Social Capital, Civic Engagement and Self-Reported Health and Well-Being in Ghana

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Abstract

This study employs data from southern Ghana to examine whether higher stocks of social capital through participation in civic groups matter in self-reported health and subjective assessment of household well-being. Drawing on Putnam's conceptualization of social capital, we compare social support, social control, direct participation in and reproductive health discussions within voluntary associations on self-rated health and household well-being. We find that social support and encouragement to use family planning significantly predict self-rated good health and household well-being, while social control and direct participation does not. Also, we detect that while social control is associated with the likelihood of reporting health problems within the last six months; direct participation in voluntary groups is significantly associated with reporting less health problems. We situate the findings in the broader context of the nuanced role social capital plays in health outcomes and discuss their implications for health promotion programs in resource constrained settings.

Introduction

This paper investigates the association between social capital generated within voluntary community organizations and self-reported health and well-being in six communities in Southern Ghana. It is located within the context of recent debates on community-level participation and health and the role of social capital, as conceptualized by Robert Putnam (1993), in the maintenance of population health.

There is an extensive literature within the social sciences on the relationship between rational choices by individuals based on knowledge and attitudes and health behavior change. The classical theory of reasoned action (Azjen and Fishbein, 1980) and the health beliefs models (Becker, Drachman and Kirscht, 1974) are examples of the basis of such research. Similarly,

social support, social influence and norms of social control derived from personal networks have been shown to encourage or deter risky behavior (Marsden and Friedkin 1994; Murabito et al. 2001) and various studies have demonstrated the influence of macro-level factors (such as social class, gender, race etc.) on health outcomes (Marmot 2005). However, not much empirical research exists on community-level participation and its influence on health and well-being.

Although concepts such as “community participation”, “civic engagement”, “local communities” and “empowerment” are now well entrenched in mainstream health discourse and has captured the attention of health planners, policy-makers, activists and academicians, much empirical work remains to untangle the mechanisms and pathways through which participation in community civic organizations can yield health benefits especially in resource-constrained settings such as sub-Saharan Africa. Such work is essential in guiding and monitoring health promotion programs on the continent.

To help fill this gap, it has been advocated that the concept of social capital which has generated much enthusiasm from fields of sociology, political science and economics might be usefully applied to explore the association between community-level participation in civic groups and health (Campbell, Williams and Gilgen 2002; Lomas 1998; Kawachi, Kennedy and Glass, 1999). Although there is an on-going debate about the various ways social capital is conceptualized and measured, much of the application of social capital to health is based on Robert Putnam’s conceptualization which has defined social capital as features of a community such as social cohesion, social support and interpersonal trust and norms of reciprocity that

results from high levels of participation in voluntary civic organizations. Such direct participation is known to facilitate action and cooperation for mutual benefit, especially the consolidation of democracy (Putnam et al.1993; Kawachi and Kennedy, 1997; Kawachi, Kennedy and Glass, 1999). One of the earliest applications of social capital to health found evidence that income inequality within a community was related to reduction in group membership and social trust which in turn was associated with increased rates of mortality (Kawachi and Kennedy, 1997). Other studies link social capital to higher levels of self-rated health (Kawachi, Kennedy and Glass, 1999; Miller, Scheffler, Lam, Rosenberg, & Rupp, 2006), improvements in child health (Drukker, Buka, Kaplan, McKenzie and Van OS, 2005), better mental health (Veentra, 2002) and lower rates of smoking (Lundborg, 2005).

Although more limited, studies in Sub-Saharan Africa on social capital have linked greater stocks of social capital to sexually-transmitted infections and HIV prevention (except one study that we know of that linked village-level social capital to household incomes (Narayan and Pritchett, 1997)). For example, two cross-sectional studies on community-level influences on HIV infection in Southern Africa, found that different types of associational membership has an effect on lower HIV risks (Campbell, Williams and Gilgen 2002; Gregson, Terceira, Mushati, Nyamukapa and Campbell, 2004). While a longitudinal study in rural South Africa also suggests that different types of social capital (structural and cognitive) have potential benefits for HIV prevention through participation in formal and informal social institutions (Pronyk et al., 2008). Thus beyond the risk of HIV infection and prevention, not much is known about community-level influences on health, especially self-reported health and household economic well-being.

Despite the explosion of research on social capital and its application to population health, the concept has been criticized for several reasons. First, research on social capital and health strongly emphasize its positive consequences. However, some researchers argue that while certain features of the concept might be associated with beneficial health outcomes, others might not (Baum, 1999; Portes, 1998; Campbell 2001). For instance, Carpiano (2004) in identifying the four forms of social capital found, contrary to previous studies, that social support from neighborhood-level social networks was positively associated with daily smoking and binge drinking while higher levels of social leverage and informal social control had the opposite effect. Similarly, Campbell et al. 2002 in their study on community level influences on HIV found that while members who belonged to sports clubs were less likely to be HIV-positive and more likely to use condoms, membership in savings clubs was associated with HIV risks behavior (Campbell, Williams and Gilgen 2002). Second, others have criticized the concept as being romanticized, applied too simply and widely and in need of clarification to establish its effects on community health (Fine 2001, Portes 1998; Campbell 2001). Lastly, as hinted above, the few studies on social capital and health in sub-Saharan Africa have been limited to sexual health, to date very little (if any) research specifically explores its relation to self-rated health and household economic well-being. Given previous evidence that simple subjective assessment of global health status predicts mortality in populations, even when known health risk factors (such as smoking) have been accounted for (Benyamini, 1997), this study makes a contribution to illuminating empirical relationships that may exist between civic engagement and health and well-being. This study also draws from previous research on diffusion of

innovations (Rogers 2003), to examine if community associations that foster the spread of sexual health behavior may have an impact on overall health and household well-being.

Thus using key features of social capital as defined by Putnam (1993) such as direct participation in several types of community organizations, social support and social control; we investigate the health-enhancing (or lack thereof) benefits of associational membership in six communities in Southern Ghana. Overall, we ask if higher stocks of social capital matter in general self-reported health status, the likelihood of reporting health problems in the previous six months and a subjective assessment of current and future household economic well-being, after accounting for a range of individual and other community-level factors that are associated with health. We argue that social capital generated through instrumental and expressive social support allows the collective resources of associational members to be harnessed; this in turn generates group identity and perceptions of self-efficacy and empowerment that yields not only health-enhancing benefits but and an optimistic assessment of household well-being. However, norms of social control and influence exerted on members may not operate in a similar way to impact self-rated good health and well-being. Similarly, we argue that the spread of innovative sexual health norms within community organizations constitutes a direct source of social capital which has an impact on self-rated health and household well-being. We discuss our results and their implications for social capital and health and community-level interventions and policies on health in Ghana and similar developing settings.

Methods

Setting

We use data from "the Social learning, social influence and fertility control" household surveys ("Cape Coast Diffusion Project") designed to study diffusion of fertility behavior in six communities located in the Western, Central and Greater Accra regions of southern Ghana. The communities were purposively selected to represent diverse ecological, socio-economic, ethnic and kinship systems in southern Ghana. Four of the communities are inland with farming and trading as the predominant economic activities, while two are on the coast with fishing and trading as the economic activities of choice. Two of the communities located in the Greater Accra region close to the capital city, Accra have a slightly higher socio-economic status (measured by the mean number of household possessions) than the rest. Educational attainment varies widely by community and by gender. Male school attainment beyond the primary level ranges from 32% to 79%. While that of females range from 27% to 58%. Christianity is the religion of choice for nearly all the communities except one, where 90% are Muslim (it is uncommon to find higher concentration of Muslims along coastal areas in Ghana; Muslim communities are typically located in the interior of the country mostly to the north). Lastly, two broad ethno-linguistic groups can be identified; the Akan and Ga-Adangbe with matrilineal and a patrilineal systems of inheritance respectively.

Data

This study draws from 1,283 individual cross-sectional cases collected in Round Six of data collection in 2001 as part of a longitudinal study of the "Cape Coast Diffusion Project" that

begun in October 1998 and lasted until February 2004. Various sampling techniques were employed in selecting respondents within the six communities; in four of the relatively smaller communities, all households were enumerated in a household census and all women aged 18-50 and their partners were selected for panel surveys. In the remaining two larger communities, a variety of sampling techniques, including simple random sampling and complete enumeration, were used to select households for inclusion in the panel surveys (for details on the sampling techniques of this project see project description in Casterline 2007).

In addition to gathering information on respondent's background, childbearing and related reproductive health items such as contraceptive use, fertility preferences, social interaction and HIV/AIDS knowledge attitudes and practices, detailed information was collected on respondents' self-rated health and the subjective assessment of current and future economic situation of the households. A separate module of the survey instrument was devoted to community organizations and associations that exist within the six communities. Each respondent was asked to identify seven potential community organizations or associations they have participated in the recent past. Due to concerns of how long interviews could last without undue fatigue, further questions on their level of involvement, features and activities was limited to only four organizations. While we will prefer to investigate the effects of social capital on health and well-being longitudinally, at least to preserve the temporal order of the hypothesized associations, we are unable to do so effectively as questions on the specific features of social capital examined here although collected in round 6 and 8 of data collection, when included round 8 substantially reduces the sample size thereby posing a threat to the valid estimation of coefficients.

Measures and Statistical Model

Four dichotomous outcome measures on health and household economic well-being are considered. The first outcome was a measure of whether or not the respondent reported any health problems or illnesses since the previous interview (interviews were roughly six months apart). The second outcome measures self-rated general health status. The survey instrument included the following question: “overall, would you say that your health is better, about the same, or worse than at the time of the last interview?” from this item, we created an outcome measure of whether or not the respondent was in better health vs. the same and worse health. The third outcome was respondents’ opinion as to whether or not the economic situation of the household is better vs. about the same, or worse, since the last interview. The last outcome focused on future economic outlook of the household. Respondents were asked “looking ahead, do you think the economic situation of your household will be better, about the same, or worse in a year’s time?” The response categories included “up to God” and “can’t tell” and were both coded into one category together with “about the same” and “worse”. The last two outcomes we argue are proxies for household economic well-being which is known to be associated with health.

Although all the outcome measures are dichotomous and may not capture all the nuances associated with health status and well-being, we believe they are more robust than ordinal or nominal scales and less affected by measurement errors that may arise due to culturally diverse interpretations, linguistic variations and the dynamics of interviewer-respondent interactions.

Our main predictors are features of social capital. We operationalize social capital in terms of five main features of civic engagement and participation in at most four associations. First, we measured the level of participation in associations. This was constructed as whether or not respondents participated in (any) associational activities on monthly and weekly basis (active member) vs. not at all or on a few occasions. Second, we constructed a measure of social support as whether or not respondents received monetary or instrumental assistance, were offered advice, information, funeral support, etc. from any of the four associations vs. no support. Third, social influence exerted on members was measured as whether or not (any) association put pressure on its members in order to change or restrict members' attitudes to social issues. Fourthly, we included a measure of whether or not respondents discussed issues related to HIV/AIDS such as how the disease is spread, how it can be prevented etc. and lastly, we measured whether or not respondents were encouraged to use family planning. The last sets of predictors were included to capture the sexual health impact of participation in community organizations on health and well-being.

We include a set of individual- and household-level controls that are related to individual health and well-being. This includes age and education coded in categories and employment (defined as any work outside the household for which they were paid in kind or cash), marital status and gender coded as dichotomies. Following previous studies that use household possessions as a proxy for household wealth in developing settings, we chose electricity supply to households (after testing other household items either separately or in combination) as an economic status indicator (Filmer and Pritchett 1999). Lastly, the

community from which respondents were sampled was included as a control in itself and as a proxy, partly for ethnicity and lineage type.

Because all the outcome variables are dichotomies, we use binomial logit regression for multivariate modeling. For each outcome only a full model which includes all predictors and controls are presented.

Results

Descriptive Results

On Table 1, we first consider the frequency distribution and cross-tabulations of our predictors, controls and outcomes. Overall, 48% of individuals reported health problems in the last six months, compared to 62% who rated their health as better. Similarly, 44% of individuals reported that their household economic situation was currently better compared to nearly 49% who perceived that their future household economic well-being will be better. On the distribution of features of social capital, the highest proportion was observed among respondents who reported receiving social support from members of their associations (81%). About 74% reported they were active participants in their organizations, while 62% said they discussed HIV within their organizations. The lowest proportions were observed among respondents who reported social control within their associations (54%) and those who were encouraged to adopt methods of family planning (42%). Lastly, on other sample characteristics, more than half the sample were aged above 36 years (54%), 34% had no schooling experience while 43% had secondary or more education. 34% of the sample were male and the rest female (66%). On measures of socio-economic status, majority of the sample worked outside the

household (95%) and had electricity supply to their households (86%). Due to sampling variations, slight differences existed in the distribution of the sample by the six the communities (range-11%-22%).

Table 1 also displays cross-tabulations (column percentages are reported across categories of the independent variables). As expected, a smaller proportion of active members in voluntary organizations (44%) reported health problems in the last six months compared to 55% of inactive members. Surprisingly, none of the other features of social capital were significantly associated with reporting health problems in the last six months. On self-rated health, individuals who were encouraged to use family planning within their voluntary associations were significantly associated with reporting a better health status (68%). Active membership in and social control within voluntary associations were only marginally associated with better self-rated health (61% and 60% respectively). Contrary to our expectations, receiving social support and discussions of HIV within associations while positively associated with better self-rated health were not found statistically significant by the chi-square statistic. On the assessment of household economic well-being, all the features of social capital except membership in voluntary organizations were significantly associated with household economic well-being (at various levels of alpha). None of the indicators of social capital were significantly associated with perceived future economic situation of the household. On the bivariate relationships between our control and dependent variables, age, education and gender were the most notable. For example, older respondents were less likely than younger respondents to perceive the current and future economic situation of the household as better, more educated individuals were more likely than the less educated to be optimistic about the future economic

situation of their household and males were less likely to report health problems, more likely to rate their health as better and more likely to report that the economic situation of their household will be better in the future.

Multivariate Results

Odds ratios from multivariate logit regression are presented on Table 2. Each of the four sections of the table corresponds to an outcome. In section 1, we estimate the likelihood of reporting a health problem or illness since the last interview. As observed from the bivariate relationships on Table 1, results from Model 1 indicate that active members of voluntary organizations are significantly less likely than inactive or occasional members to report health problems or illnesses, even after controlling for other characteristics. The odds of reporting health problems among active members of associations are 44% percent lower than those among inactive members of associations. The coefficient for social support received from members although positive is not statistically significant. That of social control exerted on members for conformity is positive and only marginally significant ($p<.10$). The odds of reporting health problems or illnesses in the last six months among those who reported social influence from associations is 1.3 times that of those who did not. Lastly, the coefficients for whether or not respondents discussed issues related to HIV/AIDS and whether they were encouraged to use family planning methods were not statistically significant. On other effects, it is notable that secondary or higher education as seen in the descriptive analysis has a marginally significant negative effect on reporting health problems as does having electricity supply to households. The effect of gender was negative and significant: men were 35% less

likely to report a health problem or illness since the last interview compared to women. Lastly, respondents from community five (Komfoeku), a farming community from the Fanti ethno-linguistic group in central region of Ghana were significantly less likely to report health problems since the last interview.

The odds ratios from the model predicting whether or not respondents reported being in better health from six months ago are presented in section 2 (Model 2). Surprisingly, unlike the previous model, active members in voluntary associations are significantly less likely to report that they were in better health (put differently they are more likely to report their health status is the same or worse from the last interview) than inactive members, even after controlling for other factors: the odds of reporting a better health status among active members are 30% lower than those among inactive members. However, social support which was not significantly associated with reporting health problems in the previous model is now positive and significantly associated with a better health status: the odds of rating one's health as better among respondents who report receiving social support are 43% higher than those among those who received no social support. The coefficient for social control which was marginally associated with reporting health problems in the previous model) is positive but not statistically significant in this model. So is the coefficient for whether or not issues of HIV/AIDS were discussed within voluntary associations. Lastly, encouragement to use family planning which was significant in the in the bivariate analysis is also highly significant ($p<.001$) and positively associated with rating one's health as better: the odds of rating one's health as better among respondents who were encouraged within voluntary associations to use family planning were 56% higher than among those who received no such encouragement. Among other

effects, employment outside the household was negatively associated with rating one's health as better, whereas men were 31% more likely than women to report a better health status. Both effects were only marginally significant.

In section 3 and 4, we turn to results predicting whether or not the current and future economic situation of the household was and will be better respectively, which as we suggested, serves as a proxy for a general assessment of the socio-economic well-being of the household. As we can see in Model 3 and consistent with the bivariate analysis, active membership in voluntary associations does not significantly affect subjective assessment of current household economic well-being. However, receiving social support which was significantly associated with general self-reported health status is again highly significant and positively associated with perceiving the economic situation of a household as positive: the odds of perceiving the economic situation of a household as positive among those who received social support were 1.6 times than those who did not receive social support. The effect of social control was positive but not significant. That of HIV/AIDS discussions was negative and marginally significant. Respondents who report that issues of HIV/AIDS were discussed in their associations were less likely to perceive the economic situation of their household as positive (OR=0.77). Lastly, the coefficient for encouragement to use family planning is positive but not statistically significant. The effects of a few of the covariates are significant and note worthy. As was the case in the bivariate analysis, younger respondents (those between 16-35 years of age) were more likely than older respondents to perceive the economic situation of their household as positive, employment was marginally associated with

a better perception of household economic situation and men were more likely than women to perceive the economic situation of their household as better.

In the last model (Model 4) which predicts whether or not respondent's assessment of the future economic situation of the household will be better, the coefficients of measures of social capital tell a similar story as in the previous model: those who received social support are significantly more likely to have an optimistic assessment of the future economic outlook of their household; those who report discussions of HIV/AIDS issues in voluntary associations are significantly less likely to be optimistic about the future economic prospects of their household. The only exception is that the coefficient for encouragement to use family planning which was positive but not significant in the previous model is now highly significant: respondents who received encouragement to use family planning were 60 percent more likely to be optimistic about the future economic prospects of their households. Like in the previous model (Model 3), the coefficients for active participation in voluntary associations and social control are not statistically significant in Model 4. That of covariates such as the effects of age and gender remain significant and positively associated with an optimistic assessment of the future economic outlook of the household and lastly, the effect of education at the secondary or higher level attained statistical significance in this model.

All of the goodness of fit statistics suggests that the models are a good fit to the data and are adequate. For example, the -2 log likelihood for the full models reported show lower values than the models with the intercept only (lower values indicate a better fit of the model). The likelihood ratio chi-square is also significant for all the models (Not shown).

To highlight and provide a visualization of gender differences in our dependent outcomes as observed in the multivariate analysis, Figure 1 plots predicted probabilities of measures of general health and household economic well-being by gender. Overall, the figure reinforces female disadvantage in measures of health and household well-being: females have lower predicted probabilities than males for all the outcomes except the likelihood of reporting health problems in the last six months in which they have higher predicted probabilities.

Lastly, exploring interactions effects between gender and our measures of social capital on one hand and health and household economic well-being on the other, turned up two significant interactions. First, men who were encouraged to use family planning were 83% more likely to report that their health status is better compared to women who were encouraged to use family planning within their voluntary associations ($p<.10$). Second, the odds of perceiving the current economic situation of households as better for men who reported social control or influence within voluntary organizations were 2.4 times than among women who reported social control ($p<0.001$) (The results of these interactions are not shown but available upon request). These results again highlight the complex relationships social capital bears with gender and health.

Discussion

This study used data from six communities in southern Ghana to investigate if higher stocks of social capital through participation in community organizations matter in self-reported health status and subjective assessment of current and future household economic well-being. Although limited to a particular sub-Saharan setting, the results of this study hold important

insights not only for the relationship between social capital and health but for health promotion programs in similar resource-limited settings. Results from both bivariate and multivariate analysis show some considerable impact of participation in community organizations on health and well-being.

In most multivariate models, respondents who received social support from members of community organizations reported a better health status and were optimistic about the current and future economic outlook of their households. However, respondents who reported social control and influence from members of community organizations to conform to social issues and attitudes were marginally more likely to report health problems in the last six months and no significant associations were found between members who reported social control and self-rated health status on one hand and the assessment of current and future household economic well-being on the other. Active participation in voluntary associations in and of itself yielded mixed results; although both bivariate and multivariate results showed that respondents who regularly participate in activities of voluntary organizations were less likely to report health problems, they were surprisingly less likely than inactive members to report a better health status and no more likely than inactive members to perceive the current and future economic situation of their household as better. Lastly, discussions of HIV and encouragement to use family planning which were included as proxies for the sexual health impact of community organizations on overall health status and well-being also yielded mixed results. While HIV discussions were not associated with health outcomes, they were significantly associated with a less optimistic assessment of current and future household economic well-being. Encouragement to use family planning on the other hand, was associated with reporting a

better health status in the bivariate and multivariate models and was also linked with an optimistic assessment of the future economic outlook of a household. However, these results must be interpreted with caution, due to the cross-sectional nature of the data and the existence of other, unobserved factors that may influence health and well-being. The detected associations nonetheless, point to the important and complex role features of community social capital bear on subjective assessment of health and household economic well-being.

First, the results highlight the complex and mixed consequences of community social capital on general health status and well-being. While social support offered through monetary or instrumental assistance such as helping each other on the farm or through communal labor, offering advice and exchange of information etc. is associated with self-rated health and household economic well-being; there is no significant impact of social control or influence on self-rated health and well-being. This is contrary to previous studies that have noted that higher levels of social control has positive benefits for such non-health outcomes such as school attrition, academic achievement, employment sources, occupational attainment and the enhancement of government performance and democracy (Coleman 1998; Zhou and Bankston 1996; Putman 1993). Furthermore, our findings on the negative impact of social control on reporting health problems in last six months may be consistent with other studies that point to the negative consequences of social capital. For example, results from studies on sexual health behavior in southern Africa find that while overall, respondents who participate in local community organizations have a better chance of avoiding HIV, young men who belonged to voluntary savings clubs were more likely to be HIV-positive and consume alcohol while women of all ages who belonged to such clubs were more likely to have a casual partner and to

consume alcohol (Campbell, Williams and Gilpen, 2001). However, compared to these studies our study moved beyond types of membership in a range of community groups to test two specific functions of social capital identified in the literature; social capital as a source of community support and as a source of social control (Portes 1998). Similarly, our findings on the negative association between active participation in community associations and self-rated good health are also contrary to Putnam 1995 that found that strong and active participation in civil societies is associated with government performance and the consolidation of democracy.

Second, our finding on the positive association between social support received in community associations and self-rated health on one hand and household well-being on the other relate well to the literature on social capital and health in general and self-rated health in particular. For example, the separate and more advanced literature on social support, social networks and health (particularly psychological distress) that measures social support as a property of individuals rather than the community has produced evidence that social support is associated with better health outcomes either directly or indirectly through stress reduction behavior (Aneshensel 1992; House et al. 1988; Kawachi and Berkman 2001) and that perceived adequacy of support from social network members is more important than received support (Haines et al. 2008; Thoits 1995; Turner and Marino 1994). Given that studies on social support are drawn from membership in social networks, especially ego-centered networks, our findings extend this literature by exploring the impact of participation in community organizations and access to social support within these organizations on self-reported health and household economic well-being. Similarly, our results on social support are very much consistent with studies that find associations between participation in community organizations and self-rated

health (Miller, Lam and Rosenberg 2006; Hyyppa and Maki 2001; Kawachi, Kennedy and Glass, 1999). In a contextual analysis of the relationship between social capital and self-rated health, Kawachi et al. 1999 found effects of low perceptions of social reciprocity and trust and membership in voluntary associations on the risk of self-rated poor health. However, although we found that active participation in community groups is negatively associated with reporting health problems, our findings on the negative association between active participation in voluntary associations and self-rated good health may contradict those of Kawachi et al. 1999 who found significant associations between low per capita membership in voluntary associations in each state and self-rated poor health. Thus overall, our results while largely consistent with previous studies on social support and health, also illustrate the complex relationships between other measures of social capital (such as social control) and general health and household economic well-being.

Although much remains to be learned about the mechanisms through which social capital gathered through associational membership may impact health outcomes, we believe that in settings marked by considerable material deprivation such as southern Ghana, social support, perceived or received, allows the collective resources of members of associations to be harnessed thereby cushioning not only their socio-economic vulnerabilities, but serves as a source of collective identity, perceived efficacy and empowerment (Campbell 2001). The benefits that accrue we argue, are crucial to individual health perceptions and household well-being. On the other hand, it is possible as referenced in the literature, that social control on social issues exerted through group participation may place excessive demands for conformity in tightly knit community groups thereby restricting personal freedoms, autonomy and

responsibility (Portes 1998). While this type of social capital might be appropriate for certain outcomes, it is important to explore further its relevance for self-rated health and perception of household well-being.

Third, with regard to the sexual health impact of associational membership on self-rated health and household well-being, our findings partly resonate with the theory of diffusion of innovations which has been applied to among others things, fertility regulation and the spread of low fertility norms in developing countries (Casterline 2001; Kohler 2001; Montgomery and Casterline 1996), sexual risks perceptions and behavior change to avoid HIV (Agadjanian 2002; Agadjanian and Menjívar 2008; Behrman et al. 2003). This theory points to the rapid spread of innovative behavior (such as condom use to avoid HIV or pregnancy) in communities that are characterized by high levels of social capital. Our findings extend this literature by linking membership in associations that encourage the use of modern family planning with self-rated good health and an optimistic assessment of future household economic well-being. However, our findings on the negative effect of exchange of information on HIV within voluntary associations on the current and future economic outlook of households are somewhat puzzling and require further investigation. Overall, we believe that social capital within voluntary organizations can be generated not only through interactions and the exchange of factual information on HIV or on modern family planning but could trigger notions of "community empowerment" and "community control" that allow members to take responsibility for their health and development needs thereby influencing perceptions of individual health and household economic well-being. However, this hypothesis is not fully tested by this study and requires further investigation before reaching definite conclusions.

Lastly, our results tentative as they seem, may have implications for community-level participation in public health programs and interventions. Since the Alma Ata Conference in 1978 where the concept of community participation was formally introduced and its implications for health discussed, there have been debates as to whether social capital generated within community organizations constitutes a useful social resource for providing health services or does it serve more as an empowerment tool through which local communities take responsibility for their own health planning (Morgan 2001; Nelson Wright 1995; Campbell 2001). Others have also put forth that the widespread public attention given to the effects of social capital especially in the light of Putnam's writings on the subject, risks simplifying and romanticizing the concept and diverting attention away from concrete debates on mitigating poverty and reducing inequality (Portes 1998; Pronyk et al. 2008; Navarro 2004; Campbell 2001). Our results here suggests that social capital in resource constrained communities may be potentially a valuable resource that could simultaneously empower local communities to take responsibility for their own health and household well-being while serving as a useful channel for health education and health service delivery. If the rationalization of our findings is anything to go by, then social capital generated through voluntary associations may serve to enhance group solidarity, create collective identities and perceived self-efficacy which ultimately shapes perceptions of individual health and household economic well-being.

Furthermore, the detected effects of gender on health and household well-being and the presence of a few interaction effects between gender and social capital on one hand and health and household well-being on the other, shows that paying attention to how features of social capital differ by gender (and other socio-economic characteristics) may inform health education

and health service delivery. However, the mechanisms through which this occurs, this study finds, are more complex than shown in previous research that tends to emphasize the positive aspects of social capital. Thus although a complex concept in need of further investigation, social capital may be far from romanticized and can be taken advantaged of to improve individual health and well-being in poor communities in sub-Saharan Africa.

In closing, a few more limitations of our study should be mentioned. Our analysis may have omitted several health related variables associated with self-rated health. Health behaviors such as smoking, alcohol consumption, malnutrition or complications related to obesity etc. could account for the contextual relationship between social capital and health. As mentioned, the lack of temporal order given the cross-sectional nature of the data also prevents causal inferences and leaves open alternative interpretations of our findings. Also, like Putnam's original conceptualization which failed to delineate and test specific mechanisms whereby high levels of participation in voluntary associations would lead to more effective government performance, this study failed to formulate specific hypotheses and test specific pathways through which community associations may impact health and household well-being. These limitations notwithstanding, our study makes some contribution to the debate on the usefulness of social capital for health in general and self-rated health and household well-being in resource-constrained settings in particular.

Tables and Figures

Table 1: Percent Distribution of Features of Social Capital and individual Characteristics by Health and Household Well-					
	Reported Health Problems in Last Six Months	Better Self-Rated Health	Current Economic Situation of Household rated as better	Future Economic Situation of Household rated as better	All
Features of Social Capital					
Active membership	44.49**	60.81†	43.96	48.73	73.52
Social support	48.17	62.81	46.24**	49.71	80.84
Social Control	48.78	60†	47.19*	48.35	54.13
Talked about HIV	47.99	61.4	42.23*	46.74	62.15
Encourage family planning	46.88	68.2**	41.54†	49.63	42.37
Individual-level Controls					
Age					
16-25	49.44	57.22	50.56	61.11**	14.02
26-35	45.57	61.82	49.75	50.49	31.62
36+	48.14	63.75	39.68**	44.56**	54.36
Education					
No School	52.56**	60.23	40.93†	39.53**	33.49
1-6 years of school	49.64	63.41	42.03	43.48*	21.50
7 or more years of school	43.37**	62.72	48.21*	57.53*	43.46
Employed	47.55	61.99	44.86	49.18	95.48
Married	46.31*	62.92	44.2	49.03	88.63
Male	40.18**	66.74*	46.88	54.73**	33.72
Electricity supply to household	46.16*	63.05	44.63	48.87	86.28
Village-level Controls					
Abuesi	49.29	69.29	27.86**	34.64**	21.81
Amanfro	47.83*	71.01*	44.93	42.03	10.75
Brenu-Akyinim	52.49	45.86**	49.72	61.88**	14.10
Frami	46	83**	51*	69**	15.58
Komfoeku	36.68**	78.38**	38.22*	47.49	20.17
Tubaman	54.87*	24.34**	61.5**	43.36†	17.60
Total (percent)	47.51	62.23	44.39	48.75	
Chi-Square Significance: **p≤.01; *p≤.05; † p≤ 1.0. N= 1283					

Table 2: Odds Ratios of Associations Between Features of Social Capital and Self-Rated Health and Household Economic Well-being

	1. Reported Health Problems in Last Six Months		2. Better Self-Rated Health		3. Current Economic Situation of Household rated as better		4. Future Economic Situation of Household rated as better	
Features of Associational Social Capital								
Active membership	0.56	**	0.70	*	0.96		1.09	
Social support	1.14		1.43	*	1.60	**	1.38	*
Social Control	1.26	†	0.94		1.16		1.01	
Talked about HIV	1.13		0.81		0.77	†	0.73	*
Encourage family planning	0.92		1.56	**	1.14		1.60	**
Individual-level Controls								
Age								
16-25	0.89		1.00		1.79	**	2.96	**
26-35	0.81		1.03		1.63	**	1.61	**
Education								
1-6 years of school	0.94		1.04		0.96		0.96	
7 or more years of school	0.79	†	0.99		1.12		1.44	*
Employed	1.24		0.54	†	1.73	†	1.27	
Married	0.84		1.03		0.89		1.01	
Male	0.65	*	1.31	†	1.42	*	1.79	**
Electricity supply to household	0.73	†	1.00		1.16		1.02	
Village-level Controls								
Amanfro	1.04		1.16		2.11	**	1.36	
Brenu-Akyinim	1.07		0.44	**	2.68	**	3.61	**
Frami	0.85		2.33	**	2.62	**	4.61	**
Komfoeku	0.52	**	1.92	**	1.50	*	1.88	**
Tubaman	1.07		0.16	**	3.97	**	1.56	*
2Log Likelihood	1709.11		1440.60		1655.09		1631.46	

Notes: Reference categories: Inactive member, did not receive social support, did not discuss HIV, association does not encourage family planning, ages above 36, no education, not employed outside household, Female, No electricity, Village 1: Abuesi. Significance Level: **p?.01; *p?.05; † p? 1.0. N=1283

Figure 1: Predicted Probabilities of Self-Rated Health and Household Economic Well-Being