two year period: *potential* and *actual* transfers. These data allow for unique analyses examining hypothetical situations where respondents would expect financial and non-financial exchanges from specific individuals, and whether these expectations are met (see the Supplementary Information). We also use other sections of the questionnaire in which respondents indicated

their household structures, their demographic traits, yearly earnings, amount of community engagement, and perceived likelihood of being HIV-positive.

In the *potential* transfers section of both waves, respondents were prompted with the statement and following question: "People in your community occasionally experience various crises, such as famine, health problems, or other events that may lead to economic shortages in your household. If you were to experience such a crisis, who would you ask for assistance?" Respondents were asked to list the 10 most reliable individuals (in order) whom they would seek in a famine "starting with the most reliable source of assistance," when facing a health problem, or other events that could lead to an "economic shortage". These, undoubtedly, are all crises in rural Malawi. Respondents then provided information on these individuals such as their relationship, age, geographic location, and religious affiliation.

In the ensuing *actual* transfers sections, respondents were prompted with the question: "From the individuals you just listed above, who actually provided assistance for you and your family within the past two years?" Respondents listed the frequency and types of their financial and non-financial (collecting firewood, helping with farming, child care, etc.) exchanges with the individuals they listed in the potential transfers section. These two sections were then used to determine the differences in exchange patterns among respondents. The individuals listed were then split into categories of family and friends in order to examine the differences in types of support provided by each group, in addition to traits of respondents who rely on friends and family in both waves.

**Dependent Variables and Methods**

Our initial analyses are based on two logit models: one predicting traits associated with individuals who would rely on *at least* 1 friend out of 10 possible people they would rely on in *both* waves (or not—the other outcome); and the other predicts traits associated with individuals who would rely only on family members out of 10 possible people they would rely on in *both* waves. These binary outcomes were constructed through the potential transfers roster (described above) by aggregating responses to form the distinct categories of "friends" and "family". The category for friends was derived from the two response categories of "friends/other not related through blood or marriage" and "boyfriend/girlfriend". The category for family was created out of 15 response categories ranging from immediate to extended family members. In order to create this binary comparison, several other potential sources of assistance in a crisis were dropped from the analysis: Traditional Authorities, Church leaders, and community leaders but these "alters" were listed minimally by respondents within their ranks.

In addition, we estimate a pooled random effects, ordered logit model (see Allison and Christakis 1994; Allison 1999) predicting respondents' traits and the ranking (1-10) of when respondents would first list a friend whom they would rely on in a crisis. In this table, the 2008 and 2010 waves of data were pooled[3]. We clustered the effects by respondents' identification numbers to control for the clustering of residuals. To most effectively assess the quality of friends by order, we then divided the sample into equal proportions by ranks 1, 2 to 3, and 4 to 10[4].

[3] We confirmed that a random effects model (instead of a fixed effects model) was appropriate through the Hausman Test. This was additionally confirmed through testing the joint significance of the interaction terms in this test model.

[4] We re-estimated this model under the belief that eventually one of the Malawian respondents would rely on a friend, in a crisis. Therefore, a fourth ordered category was created to include individuals who did not say they

**Independent Variables**

We control for individual traits which may impact decisions to rely on friends in a crisis, we first considered basic demographic traits such as gender, age, marital status, religion, and yearly earnings (presented in logged Malawi Kwacha, where 150 Kwacha was equivalent to roughly one US dollar). Then, we consider respondents' immediate family sizes by using information in household rosters. We broke family size into several variables—the number of respondents' living parents, the number of respondents' living parents in-law, the number of living children per respondent, and separately, the number of living young and adult children per respondent—in efforts to evaluate the "supply side" of potential support for respondents. By doing so, we had the opportunity to examine more nuanced effects of the presence or absence of certain family members.

Next, we use measures constructed by Kohler et al. (2012) to account for net intergenerational transfers of financial and non-financial resources. In the questionnaire, respondents were asked to describe the relative amounts of both types of resources they provided to other individuals as well as how much they received from such individuals. These responses were translated into continuous net measures of financial and non-financial transfers (see Kohler et al. 2012 for details) between respondents and their living parents, respondents and their young children, and respondents and their adult children. A mean negative score represents the sample having received more than they gave in the previous year, while positive mean scores indicated

would rely on a friend, in a crisis within the first 10 people they listed. The results were virtually the same as the ones we present below.

giving more than one received in the previous year[5]. The measures on intergenerational transfers allow us to account for the actual types of family support in the past year—both of which could influence why respondents would rely on family or friends.

Our social capital measures—formal and informal civic engagement—were defined in a manner suitable to Putnam's (2000) conceptualization which is based on direct participation in community organizations and participation in community sanctioned events, respectively. Formal civic engagement was initially defined by a scale with possible scores ranging from 0 to 7 and is treated like a continuous variable in our analysis. A score of 0 signifies that respondents were not part of any village committees while a score of 7 indicates that a respondent was on a development committee, a health committee, a funeral group, a market committee, the Chief's council, a District development committee, and a village AIDS committee. Informal civic engagement was approximated by the number of times respondents had been to the following social gatherings in the previous month: a funeral, a drama performance, a beer place, a place where people dance, and a market. The scores ranged from 0 to 100. Both scales were square root transformed in efforts to normalize the distribution of scores.

Finally, to capture potential HIV/AIDS stigma, we used a question posed to respondents in which they claimed how likely (on a scale of 0 to 10 where 0 represents a 0% chance and 10 represents a 100% chance) it was that they were HIV-positive. Actual HIV/AIDS status was not used (due to missing data). Given the gross over-estimations of HIV/AIDS prevalence, or that one has HIV/AIDS, in rural Malawi (see Anglewicz and Kohler 2009; Anglewicz et al. 2010;

[5] In our analyses we present net financial and non-financial transfers between respondents and their parents, their youth children, and their adult children. In the tables, a negative symbol signals that the mean score and average direction of transfers for the sample was negative (meaning that respondents received more than they gave) in that wave while a positive symbol indicates that the mean score and average direction of transfers for the sample was positive (meaning that respondents gave more than they received). However, these measures do not enable us to truly understand the magnitude of the intergenerational transfers in large part because these transfers are impacted by a myriad of factors not captured by our data. While these net transfer variables certainly have such limitations—leaving their interpretation murky—we still tease out possible reasons for the effects witnessed in the analyses.

Kaler and Watkins 2010), perceived HIV/AIDS status may more effectively capture stigma in these areas. HIV/AIDS has even been shown to be associated with lower mental health outcomes than not believing that one has a high probability of currently being infected (Hsieh 2013) which lends support to the possibility of perceived HIV/AIDS stigma.

**The Sample**

A cohort of respondents who participated in both the 2008 and 2010 waves of data were selected for this analysis, while participants who were present in only one of the waves were not included due to the lack of longitudinal data for these respondents. Therefore out of a total of 4050 respondents who completed the survey in 2008 (58.5% women and 41.5% men) and 3790 respondents who completed the survey in 2010 (58.8% women and 41.2% men), we can only use these data on 2969 respondents who completed the survey in both waves (59.7% women and 40.3% men) which accounts for 73.3% of the 2008 wave of respondents and 78.3% of the 2010 wave of respondents (see Table 1 and below for greater detail about the composition of our sample). By keeping individuals who completed the survey in both waves, we are able to more accurately describe the traits associated with individuals who rely on them at different points for support due to our belief that their help-seeking and lifestyle behaviors would likely be consistent over these two time periods. There are some differences between those who did not participate in the 2010 wave though, despite participating in 2008 (see Supplementary Table 1)[6]. However, these differences are substantively small and unlikely to affect our results.

-INSERT TABLE 1 ABOUT HERE-

[6] The respondents who were surveyed in 2008 and not 2010 had fewer children ($p<0.001$), had fewer financial transfers with their parents ($p<0.01$), and less formal civic engagement ($p<0.05$) on average than respondents who participated in both waves.

## RESULTS

### What is a Malawian Friend Compared to Family?

In Table 2, we see that in both 2008 and 2010, greater percentages of respondents reported seeing their friends daily (43.6% and 51.7%), or at least once a week (32.4% and 29.0%) compared to those who see family daily (41.9% and 46.0%) or at least once a week (21.4% and 20.8%). As such, respondents, on the whole, had more frequent contact with their friends than family who were listed as potential/actual sources of help[7], and this may be explained by geographic proximity (see Supplementary Table 2)[8]. Since larger proportions of friends were listed as being located in the respondents' villages *and* the next level of geographic demarcation, the district, compared to family members. Family members were more likely to be found in one of Malawi's major cities or other distant villages and districts.

-INSERT TABLE 2 ABOUT HERE-

However, the financial and non-financial transfers that family and friends provide give us a better indication of the context of the relationships respondents have with these individuals,

[7] The traits of friends and family come from aggregating the lists of up to 10 individuals whom respondents would rely on in a crisis. In 2008 14718 family members were listed as potential sources of assistance (69.4%) compared to the 6493 friends listed (30.6%). A similar pattern was seen in 2010 where 16245 family members were listed (68.8%) compared to 7369 friends (31.2%). The survey did not ask respondents to list the traits of all of their family or friends (whether they would rely on them in a crisis or not) due to time constraints. Nonetheless, we believe that these trends still provide an accurate depiction of the traits of family and friends for these rural Malawians.

[8] As it turns out, in 2008 friends whom a respondent would rely on are less likely to be located in the district or a major city/elsewhere in relation to the village compared to family members. When controlling for location we see that friends are more likely to be seen weekly in comparison to less frequent time periods than family members. In 2010 friends are less likely to be in a major city/elsewhere in relation to the village compared to family members. When controlling for location we see that friends are more likely to be seen weekly *and* daily in comparison to less frequent time periods than family members.

who were listed as potential sources of support in a crisis. Between 42.0% and 46.3% of friends did not provide any financial help to respondents while 36.4% to 39.4% of family did not provide any financial help in the two waves. This suggests that family members provided a bit more financial help than friends across the two waves. In addition, greater proportions of family also provided "some" or "a lot" of financial help as compared to friends. While these differences are not enormous, these patterns reflect findings from Fischer (1982a; 1982b) and other friendship research (Clark 1981; Uehara 1990) on the tendency of family to provide more financial help compared to friends. Family members also frequently provide non-financial help—such as farm production, collect firewood, collect water, cooking, building or maintenance, and care giving—than friends on a yearly, weekly, and daily basis. Friends were only marginally more likely to provide non-financial help to respondents than financial help. Therefore, family members, despite living further away on the whole than friends, still provide more financial and non-financial help to respondents.

Regardless of the rank, as Figure 1 shows, family members are overwhelmingly favored to be a potential source of assistance in a crisis than friends[9]. However, as Figure 2 shows (based on received financial and non-financial transfers from individuals listed in the potential transfers roster), between 60% and 64% of family members listed as potential sources of help actually provided financial and non-financial transfers and between 52% and 58% of friends listed actually provided financial and non-financial transfers; this reinforces our questions about why someone would potentially rely on friends in a crisis, when friends are also less likely to provide help than family members.

[9] In both years, the overall percentage breakdown of family members listed as potential sources of help and friends listed was 70% to 30%, respectively. For the 1st, or 2nd or 3rd rank categories, friends are disproportionately under represented compared to this overall distribution (see Figure 1).

-INSERT FIGURES 1 AND 2 ABOUT HERE-

Our claims about the strength of family or friendship ties are limited though. The data are conditioned on family members and friends being listed as potential sources for resource exchanges (leaving us unclear about the traits of the family members and friends not listed), but it appears that, in terms of frequency of contact, friendship ties are stronger, but in terms of resource exchanges, family members are stronger (see Wellman 1979; Kreager and Haynie 2011). While there were no metrics available to indicate whether friends are there to simply have a good time (as Fischer suggests) or whether they provide more emotional support than family (as some of the friendship literature shows), we still see that family are the primary financial and non-financial supporters for these rural Malawians. Why would anyone rely on a friend?

**Hypothetically Relying on at Least One Friend in Both Waves**

We first look at individuals who would potentially rely on at least one friend, in a crisis in both 2008 and 2010 regardless of the ranking of the friend(s)[10]. While the binary outcome does not tell us anything about the quality of friends (since the "last resort" type of friends are lumped in with the "first resort" type of friends), we get an indication of respondents' propensities to go outside their family networks and rely on others, as well as the unique traits of such respondents. Only 47.5% of respondents indicated they would potentially rely on at least one friend in 2008 and 2010 while the remaining 52.5% would not (leaving the possibility that would rely on a friend in only one wave or neither wave). Thus, listing even one friend in both waves is not practiced by the majority of respondents.

[10] So, someone who listed a friend as the 10th person whom they would seek out in a crisis in both waves would qualify in the same fashion as an individual who would rely on a friend 1st in both waves.

By first testing how the supply of family, controlling for personal traits, is associated with relying on a friend in both waves, we see that the more young children respondents have, the higher odds of relying on a friend, in a crisis in both waves ($p<0.05$ in models 2, 4, and 5) but this effect is insignificant when considering the set of financial and non-financial transfer variables. More adult children, though, are associated with lower odds of relying on a friend, in a crisis in both waves (in models 2-5)[11]. However, to assess the quality of the relationship between respondents and their parents and children, we include the financial and non-financial transfers between these respective generations (models 3 and 6). Net reception of non-financial transfers from adult children is associated with increased odds of relying on a friend in both waves ($p<0.05$).

-INSERT TABLE 3 ABOUT HERE-

In models 4 and 6, we then assess whether respondents' social capital—formal and informal civic engagement—changes the way we understand respondents' propensities to potentially rely on friends in a crisis. In both models we see that being engaged in formal community activities ($p<0.05$)—such as participation in village committees—and informal community activities ($p<0.01$)—such as the market place, beer halls, or dances—is associated with higher odds of hypothetically relying on a friend, in a crisis, than not, in 2008 and 2010.

In models 5 and 6, we add the effect of respondents' perceived HIV/AIDS status under the premise that if one believes he or she is HIV-positive, then that person may be ashamed of

[11] It is only in Table 3 that the inclusion of youth and adult children lead to any significant effects. Since the effects are not consistent even within Table 3 and the effects are insignificant in Tables 4 and 5, it is unclear whether the number of children that a respondent has on average is a meaningful predictor of potential reliance on friends or family members in a crisis.

seeking help from their family (as being HIV-positive is certainly a crisis-like situation for one's finances and life course). In this case though, individuals who believe they have higher probabilities of being HIV-positive are no more likely to rely on friends in both waves than not. We will re-visit this issue when considering how the order of when one would rely on a friend is impacted by one's perceived HIV/AIDS status.

Respondents of Yao ethnicity and those who have higher yearly earnings, also show robust and significantly greater odds of indicating they would rely on at least one friend, in a crisis.

**Hypothetically Relying Only on Family Members**

Are those who would rely on at least one friend, in a crisis different from those who said that they would rely only on family members in the list of ten potential people in both waves? While only 16.3% of our sample responded in this fashion, we see some distinctions in Table 4. The effects of respondents' potential family network sizes, intergenerational transfers, and perceived probability of being HIV-positive are surprisingly insignificant when controlling for all other variables. But most intriguing are the findings that formal civic engagement and informal civic engagement are significantly associated ($p<0.05$ and $p<0.01$, respectively, in models 4 and 6) with relying only on family members. Further, those of Yao ethnicity and those with higher yearly earnings have lower odds of relying only on family members.

It appears that there are some stark differences between respondents who would rely on at least one friend in both years and those who would not rely on a friend in either year, and therefore adhere to cultural norms. Tables 3 and 4 show how respondents' social behaviors and personal traits impact the propensity to rely on friends, who appear to be slightly less reliable for

support than family members. This leaves us with additional questions about the quality of friends whom respondents rely on. Qualitative work would effectively allow us to discover detailed information behind the bonds that respondents have with friends and why they would indeed go slightly against Malawian norms by potentially relying on them in a crisis. But in the absence of such data (at this point), we examine the *order* of when respondents would potentially first rely on a friend, in a crisis, to uncover underlying qualities of these friends.

-INSERT TABLE 4 ABOUT HERE-

**Predicting the Order of When the First Friend is Listed**

In the Table 5, higher levels of informal civic engagement continue to be significantly associated with respondents being more likely to rely on a friend—this time closer to the first in the ranking than tenth (in models 4 and 6). Formal civic engagement is not significant however. Net provision of financial support to parents is positively associated with relying on friends higher up in the potential rankings, in a crisis ($p<0.01$ in models 3 and 6). This may suggest that with many financial resources directed towards their parents, respondents will have up to two fewer individuals on whom they could rely on for assistance in a crisis, and therefore have higher odds of relying on someone else, such as a friend, higher up in this ranking.

Like we saw in Tables 3 and 4, Yaos are more likely to forego relying on family, which could be due to the extreme poverty that they face in the Southern Region (making some family members unreliable), but we have no evidence in our data to support this speculation. Despite being insignificant in Tables 3 and 4, not being married is associated with lower odds of potentially relying on a friend higher up in the ranking. These effects are in the same direction in

Table 3 and in the opposite in Table 4 (like many of our coefficients) which indicates that there may be an important relationship not captured by our modeling. We can only speculate once again—in the absence of specific theory—that the unmarried are a select group who need to rely on their family.

Finally, perception of HIV-positive status is again not associated with relying on a friend closer to 1st than to 10th or beyond in a crisis. Attitudinal research would provide better insight into why this is the case since we know that HIV/AIDS and the ensuing stigma are salient topics of discussion in rural Malawi and that one's perceived probability of HIV/AIDS is related to mental health outcomes.

-INSERT TABLE 5 HERE-

**Reviewing our Hypotheses**

Our first hypothesis predicted that having a larger "supply" of family support available (living children, parents, and parents in-law) would be associated with lower odds of potentially relying on friends and being likely rely on a friend, in a crisis, over time, and potentially relying on a friend closer to 1st than 10th in a ranking of potential supporters. This relationship is generally not witnessed in our analysis except for where we see that having more adult children is associated with lower predicted odds of potentially relying on at least one friend in both waves (Table 3). Additionally, having more young children increases the odds of relying on a friend, in a crisis (Table 3). Hypothesis 1 is minimally supported.

Hypothesis 1a predicted that if respondents, on average, give more financial and non-financial transfers than they receive to their parents, young children, and adult children, then the

respondent, on average, will have higher odds of indicating he/she would potentially rely on a friend, in a crisis, in both waves, and potentially rely on a friend closer to 1st than 10th in a ranking of potential supporters. This relationship is meaningful when predicting the order of when respondents would first rely on a friend, in a crisis since net provision of financial transfers to parents is associated with higher odds of this first potential friend being listed farther up in the ranking (Table 5). Competing evidence in Table 3 suggests that net *reception* of non-financial transfers from adult children is also associated with higher odds of this first potential friend being listed higher in the ranking. Since these effects are somewhat contradictory and inconsistent across our analyses, Hypothesis 1a is minimally supported as well.

The results are much more conclusive with respect to our second hypothesis. We believed that our two social capital measures—formal and informal civic engagement—would be associated with higher odds of relying on a friend, in a crisis, in both waves, and potentially relying on a friend closer to 1st than 10th in a ranking of potential supporters. This is most fully supported by Tables 3 and 4 whereby those with higher scores on both measures are more likely to rely on at least one friend in both waves and those with lower scores on both measures are more likely to rely only on family members in both waves. In Table 5 though, we see that it is only informal civic engagement—going to the market, funerals, drama performances, beer halls, and dances—that is associated with potentially relying on a friend, in a crisis higher in the ranking. For the most part, Hypothesis 2 is supported.

Our third hypothesis predicted that higher perceived probabilities of being HIV-positive (whether one actually is or not) would translate into higher odds of potentially relying on at least one friend in both waves or relying on a friend closer to 1st than 10th in a ranking of potential supporters. This is in large part due to the possible HIV/AIDS stigma from family members that

would lead individuals to be more likely to rely on friends in a crisis. This hypothesis was not supported in any of our analyses.

## Discussion

The purpose of this paper was threefold: to see whether friends in a LIC have similar roles to those in HICs (where the literature stems from), with respect to financial and non-financial exchanges, in comparison to family members; whether there were any unique traits about individuals in Malawi who would seek out a friend for help in a crisis, since such an act would generally go against Malawian norms of relying on family members; and finally, if there are associations between individual qualities and the order of when someone would first rely on a friend.

We see that family members are relied upon, in greater proportions than friends, for financial and non-financial assistance in rural Malawi, there is evidence to suggest that friends operate in a similar fashion to the way Fischer (1982a; 1982b) initially described them. The descriptive statistics relays that family members are much more likely to provide financial support than friends who may provide non-financial help like emotional support, like the majority of the literature on friendship (Cantor 1979; Gerner and Wilson 2005; Larson, Mannell, and Zuzanek 1986; Roseneil and Budgeon 2004; Van Der Gaag and Snijders 2005). But it is important to note that these differences are not as large as one may expect in our sample. This may be due to a selection effect of those who were listed as friends in the potential transfers rosters, since it is plausible that those friends could be *like* family members—fictive kin.

Despite not providing as much help compared to family members, just under half of these rural Malawians still indicated that they would seek out help from at least one friend, in a crisis.

Since we did not have psychological metrics to analyze, yet we know that social structure is indeed important in understanding help-seeking behavior (Friedman and Hechter 1988; McKinlay 1973; Pescosolido 1992) we examined key individual traits and socio-structural components of these individuals' lives to see what may drive them to seek help. It became clear that those who would rely on at least one friend, in a crisis, in both years, are different with respect to some of their financial and non-financial intergenerational transfers, amount of formal and informal civic engagement, and unexpectedly, yearly earnings and ethnicity, than those who would *not* rely on a friend in either year they were asked. Thus, those who seek help from friends are different from those who do not. It is most surprising, however, how intergenerational transfers are relatively unimportant, compared to formal and informal civic engagement, in understanding help seeking behaviors. The decision to potentially rely on a friend, in a crisis, is seemingly determined by activities outside of the family, rather than by the dynamics within these rural Malawians' families.

Finally, we expand upon sociological knowledge about friendship by witnessing that the individual traits and social situations of these individuals are also associated with the hypothetical order of when a friend would first be relied upon in a crisis. The evidence suggests that financial with parents, informal civic engagement, yearly earnings, and ethnicity are a few key factors associated with the decision of when to rely on a friend instead of a family member. While these findings leave us with many new questions about understanding the causal mechanisms or reasoning behind choosing to rely on a friend based on these traits, we have a better understanding of the value of a friend based on individuals' personal traits or social circumstances. Not all rural Malawians are equal, but neither are their friends. Thus, trying to understand the individual, familial, economic, and social factors that drive someone to rely on a

friend is just as important as the type of assistance received. This is well-known by psychologists but known to a lesser extent by sociologists and friendship scholars.

By setting up a situation of life or death (potentially)—which a crisis likely *is*, in rural Malawi, because of poor roads, few hospitals, scarce transportation, or minimal basic services, like running water—we can see the value of friends. Further we are given hints about the reasons why someone would rely on a friend—someone who is likely to be of less use compared to family, from what we know in the literature and from our data too.

Inevitably, there are concerns about how representative this research is of the remaining urban 15% of the Malawian population and more broadly, the generalizability of these results across sub-Saharan Africa. Urban areas in Malawi offer more services, better transportation, and well-developed infrastructures compared to rural Malawi and it is unclear as to how this could change friendship and family dynamics, or, more basically, respondents' answers to these questions.

**Conclusions**

Friends continue to occupy a unique social space in individuals' lives, even in rural areas of one of sub-Saharan Africa's poorest countries. Friends remain to be seen as the primary caregivers and social safety nets as long as the family is an important institution. Friends have role flexibility in the type of help they provide (Litwak and Szelenvi 1969) but they have few expectations placed upon them. So when friends actually are needed, we must scratch our heads and wonder "why now?" Understanding a person's qualities *and* their social circumstances are crucial in future friendship studies. With many gaps—like those found in educational attainment or yearly income—increasing between the rich and the poor in post-industrial nations like the

United States, Britain, and Italy, the less fortunate may have to rely on whomever is available for their financial and non-financial needs; the prominence of friends may thereby increase in such conditions. Gerland's (2006) research on formal and informal groups' influences on rural Malawians' knowledge about HIV/AIDS, and behavioral responses, already informs us that people outside of the family are important components of these individuals' survival strategies. In parts of sub-Saharan Africa where the HIV/AIDS pandemic has left many children without their parents, grandparents, aunts, and uncles, friends too, may be called upon for their help more frequently, in the absence of family.

People seek help under duress as psychologists have noted. Sociologists can expand upon this by more carefully examining not only what predicts reliance on friends or family, but why some friends or family may be called upon sooner rather than later. Our case of rural Malawi reveals this. By expanding research this way and in atypical research sites, we will continue to understand why people rely on friends, and in the process, examine the robustness of sociological theories.

**Table 1: Descriptive Statistics of Respondents in Both Waves**

| | | 2008 | | | 2010 | | |
|---|---|---|---|---|---|---|---|
| **Percent Distributions** | | Female | Male | Total | Female | Male | Total |
| Family Structure | | | | | | | |
| | 0 Living Parents | 34.0 | 38.4 | 35.8 | 35.9 | 39.3 | 37.3 |
| | 1 Living Parent | 33.0 | 29.0 | 31.4 | 33.6 | 30.2 | 32.2 |
| | 2 Living Parents | 33.0 | 32.6 | 32.8 | 30.5 | 30.5 | 30.5 |
| | 0 Living Parents In-Law | 46.5 | 34.7 | 42.0 | 49.2 | 35.7 | 43.9 |
| | 1 Living Parent In-Law | 27.1 | 30.0 | 28.3 | 26.8 | 30.7 | 28.3 |
| | 2 Living Parents In-Law | 26.4 | 35.2 | 29.8 | 24.0 | 33.5 | 27.8 |
| Marital Status | | | | | | | |
| | Married | 79.4 | 87.6 | 82.7 | 76.9 | 87.6 | 81.2 |
| | Not Married | 20.6 | 12.4 | 17.3 | 23.1 | 12.4 | 18.8 |
| Ethnicity | | | | | | | |
| | Yao | 26.28 | 23.60 | 74.44 | 26.28 | 23.60 | 74.44 |
| | Non-Yao | 73.12 | 76.40 | 25.56 | 73.12 | 76.40 | 25.56 |
| **Means** | | | | | | | |
| Family Structure | | | | | | | |
| | # Living Children | 4.1 | 4.5 | 4.2 | 40.3 | 4.6 | 4.4 |
| Age | | 40.4 | 42.5 | 41.2 | 42.4 | 44.5 | 43.2 |
| Estimated Yearly Earnings in Kwacha | | 19488.4 | 37750.6 | 26853.1 | 60415.2 | 91862.7 | 72998.6 |
| N | | 1773 | 1196 | 2969 | 1773 | 1196 | 2969 |

**Table 2: Descriptive Statistics of Relationships with All Family and Friends Listed as Potential Sources of Help in a Crisis and Actual Transfers Received (Percent Distributions)**

| | | 2008 | 2010 |
|---|---|---|---|
| How Often Respondents See Family | Daily | 41.9 | 46.0 |
| | At Least Once a Week | 21.4 | 20.8 |
| | At Least Once a Month | 16.9 | 15.1 |
| | Several Times a Year | 12.2 | 10.4 |
| | Once a Year | 5.9 | 6.2 |
| | Not Every Year | 1.8 | 1.5 |
| How Often Respondents See Friends | Daily | 43.6 | 51.7 |
| | At Least Once a Week | 32.4 | 29.0 |
| | At Least Once a Month | 13.6 | 10.3 |
| | Several Times a Year | 8.5 | 6.9 |
| | Once a Year | 1.7 | 2.0 |
| | Not Every Year | 0.3 | 0.2 |
| Family Location | In Village | 52.6 | 55.7 |
| | In District | 31.5 | 30.7 |
| | In City/Elsewhere | 15.9 | 13.6 |
| Friend Location | In Village | 60.8 | 64.5 |
| | In District | 34.8 | 31.1 |
| | In City/Elsewhere | 4.4 | 4.4 |
| Received Financial Help from Family in the Past Year? | No | 39.4 | 36.4 |
| | A Little | 25.5 | 30.0 |
| | Some | 20.6 | 20.4 |
| | A Lot | 14.5 | 13.3 |
| Received Financial Help from Friends in the Past Year? | No | 46.3 | 42.0 |
| | A Little | 28.6 | 31.5 |
| | Some | 17.0 | 17.5 |
| | A Lot | 8.1 | 9.0 |
| Received Non-Financial Help from Family in the Past Year? | No | 40.0 | 40.1 |
| | Daily | 1.9 | 3.3 |
| | More than Once a Week | 4.9 | 6.7 |
| | More than Once a Month | 8.2 | 9.3 |
| | Several Times a Year | 30.7 | 27.4 |
| | Once | 14.4 | 13.3 |
| Received Non-Financial Help from Friends in the Past Year? | No | 43.7 | 41.4 |
| | Daily | 0.7 | 1.6 |
| | More than Once a Week | 4.3 | 5.9 |
| | More than Once a Month | 8.1 | 7.8 |
| | Several Times a Year | 27.9 | 27.3 |
| | Once | 15.3 | 16.0 |

**Figure 1: Proportions of Family Members and Friends Listed by Rank as Potential Sources of Help in a Crisis**

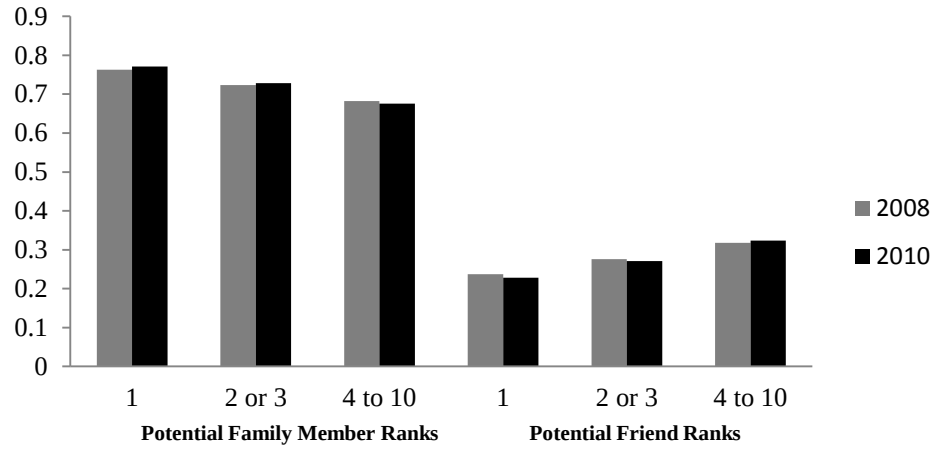

**Figure 2: Family and Friends Listed as Potential Sources of Help in a Crisis and Proportions of Family and Friends Who Actually Provided Transfers**

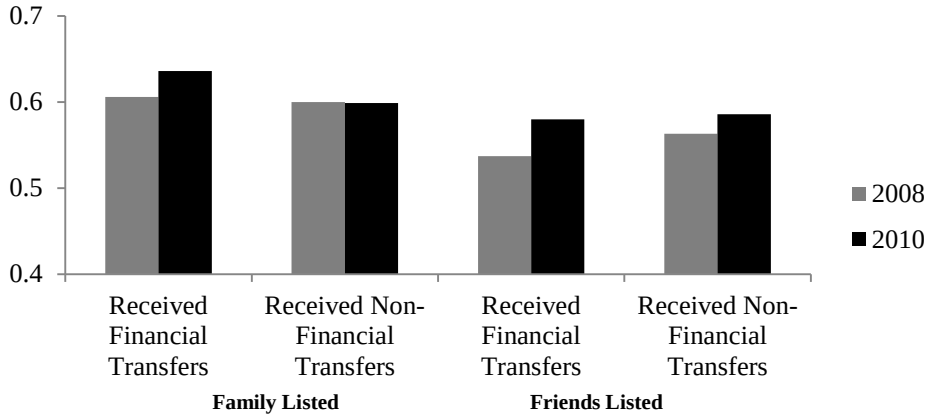

**Table 3: Logit Model Predicting the Odds of Relying on at Least 1 Friend in Both Waves**

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| 1 Living Parent (0) | 1.217 | 1.165 | 1.103 | 1.148 | 1.165 | 1.095 |
| | (0.133) | (0.128) | (0.125) | (0.127) | (0.129) | (0.124) |
| 2 Living Parents (0) | 1.167 | 1.138 | 1.075 | 1.134 | 1.138 | 1.082 |
| | (0.145) | (0.142) | (0.141) | (0.142) | (0.142) | (0.142) |
| 1 Living Parent In-Law (0) | 1.021 | 0.988 | 0.976 | 0.981 | 0.988 | 0.970 |
| | (0.112) | (0.109) | (0.109) | (0.108) | (0.109) | (0.108) |
| 2 Living Parents In-Law | 0.817 | 0.807 | 0.802 | 0.805 | 0.807 | 0.801 |
| | (0.0989) | (0.0988) | (0.0988) | (0.0985) | (0.0989) | (0.0986) |
| # Living Children | 1.030 | | | | | |
| | (0.0202) | | | | | |
| # Living Adult Children | | 0.932** | 0.944* | 0.930** | 0.932** | 0.941* |
| | | (0.0249) | (0.0259) | (0.0248) | (0.0249) | (0.0258) |
| # Living Young Children | | 1.253* | 1.151 | 1.212* | 1.255* | 1.124 |
| | | (0.113) | (0.113) | (0.110) | (0.113) | (0.111) |
| Male (Female) | 1.326** | 1.318** | 1.314** | 1.143 | 1.317** | 1.145 |
| | (0.121) | (0.121) | (0.123) | (0.112) | (0.121) | (0.114) |
| Age | 0.981*** | 0.988** | 0.989* | 0.990* | 0.988** | 0.991* |
| | (0.00391) | (0.00443) | (0.00448) | (0.00451) | (0.00443) | (0.00455) |
| Not Married (Married) | 0.800 | 0.796 | 0.839 | 0.790 | 0.797 | 0.831 |
| | (0.114) | (0.114) | (0.120) | (0.113) | (0.114) | (0.119) |
| Yao (Non-Yao) | 2.446*** | 2.372*** | 2.415*** | 2.377*** | 2.374*** | 2.420*** |
| | (0.250) | (0.243) | (0.250) | (0.244) | (0.243) | (0.251) |
| Yearly Earnings (ln) | 1.110*** | 1.109*** | 1.098*** | 1.101*** | 1.108*** | 1.091*** |
| | (0.0252) | (0.0252) | (0.0250) | (0.0250) | (0.0253) | (0.0248) |
| Net Financial Transfers with Parents (+) | | | 1.102 | | | 1.088 |
| | | | (0.0753) | | | (0.0747) |
| Net Non-Financial Transfers with Parents (+) | | | 1.027 | | | 1.012 |
| | | | (0.0868) | | | (0.0864) |
| Net Financial Transfers with Young Children (+) | | | 1.103 | | | 1.096 |
| | | | (0.0771) | | | (0.0773) |
| Net Non-Financial Transfers with Young Children (+) | | | 1.186 | | | 1.190 |
| | | | (0.113) | | | (0.114) |
| Net Financial Transfers with Adult Children (-) | | | 1.043 | | | 1.039 |
| | | | (0.0397) | | | (0.0400) |
| Net Non-Financial Transfers with Adult Children (-) | | | 1.165* | | | 1.163* |
| | | | (0.0722) | | | (0.0731) |
| Formal Civic Engagement Score (sqrt) | | | | 1.190** | | 1.183** |
| | | | | (0.0715) | | (0.0717) |
| Informal Civic Engagement Score (sqrt) | | | | 1.097** | | 1.094** |
| | | | | (0.0364) | | (0.0363) |
| Perceived Probability of Being HIV+ | | | | | 0.994 | 0.993 |
| | | | | | (0.0219) | (0.0219) |
| Observations | 2507 | 2507 | 2507 | 2507 | 2507 | 2507 |
| *BIC* | 3386.4 | 3383.1 | 3413.4 | 3380.5 | 3390.8 | 3420.0 |

Independent variables based on 2010 outcomes Exponentiated coefficients. Standard errors and reference groups in parentheses.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. BIC=$Dev_m$+k*lnN.

**Table 4: Logit Model Predicting the Odds of Relying Only on Family Members in Both Waves**

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| 1 Living Parent (0) | 0.777 | 0.775 | 0.802 | 0.797 | 0.774 | 0.815 |
| | (0.118) | (0.119) | (0.127) | (0.124) | (0.119) | (0.130) |
| 2 Living Parents (0) | 0.857 | 0.876 | 0.912 | 0.892 | 0.875 | 0.912 |
| | (0.143) | (0.147) | (0.162) | (0.152) | (0.147) | (0.164) |
| 1 Living Parent In-Law (0) | 0.856 | 0.869 | 0.875 | 0.864 | 0.867 | 0.868 |
| | (0.135) | (0.138) | (0.139) | (0.138) | (0.138) | (0.139) |
| 2 Living Parents In-Law | 1.031 | 1.070 | 1.072 | 1.073 | 1.070 | 1.074 |
| | (0.175) | (0.183) | (0.184) | (0.184) | (0.183) | (0.185) |
| # Living Children | 0.964 | | | | | |
| | (0.0246) | | | | | |
| # Living Adult Children | | 1.029 | 1.025 | 1.035 | 1.029 | 1.031 |
| | | (0.0342) | (0.0348) | (0.0346) | (0.0342) | (0.0355) |
| # Living Young Children | | 0.980 | 1.027 | 1.033 | 0.969 | 1.057 |
| | | (0.118) | (0.134) | (0.126) | (0.118) | (0.140) |
| Male (Female) | 0.814 | 0.811 | 0.799 | 0.971 | 0.816 | 0.959 |
| | (0.103) | (0.104) | (0.106) | (0.136) | (0.104) | (0.139) |
| Age | 1.016** | 1.011 | 1.012 | 1.008 | 1.012* | 1.009 |
| | (0.00514) | (0.00599) | (0.00611) | (0.00599) | (0.00601) | (0.00611) |
| Not Married (Married) | 1.092 | 1.146 | 1.119 | 1.152 | 1.137 | 1.123 |
| | (0.194) | (0.201) | (0.197) | (0.204) | (0.200) | (0.200) |
| Yao (Non-Yao) | 0.202*** | 0.209*** | 0.206*** | 0.211*** | 0.208*** | 0.207*** |
| | (0.0398) | (0.0408) | (0.0405) | (0.0412) | (0.0405) | (0.0407) |
| Yearly Earnings (ln) | 0.921** | 0.919** | 0.924** | 0.928** | 0.921** | 0.933** |
| | (0.0245) | (0.0242) | (0.0243) | (0.0245) | (0.0242) | (0.0247) |
| Net Financial Transfers with Parents (+) | | | 0.942 | | | 0.961 |
| | | | (0.0918) | | | (0.0942) |
| Net Non-Financial Transfers with Parents (+) | | | 0.959 | | | 0.988 |
| | | | (0.124) | | | (0.128) |
| Net Financial Transfers with Young Children (+) | | | 0.923 | | | 0.939 |
| | | | (0.0915) | | | (0.0932) |
| Net Non-Financial Transfers with Young Children (+) | | | 0.972 | | | 0.964 |
| | | | (0.121) | | | (0.122) |
| Net Financial Transfers with Adult Children (-) | | | 1.017 | | | 1.020 |
| | | | (0.0449) | | | (0.0453) |
| Net Non-Financial Transfers with Adult Children (-) | | | 0.905 | | | 0.913 |
| | | | (0.0635) | | | (0.0647) |
| Formal Civic Engagement Score (sqrt) | | | | 0.815* | | 0.815* |
| | | | | (0.0675) | | (0.0677) |
| Informal Civic Engagement Score (sqrt) | | | | 0.875** | | 0.875** |
| | | | | (0.0377) | | (0.0379) |
| Perceived Probability of Being HIV+ | | | | | 1.041 | 1.042 |
| | | | | | (0.0294) | (0.0295) |
| Observations | 2507 | 2507 | 2507 | 2507 | 2507 | 2507 |
| *BIC* | 2101.8 | 2110.9 | 2154.3 | 2110.0 | 2116.7 | 2159.8 |

Independent variables based on 2010 outcomes. Exponentiated coefficients. Standard errors and reference groups in parentheses.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. BIC=$Dev_{in}$+k*lnN.

**Table 5: Random Effects Ordered Logit Model Predicting When a Friend Would Potentially First Be Called Upon in a Crisis**

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| 2010 (2008) | 0.976 | 0.978 | 0.994 | 1.003 | 0.976 | 1.020 |
| | (0.06) | (0.07) | (0.07) | (0.07) | (0.06) | (0.07) |
| 1 Living Parent (0) | 1.095 | 1.088 | 1.058 | 1.085 | 1.097 | 1.053 |
| | (0.10) | (0.10) | (0.10) | (0.10) | (0.10) | (0.10) |
| 2 Living Parents (0) | 1.102 | 1.088 | 1.061 | 1.084 | 1.105 | 1.048 |
| | (0.11) | (0.11) | (0.11) | (0.11) | (0.11) | (0.11) |
| 1 Living Parent In-Law (0) | 0.934 | 0.922 | 0.928 | 0.937 | 0.932 | 0.929 |
| | (0.08) | (0.08) | (0.08) | (0.08) | (0.08) | (0.08) |
| 2 Living Parents In-Law | 0.869 | 0.848 | 0.867 | 0.870 | 0.867 | 0.865 |
| | (0.08) | (0.08) | (0.08) | (0.08) | (0.08) | (0.08) |
| # Living Children | 1.030 | | 1.033* | 1.032* | 1.029 | 1.033* |
| | (0.02) | | (0.02) | (0.02) | (0.02) | (0.02) |
| # Living Adult Children | | 0.971 | | | | |
| | | (0.02) | | | | |
| # Living Young Children | | 1.018 | | | | |
| | | (0.05) | | | | |
| Male (Female) | 1.152 | 1.144 | 1.103 | 1.104 | 1.161* | 1.071 |
| | (0.08) | (0.08) | (0.08) | (0.09) | (0.08) | (0.09) |
| Age | 1.003 | 1.008* | 1.004 | 1.004 | 1.003 | 1.005 |
| | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| Not Married (Married) | 0.719** | 0.700** | 0.741* | 0.705** | 0.710** | 0.716** |
| | (0.09) | (0.09) | (0.09) | (0.09) | (0.09) | (0.09) |
| Yao (Non-Yao) | 1.413*** | 1.387*** | 1.417*** | 1.393*** | 1.403*** | 1.388*** |
| | (0.10) | (0.10) | (0.10) | (0.10) | (0.10) | (0.10) |
| Yearly Earnings (ln) | 1.007 | 1.008 | 1.003 | 1.003 | 1.007 | 1.000 |
| | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) |
| Net Financial Transfers with Parents (+) | | | 1.142** | | | 1.139** |
| | | | (0.06) | | | (0.06) |
| Net Non-Financial Transfers with Parents (+) | | | 0.887 | | | 0.885 |
| | | | (0.06) | | | (0.06) |
| Net Financial Transfers with Young Children (+) | | | 0.964 | | | 0.965 |
| | | | (0.05) | | | (0.05) |
| Net Non-Financial Transfers with Young Children (+) | | | 0.980 | | | 0.975 |
| | | | (0.07) | | | (0.07) |
| Net Financial Transfers with Adult Children (-) | | | 1.054 | | | 1.052 |
| | | | (0.04) | | | (0.04) |
| Net Non-Financial Transfers with Adult Children (-) | | | 1.093 | | | 1.092 |
| | | | (0.07) | | | (0.07) |
| Formal Civic Engagement Score (sqrt) | | | | 0.944 | | 0.943 |
| | | | | (0.05) | | (0.05) |
| Informal Civic Engagement Score (sqrt) | | | | 1.087*** | | 1.084** |
| | | | | (0.03) | | (0.03) |
| Perceived Probability of Being HIV+ | | | | | 1.026 | 1.027 |
| | | | | | (0.02) | (0.02) |
| Threshold 1: First Would Rely on a Friend 2nd or 3rd in Ranking (compared to 4th to 10th) | 0.835 | 0.856 | 0.810 | 1.032 | 0.875 | 1.043 |
| Threshold 2: First Would Rely on a Friend 1st in Ranks (compared to 2nd or 3rd) | 2.952 | 3.024 | 2.878 | 3.661 | 3.098 | 3.720 |
| Observations | 3236 | 3236 | 3236 | 3236 | 3236 | 3236 |
| *BIC* | 7148.4 | 7158.5 | 7182.0 | 7152.8 | 7154.0 | 7192.6 |

Exponentiated coefficients. Standard errors and reference groups in parentheses.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. BIC=$Dev_m$+k*lnN.

## Supplementary Information

**Table S1: Key Descriptive Statistics Among Respondents by Attrition Status at Follow Up**

| | Not in 2010 Wave | | In 2008 and 2010 Waves | | | |
|---|---|---|---|---|---|---|
| | Mean | Std Dev | Mean | Std Dev | Means | |
| Alive children | 3.73 | 2.80 | 4.24 | 2.75 | -0.51 | *** |
| Net financial transfers with alive parents (+) | 0.09 | 0.72 | 0.17 | 0.71 | -0.08 | ** |
| Net non-financial transfers with alive parents (+) | 0.11 | 0.49 | 0.09 | 0.47 | 0.02 | |
| Net financial transfers with alive adult children (-) | -0.31 | 1.17 | -0.33 | 1.26 | 0.02 | |
| Net non-financial transfers with alive adult children (-) | -0.11 | 0.74 | -0.07 | 0.61 | -0.03 | |
| Age | 41.21 | 18.44 | 41.23 | 16.52 | -0.02 | |
| Yearly Earnings (ln) | 8.84 | 2.36 | 8.80 | 2.35 | 0.04 | |
| Formal civic engagement | 0.67 | 0.70 | 0.74 | 0.73 | -0.06 | * |
| Informal civic engagement | 3.16 | 1.47 | 3.25 | 1.39 | -0.09 | |
| Perceived Probability of being HIV+ | 1.85 | 2.19 | 1.72 | 2.15 | 0.13 | |

Outcome variables are based on 2010 responses.
*** p<0.001, ** p<0.01, * p<0.05

**Table S2: Logit Model of Traits Predicting Likelihood of Being a Friend Who is Relied Upon Compared to Family**

| | | 2008 | | | 2010 | | |
|---|---|---|---|---|---|---|---|
| | | (1) | (2) | (3) | (1) | (2) | (3) |
| Location [In Village] | In District | 0.952 | | 0.892** | 0.873*** | | 0.968 |
| | | (0.031) | | (0.037) | (0.027) | | (0.040) |
| | In City/Elsewhere | 0.238*** | | 0.266*** | 0.282*** | | 0.410*** |
| | | (0.016) | | (0.020) | (0.017) | | (0.031) |
| How Often You See the Person | Weekly | | 2.314*** | 1.622*** | | 2.382*** | 1.831*** |
| [Not daily or weekly] | | | (0.093) | (0.072) | | (0.097) | (0.084) |
| | Daily | | 1.591*** | 1.038 | | 1.923*** | 1.445*** |
| | | | (0.058) | (0.051) | | (0.069) | (0.073) |
| | Constant | 0.511*** | 0.289*** | 0.447*** | 0.525*** | 0.265*** | 0.353*** |
| | | (0.010) | (0.008) | (0.021) | (0.009) | (0.008) | (0.017) |
| Observations | | 21199 | 21203 | 21194 | 23587 | 23597 | 23572 |

Standard errors in parentheses. * p<0.05, ** p<0.01, *** p<0.001. Reference groups in brackets.

## SECTION 6: POTENTIAL TRANSFERS ROSTER

**Wanthu muchigawa chino nyengo zinyankhe wakukumana namasugzo yakwiza mwamabuchibuchi nge njala, masugzo yakukhwasya umoyo, panji vinthu vinyankhe ivyi vyingapangisya kuchepa kwa ndalama panyumba. Para imwe mungawa mumasuzgo ngati agha kasi mungaluta kwa njani kukapenja wovwiri?**

*Interviewers ask: "People in your community occasionally experience various crises, such as famine, health problems, or other events that may lead to economic shortages in your household. If you were to experience such a crisis, who would you ask for assistance?"*

**[__] 1. List the names of up to 10 individuals whom you would contact in the case of a crisis, <u>starting with the most reliable</u> source of assistance. Interviewer: if respondent has difficulty naming individuals, ask "How about any of your relatives or friends? Or community, religious or political leaders? Or someone who you have given assistance to in the past?**

**[__] 2. If the respondent does not list 10 individuals, ask "How about for less critical economic shortages, like school fees. To whom would you ask for assistance if you were unable to provide?"**

**[__] 3. After listing of names, fill out the table line by line. Ask all questions for each name listed. For CODES, see code sheets**

| ID | PT0: FULL NAME | PT1 | PT2 | PT3 | PT4 | PT5 | PT6 | PT7 | PT9 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | **Kasi pali wubale wuli pakati pa imwe na (zina)**<br>What is (NAME)'s relationship to you? | **Kasi (zina) wali na vyaka vilinga (panji wakababika chaka wuli)?**<br>How old is (NAME)? OR, in what year was (NAME) born?<br>Circle age or birth year<br>DK = 9999 | **Kasi (zina) nyengo zinayinandi wakukhala nkhu?**<br>Where does (NAME) usually stay? | **Kasi (zina) mukuonana pafupipafupi uli?**<br>How often do you see (NAME)? | **Kasi mungapambaniska uli usambazi wa nyumba yaw a (zina) nanyumba yinu?**<br>How does the wealth of (NAME's) household compare to your household? | **Kasi nthowa yenecho iyo (zina) wakusangira ndalama ni vichi?**<br>What is (NAME)'s main way of earning money? | **Kasi (zina) mukusopa nayo mpingo umoza?**<br>Does (NAME) attend the same religious congregation you do?<br>Yes = 1<br>No = 0<br>Dk = 9 | **If any child stays elsewhere ask ;**<br>**Kasi walipo mwana winu uyo wakukhala na munthu uyu?**<br>Do any of your non-resident children live with this person?<br>No....0<br>If Yes<br>Line number of child | |
| LINE | NAME | CODE | AGE OR YEAR OF BIRTH | CODE | CODE | CODE | CODE | CODE | | |
| 1 | | | AGE<br>B-YEAR | | | | | | | |
| 2 | | | AGE<br>B-YEAR | | | | | | | |
| 3 | | | AGE<br>B-YEAR | | | | | | | |
| 4 | | | AGE<br>B-YEAR | | | | | | | |
| 5 | | | AGE<br>B-YEAR | | | | | | | |
| 6 | | | AGE<br>B-YEAR | | | | | | | |
| 7 | | | AGE<br>B-YEAR | | | | | | | |
| 8 | | | AGE<br>B-YEAR | | | | | | | |
| 9 | | | AGE<br>B-YEAR | | | | | | | |
| 10 | | | AGE<br>B-YEAR | | | | | | | |

## SECTION 7: ACTUAL TRANSFERS ROSTER

**Interviewer ask: "Next I want to ask about who <u>actually provided</u> assistance for you and your family within the past two years"**

**[__] 1. Copy the names from the Potential Transfers Roster (Section 6 above) to the table below.**

**[__] 2. After listing of names, fill out the table line by line. Ask all questions for each name listed. For CODES, see code sheet**

**[__] 3. Finally, ask "is there anyone else who you gave help in the past two years- either financial or non-financial?" List any other individuals who the respondent gave financial or non-financial help to in the past two years who are not already listed in Section 2 or 3 (household and family listing).**

| ID | AT0: FULL NAME | AT1 | AT2 | AT3 | AT4 | AT5 | AT6 | AT7 | AT8 | AT9 | AT10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Kasi muli kumupasako (zina) ndalama panji vovwiri wa ndalama muvyaka viwiri vyajupha ivyi?<br><br><u>IF YES: Kasi ndalama izo zikawa ……?</u><br>0 = No<br><u>1 = zichoko</u><br><u>2 = zinandi kweni chomene yayi</u><br><u>3 = zinandi</u><br><br>**<u>If NO or DK, go to AT3</u>** | Kasi mukulindigza kuti i(zina) wazamumuwegzerani ndalama izi?<br><br>Do you expect that name will repay you this money?<br><br>No=0<br>Yes=1<br>DK=99 | **Kasi mu vyaka viwiri ivyo vyajumpha, mwaperekapo wowwiri wuliwose kupatula wa ndalama kwa (zina) ngati kumuthenyera nkhuni, kumupwererera wanthu, kuphika, kulima.**<br><br>In the past two years, have you given (NAME) any non-financial help? This could include help that takes time like collecting firewood, cooking, taking care of people, or helping with farming.<br><br><u>If YES</u>, how often did you help (NAME)?<br><br>**<u>IF NO</u> or DK GO TO AT5** | **Kasi wukawa wowwiri uli uwu mukamupasa (zina)**<br><br>What type of help did you give?<br><br>LIST THE TWO MOST IMORTANT TYPES OF HELP | **<u>IF DK OR NO ON AT1 AND AT3 →GO TO AT6</u>**<br><br>**Kasi (zina) mukamupasako ndalama/wovwiri chifukwa chakuti wakarwaranga?**<br><br>Did you help (NAME), or did you give money to (name) because he/she was in poor health?<br><br>Yes = 1<br>No = 0 | Kasi (zina) wali kumupasaniko ndalama mu vyaka viwiri vyajumpha?<br><br><u>IF YES: Kasi ndalama izo zikawa ……?</u><br>0 = No<br><u>1 = zichoko</u><br><u>2 = zinandi kweni chomene yayi</u><br><u>3 = zinandi</u><br><br>If NO or DK/CR, go to AT8 | Kasi mukulindizga kuti muzamuwezga ndalama izi?<br><br>Do you expect to repay (NAME)?<br><br>Yes = 1<br>No = 0 | **Kasi mu vyaka viwiri ivyo vyajumpha, mwapokerapo wovwiri wuliwose kupatulako wandalama kwa (zina), ngati kumuthenyererani nkhuni, kumupwererani, kumuphikirani, kumulimirani.**<br><br>In the past two years, has (NAME) given you any non-financial help? This could include help that takes time like collecting firewood, cooking, taking care of people, or helping with farming.<br><br>**<u>If NO</u> or DK/CR, go to AT10** | **Kasi wukawa wowwiri uli uwo mukapokera kufuma kwa (zina)?**<br><br>What type of help did (NAME) give you?<br><br>**LIST THE TWO MOST IMPORTANT TYPES OF HELP** | **IF AT6 AND AT8 ARE BOTH NO OR DK/CR DO NOT ASK AT10:**<br><br>**Kasi (zina) wakamupasani ndalama/wovwiri chifukwa chakuti imwe panji munthu munyakhe wakarwaranga?**<br><br>Did (NAME) help you, or did (NAME) give money to you because you or someone in your household was in poor health?<br><br>Yes = 1<br>No = 0<br>DK = 99 |
| LINE | NAME | CODE | CODE | CODE | CODE | CODE | CODE | CODE | CODE | CODE | CODE |
| 01 | | | | | [__][__] | | | | | [__][__] | |
| 02 | | | | | [__][__] | | | | | [__][__] | |
| 03 | | | | | [__][__] | | | | | [__][__] | |
| 04 | | | | | [__][__] | | | | | [__][__] | |
| 05 | | | | | [__][__] | | | | | [__][__] | |
| 06 | | | | | [__][__] | | | | | [__][__] | |
| 07 | | | | | [__][__] | | | | | [__][__] | |
| 08 | | | | | [__][__] | | | | | [__][__] | |
| 09 | | | | | [__][__] | | | | | [__][__] | |
| 10 | | | | | [__][__] | | | | | [__][__] | |

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