

*Full Length Research Paper*

# Community social capital and the use of health care services in Uganda

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Evidence mainly from high and middle income countries shows that community social capital is associated with positive health outcomes. The current policy interest in social capital stems from the anticipation that investing in it will enhance improvements in population health and some governments in high income countries have promoted initiatives to enhance its generation. However, there is a paucity of empirical evidence from low income countries on the utility of social capital for health outcomes. Therefore, the study objective was to assess the role of social capital in the use of health care services in Uganda, a low income country. The study sample included nine hundred and thirty six febrile children with complete data on place of treatment, caregiver social capital and socio-demographic variables; child demographic variables and household socioeconomic status were selected from the Iganga-Mayuge Health and Demographic Surveillance Site data base. The association for each dimension of social capital and use of a public health facility was explored using bivariate and multivariable regression models, controlling for potential confounding factors and other social capital variables at the individual caregiver and community levels. The study found that high levels of trust (OR 2.75, 1.50 to 5.02) and medium levels of informational support (OR 1.68, 1.12 to 2.50) were positively associated with the use of a public health facility. In contrast, high levels of reciprocity (OR 0.69, 0.49 to 0.97) were associated with non-use of a public health facility. This exploratory study shows an independent effect of community social capital on treatment choices made by child caregivers in a predominantly rural area of a low income country. This observation places social capital amongst the other contextual level factors that influence use of health care services in this setting. Such information can be used retrospectively or prospectively by health planners to enhance the response of communities to new policies and strategies.

**Key words:** Social capital, health care service use, children, community, Uganda.

## INTRODUCTION

There is growing evidence that community social capital is associated with positive health outcomes (Szreter and Woolcock, 2004). Robert Putnam who has written widely on social capital describes it as “features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit” (Putnam, 1995). Communities, endowed with high social capital are in a stronger position to confront

poverty and vulnerability including the promotion of mutual health and access to health care services (Woolcock and Narayan, 2000). Thus, the current policy interest in social capital stems from the anticipation that investing in it will enhance improvements in population health (Edwards, 2004) and some governments in high income countries have promoted initiatives to enhance its generation (Government of Canada). Whilst much of this evidence is from high and middle income countries (Rose, 2000; Subramanian, Kawachi et al., 2001; Hendryx et al., 2002; Mohseni and Lindstrom, 2007; Baron-Epel et al., 2008; Mansyur et al., 2008), research

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from low income countries suggests that social capital does play a similar role. For instance, it is clear that social capital enables poor people to overcome access barriers to expensive health care (Ayé et al., 2002; Leive and Xu, 2008; Ware et al., 2009). However, research evidence suggests that level of income of a country influences the nature of social capital (Kaasa and Parts, 2008), which could in turn produce different magnitudes and dimensions of its utility (Fukuyama, 1995) in different locations.

Additionally, the structure of social capital is multi-dimensional, and incorporates different levels and units of analysis (Woolcock and Narayan, 2000; Stone and Hughes, 2002; Kawachi et al., 2004; Szreter and Woolcock, 2004). Thus, countries and indeed sub-groups within countries with different income levels are unlikely to have proportional returns from social capital.

The influence of social capital on access to effective health care services is believed to operate through collective efficacy resulting from social cohesion which taps into norms of trust and reciprocity (Lochner et al., 1999; Ayé et al., 2002; Hendryx et al., 2002; Stone and Hughes, 2002; Ware et al., 2009). Collective efficacy also facilitates instrumental support and lowers transaction costs for information dissemination (Lindström, 2004). In this respect, we would expect social capital at the community level to influence access to social services such that those with higher stocks of social capital would be better enabled to access appropriate social services compared to those communities with lower social capital. Thus, if social capital truly is an enabling factor, we would expect to see higher use of effective health services by communities with higher stocks of social capital.

Of importance to an assessment of the utility of social capital is a recognition of the inequitable income and gender distribution of social capital and access to benefits accruing from it (Silvey and Elmhirst, 2003; Cleaver, 2005; Bakeera et al., 2009). More generally, the case of the women factory workers in Indonesia illustrates how cultural context and expectations can undermine potential benefits of social capital (Silvey and Elmhirst, 2003). Whilst belonging to a social network afforded women some level of moral protection in an unfamiliar urban setting, the expectation was a control over wages that ensured that these were channelled back to their rural families in conformity with the cultural expectation. In contrast, this family support contribution was not expected of their male counterparts. More specifically for health care use, although social capital was identified as one of the facilitating factors for health care use in a qualitative study in the demographic surveillance site in Eastern Uganda, having access to these social resources benefitted the wealthier members of society in terms of overcoming material access barriers to health care use than their poorer counterparts (Bakeera et al., 2009).

Some of the other social factors associated with the

health care choice and use are established as perceived quality of care and socio-economic status (Kiwanuka et al., 2008; Rutebemberwa et al., 2009). Whilst a previous study suggests that social capital could be an additional social determinant for use of health care services (Bakeera et al., 2009), it does not provide evidence on the magnitude of this influence. Thus, the main aim of the study was to investigate the association of social capital with the use of effective health care services in the Iganga-Mayuge Health and Demographic Surveillance Site (HDSS) for febrile children. This was in order to determine the magnitude of association of social capital with use of health care services in relation to other selected known determinants. In exploring the connection between level of social capital and use of health care services, choice of febrile children as study subjects was for the practical reason of data availability as later explained in the methodology. Additionally, febrile illness in children under five years contributes substantially to the burden of morbidity in Uganda and health service use (Uganda Ministry of Health, 2005).

## METHODS

### Study setting

The study is set in the Iganga-Mayuge Health and Demographic Surveillance Site (HDSS) in Eastern Uganda. The demographic surveillance site data baseline was conducted in 2005 and since then update rounds are conducted bi-annually. The area is characterized by low service provision featuring inadequate human and health care financing resources. For instance, only 54% of approved posts in Iganga district were filled with professional workers in 2006. The per capita utilization of outpatient is lower than the national average of 90%, having dropped from 58% in 2005/2006 to only 40% in 2006/07. Additionally, only 68% of the district population lives within a 5 km radius of either a public or private not-for-profit health facility compared to the HSSP II target of 75% (Iganga Local Government Annual Health District 2006/2007 Work-Plan).

The study timing was opportunistic because the data collection overlapped with the change in malaria treatment policy in Uganda, from a failing therapy composed of chloroquine® with sulphadoxine/pyrimethamine (CQ/SP) to a more effective one with an Artemisinin-based-Combination Therapy (ACT) (Malimbo et al., 2006). At the early implementation of the policy change, the new malaria treatment was largely available in the public health units (Medicines for malaria venture and Uganda ministry of health 2008; Rutebemberwa et al., 2009). Therefore the treatment seeking behaviour by caregivers of children at this particular point in time is important because it has implications for whether a child received effective treatment. According to the Integrated Management of Childhood Illness (IMCI) guidelines, any child aged less than five years with fever in an endemic area is presumptively treated for malaria (WHO).

### Sources of data

The study was based on cross-sectional data from the Iganga-Mayuge health and demographic surveillance site in Eastern Uganda.

### Child demographic variables

The HDSS data update round carried out between October to December 2006 included questions on the determinants of choice of health care use (Rutebemberwa et al., 2009). The child demographic

variables obtained from this data set are sex and age of child (<2months, 2 to 11 months, 12 to 23 months, 24 to 35 months, 36 to 47 months, 48 to 59 months). This present study used a sub-sample of children with complete data on place of treatment and whose caregivers had information on social capital (n=936). The outcome measure of utilization of health care services by a febrile child was re-categorized to reflect use and non use of public health facility as follows: 'use' referred to if a child was taken to a public health facility only and 'non-use' was if the child was taken to other sources of care including home, neighbour, private drug shop, community based distributor but not a public health facility (Table 1).

### Socioeconomic and demographic variables

The socioeconomic and demographic information in this study uses data from the second update round of September to December, 2006 (Iganga Mayuge demographic surveillance site, 2010). Caregiver socio-demographic variables from the HDSS data base were - educational attainment of care giver - none, Primary 1 to 4, Primary 5 to 7, Secondary 1 to 4, Secondary 5 to 6, care giver age category <20 years, 20 to 29, 30 to 39, 40 to 49, 50 to 59, =>60; gender (female and male). Each child was assigned the Socio-Economic Status (SES) for head of household. Household head SES was measured by an asset-based index. The final list had a Cronbach's alpha of 0.82 and included a total of 20 items including housing structure (restroom, floor material, roof material, wall material); living standards (cooking fuel) and possession of household durable items (electric cooker, refrigerator, radio, electric iron, charcoal iron, bed net, kerosene lamp, kerosene stove, car, tea table, camera, television, sound stereo, wheel barrow and cell phone). This list of items is comparable to that used by the Uganda Bureau of Statistics. Reliability testing of the asset-based index was done using Cronbach's alpha after the items had been screened for relevance (Cronbach, 1951). The first principal component from PCA was used to generate an asset index that was used to group all households into wealth quintiles (Filmer and Pritchett, 2001) (Table 1).

### Social capital variables

Like most other researchers who use secondary sources, the measurement of social capital in this study is limited to proxy measures since it is generally difficult to find secondary comprehensive data that incorporate all its dimensions (Harpham et al., 2002). The use of a limited scope of social capital questions often incorporating single items such as measures of trust, confidence in governments, voting trends and social mobility has been used in other studies (Lochner et al., 1999). Nonetheless, these single social capital variables such as trust/mistrust and reciprocity (Lochner et al., 1999), have all been invariably associated with health outcomes (Kawachi et al., 1997; Subramanian et al., 2002).

The variables in this study were obtained from the "2008 pilot data set on social capital" where a questionnaire was administered to caregivers of children who had participated in the 2006 "Determinants of delay in care-seeking for febrile children in eastern Uganda". The social capital questionnaire was administered as part of the broader objective of increasing local understanding on the barriers and facilitating factors to health care use. Due to administrative restrictions, the social capital questionnaire in the HDSS was limited to seven questions only. The questions used in this pilot study were selected based on those suggested to have been extensively used, (The national data program for the sciences, 2010; Kawachi et al., 1997; Krishna and Shrader, 1999; Lochner et al., 1999; Hendryx et al., 2002; Stone and Hughes, 2002; Franke, 2005; Zukewich and Norris, 2005) and in our setting applicable to pathways important for use of health care services at community level (Bakeera et al., 2009).

At the individual level, civic trust was assessed by responses to the following survey question: "Do you think that generally other people can be trusted" (Kawachi et al., 1997; Lochner et al., 1999). Caregivers were also asked about social support: "When you think about your life, are there people around you that you can ask for help?" and "When you think about your life, are there people that you can trust to give you

good advice when you need it?" (Zukewich and Norris, 2005). Each child was assigned their caregiver's individual level score for civic trust (low=care giver answered 'no' to whether they thought other people could be trusted and high=care giver answered 'yes'); and social support (instrumental or informational) - high =yes and >5 persons who could provide help/advice when needed; medium=yes and 1 to 5 person who could provide help/advice when needed; low=no persons who could provide help or advice when needed. Reciprocity was assessed by responses to "Do you think that people around here are generally willing to help each out" (yes=high and no=low) (Kawachi et al., 1997; Lochner et al., 1999).

At the community level, collective perceptions of reciprocity were assessed by the following item: "Do you think that people around here are generally willing to help each other out" (Kawachi et al., 1997). Children were assigned to a social capital category (high or low) on the basis of their caregiver's village of residence level of aggregated social capital dimensions. Dichotomous group level variables were created by aggregating the individual responses at the village level (Diez Roux, 2002; Szreter and Woolcock, 2004). The mean was arbitrarily used as the cut-off point between low and high for the dichotomous group variables (Table 1).

### Sample size calculation

The absence of previous data on the magnitude of effect of social capital on the use of health services means that these parameters could not be used in an estimate of sample size. As the next best option, the study uses previously established differences in use by socioeconomic status. The assumption made here is that social capital has a linear relationship with socio-economic status. Data available on differences in use of health care services at the time of undertaking the study was from the Affordability Ladder Patterns Project by the Institute of Public Health (2004) which calculated the national average for the difference in out-patient use between the richest and poorest quintiles as 22%. Thus the sample size used in this study should be able to detect at least a difference of 22% between the least poor (highest wealth quintile) and the most poor (lowest wealth quintile). This analysis was taken from the previous Uganda national household survey data for 1997/1998, 1999/2000 and 2002/2003 which is conducted every two years. Information on use of health care services is only nationally available from the Health Management Information System (HMIS) which covers the public and the private-not-for-profit facilities. The average national utilization of Out-Patient Department (OPD) first attendance of services was 0.90 per capita annually (Ministry of health, annual health sector performance report, 2006/2007). Assuming that the average utilization of services among the rich in 2006 is 0.90 and that the difference in use between the most poor and least poor does not change from that in 2002/2003, this will mean that average use of services among the poor is estimated at 0.68.

Thus the minimum sample size that allows for 5% level of significance and 90% power to detect a difference of at least 22.0% between the highest and lowest quintiles is 80 for each quintile (Splus software). Since there are 5 quintiles, the total required sample will be 400. The available data is based on a sample size of 936 individuals is therefore adequate to detect statistically significant differences at 5% level.

### Statistical analysis

Univariate analysis was done for socio-demographic characteristics of the children and child caregivers. In the bivariate analysis, the children who were taken outside to a public health facility were compared with those who had been taken elsewhere. This was done with respect to child and caregiver socio-demographic characteristics, household head socio-economic status and social capital dimensions at individual and community level (Diez Roux, 2002; Diez Roux, 2004).

The multivariable models explored the association for each dimension of social capital and use of a public health facility, controlling for potential confounding factors and other social capital variables at the individual caregiver and community levels (Diez Roux, 2002; Diez Roux,

**Table 1.** Characteristics of a sample of febrile children reportedly using and not using a public health facility.

<b>Variable</b>	<b>Used a public health facility</b>	<b>Did not use a public health facility</b>
<b>Sex of child</b>	n= 531 (%)	n= 405(%)
Male	268 (50.5)	204 (50.4)
Female	263 (49.5)	201 (49.6)
<b>Age of child</b>	n= 531 (%)	n= 405 (%)
<2 months	55 (10.4)	39 (9.6)
2-11 months	61 (11.5)	44 (10.9)
12-23 months	114 (21.5)	65 (16.0)
24-35months	114 (21.5)	103 (25.4)
36-47months	115 (21.7)	89 (21.7)
48-59months	72 (13.6)	65 (16.0)
<b>Care giver educational status*</b>	n= 496 (%)	n= 384 (%)
None (0 years)	56 (11.3)	55 (14.3)
P1-P4 (1-4 years)	125 (25.2)	90 (23.4)
P5-P7 (5-7 years)	224 (45.2)	175 (45.6)
S1-S4 (8-14 years)	91 (18.3)	64 (16.7)
<b>Care giver age category**</b>	n= 516 (%)	n= 395 (%)
<20 years	25 (4.8)	16 (4.1)
20-29 years	203 (39.3)	153 (38.7)
30-39 years	187 (36.2)	167 (42.2)
>/=40	101 (19.6)	59 (14.9)
<b>Caregiver gender</b>	n= 516 (%)	n= 395 (%)
Male	111 (21.5)	111 (21.5)
Female	405 (78.5)	405 (78.5)
<b>Household head SES quintile</b>	n= 531 (%)	n= 405 (%)
Most Poor	141 (26.6)	113 (27.9)
More Poor	129 (25.4)	100 (24.7)
Poor	67 (12.6)	46 (11.4)
Less Poor	119 (22.4)	86 (21.2)
Least Poor	75 (14.1)	60 (18.3)
<b>Village reciprocity</b>	n= 531 (%)	n= 405 (%)
Low	319 (60.1)	203 (50.1)
High	212 (39.9)	202 (49.9)
<b>Individual caregiver reciprocity</b>	n= 531 (%)	n= 404 (%)
Low	146 (27.5)	94 (23.3)
High	385 (72.5)	310 (76.7)
<b>Village trust</b>	n= 531 (%)	n= 405 (%)
Low	23 (4.3)	34 (8.4)
High	508 (95.7)	508 (91.6)
<b>Care giver level of civic trust</b>	n= 531 (%)	n= 405 (%)
Low	170 (32.0)	125 (30.9)
High	361 (68.0)	280 (69.1)

Table 1. Contd.

<b>Village instrumental support</b>	n= 531 (%)	n= 405 (%)
Low	214 (22.9)	96 (23.7)
Medium	341 (64.2)	217 (53.6)
High	72 (13.6)	92 (22.7)
<b>Caregiver instrumental support</b>	n= 528 (%)	n= 408. (%)
Low	118 (22.2)	110 (27.4)
Medium	299 (56.6)	230 (57.2)
High	79 (15.0)	62 (15.4)
<b>Village informational support</b>	n= 531 (%)	n= 405 (%)
Low	90 (16.9)	80 (19.8)
Medium	370 (69.7)	234 (57.8)
High	71 (13.4)	91 (22.5)
<b>Caregiver informational support</b>	n= 527 (%)	n= 403 (%)
Low	72 (13.7)	67 (16.6)
Medium	360 (68.3)	260 (64.5)
High	95 (18.0)	76 (18.9)

2004). Logistic regression was used for both the bivariate and multivariable analyses. The unit of analysis was the child.

Education of the caregiver is associated with use of health care services in the Ugandan setting (Uganda ministry of health, Mbarara University of Science and Technology, 2002) and is also an independent determinant of social capital (ref). It is therefore a potential confounder of the association between use of health care services and social capital. Similarly, gender of the caregiver is a potential confounder because there are known differences in the distribution of social capital by gender and there could also be differences in the care giving patterns between men and women. Also, socioeconomic status is an independent determinant of social capital and use of health care services so could confound the association of social capital with use of health care services.

#### Ethical clearance

The study received ethical approval from the Makerere University School of Public Health Higher Degrees Research and Ethics Committee. Permission was granted by the management of the Iganga-Mayuge health and demographic surveillance site to use the secondary data sources.

## RESULTS

### Descriptive results

#### *Child and caregiver socio-demographic characteristics*

The number of children used in the analysis is those where information on variables was complete for the child and caregiver characteristics (Table 1). Of the 936 child

children included in the study, 531 (56.7%) children were taken to a public health facility while 405 (43.3%) used other treatment options (community medicine distributor, neighbour, drug shops, other). A comparison of the two groups with respect to child age and gender, caregiver age, gender, education status, household head socioeconomic status and social capital factors revealed that there were no major differences between the two groups (Table 1).

### Community social capital

The distribution of social capital varied for each dimension. The distribution of reciprocity was even with about half of the population perceiving a low level of reciprocity and the other half a high one. The distribution of the aggregate level of trust showed that most children lived in villages where caregivers had a high level of trust. The most prevalent form of informational and instrumental support was the medium category, where caregivers reported having from 1 to 5 persons who could provide good advice or instrumental support when it was needed (Table 1).

### Association of child and caregiver social factor and demographic variables with use of health care services

Table 2 shows the results of the bivariate analysis for the

**Table 2.** Association of child, caregiver and community variables with use of a public health facility.

Variable	Crude OR (95% CI)	P-values
<b>Sex of child</b>		
Male	1.00	
Female	1.00 (0.77-1.29)	0.976
<b>Age of child</b>		
<2 months	1.00	
2-11 months	0.98 (0.56-1.73)	0.953
12-23 months	1.24 (0.75-2.07)	0.403
24-35months	0.78 (0.48-1.28)	0.332
36-47months	0.92 (0.56-1.50)	0.729
48-59months	0.79 (0.46-1.33)	0.372
<b>Care giver education status*</b>		
None (0 years)	1.00	
P1-P4 (1-4 years)	1.36 (0.86-2.16)	0.186
P5-P7 (5-7 years)	1.26 (0.82-1.92)	0.287
S1-S4 (8-14 years)	1.40 (0.86-2.28)	0.182
<b>Care giver age category**</b>		
<20 years	1.00	
20-29 years	0.85 (0.44-1.65)	0.628
30-39 years	0.72 (0.37-1.34)	0.323
>/=40	1.10 (0.54-2.22)	0.800
<b>Caregiver gender</b>		
Male	1.00	
Female	0.86 (0.682-1.19)	0.349
<b>Household head SES quintile</b>		
Most poor	1.00	
More poor	1.03 (0.72-1.48)	0.856
Poor	1.17 (0.74-1.83)	0.500
Less poor	1.11 (0.76-1.61)	0.586
Least poor	1.00 (0.83-1.21)	0.993
<b>Village reciprocity</b>		
Low	1.00	
High	0.67 (0.51-0.87)	0.003*
<b>Individual caregiver reciprocity</b>		
Low	1.00	
High	0.80 (0.59-1.08)	0.131
<b>Village trust</b>		
Low	1.00	
High	2.02 (1.17-3.49)	0.030*
<b>Village level trust</b>		
Low	1.00	
High	2.02 (1.17-3.49)	0.011*

Table 2. Contd.

<b>Care giver level of civic trust</b>		
Low	1.00	
High	0.94 (0.72-1.25)	0.707
<b>Village instrumental support</b>		
Low	1.00	
Medium	1.28 (0.93-1.76)	0.131
High	0.64 (0.42-0.96)	0.031
<b>Caregiver instrumental support</b>		
Low	1.00	
Medium	0.95 (0.71-1.29)	0.755
High	0.93 (0.62-1.41)	0.748
<b>Village informational support</b>		
Low	1.00	
Medium	1.16 (0.99-1.35)	0.066
High	0.83 (0.66-1.03)	0.100
<b>Caregiver informational support</b>		
Low	1.00	
Medium	1.29 (0.89-1.86)	0.178
High	1.16 (0.74-1.82)	0.509

Table 3. Multivariable regression: Association between community social capital and use of public health facility by children aged less than five years.

Variable	Crude OR (95% CI)	Adjusted OR (95% CI) †
<b>Village reciprocity</b>		
Low	1.00	1.00
High	0.67 (0.51-0.87)	0.69 (0.49-0.97)*
<b>Village level trust</b>		
... Low	1.00	1.00
... High	2.02 (1.17-3.49)	2.75 (1.50-5.02)*
<b>Village instrumental support</b>		
Low	1.00	1.00
Medium	1.28 (0.93-1.76)	1.38 (0.96-1.99)
High	0.64 (0.42-0.96)	0.75 (0.43-1.31)
<b>Village informational support</b>		
Low	1.00	1.00
Medium	1.16 (0.99-1.35)	1.68 (1.12-2.50)**
High	0.83 (0.66-1.03)	0.89 (0.49-1.62)

and caregiver social factor and demographic variables. The variables that had a statistically significant

association with use of a public health facility were: village level reciprocity; trust at the individual and

community levels.

### **Relationship between social capital and use of health care services**

Table 3 shows the results of the multivariate analysis for children who were taken to a public health facility. After controlling for the potential confounding factors, the associations of each dimension of social capital were altered but remained statistically significant. The association of reciprocity with use of a public health facility was slightly attenuated and children whose caregivers lived in villages with high reciprocity were 31% less likely to use a public health facility than those who lived in low reciprocity villages ( $p < 0.05$ ). The association between trust and use of a public health facility was strengthened and children whose caregivers lived in villages with high trust were almost three times more likely to use a public health facility ( $p < 0.05$ ). Similarly, the association of informational support with use of a public health facility was strengthened and children whose caregivers lived in villages with a medium level of informational support were almost twice as likely to use a public health facility than those who lived in a village with low informational support ( $p < 0.001$ ). The association of instrumental support with use of a public health facility remained statistically insignificant.

## **DISCUSSION**

High levels of trust and medium informational support were positively associated with the use of a public health facility. In contrast, high levels of reciprocity were associated with non-use of a public health facility.

### **Strengths and weaknesses of the study**

As far as we know, this is the first study in a health and demographic surveillance site in Uganda to explore the association with different dimensions of community social capital and the use of a public health facility. The study includes a range of confounding factors. Like other cross-sectional studies, this one suffers from the limitation of not being able to attribute any causality to the associations found in this paper.

By using estimates of social capital that were measured at a slightly different time (Dec 2007- Jan 2008) than the outcome variable (Oct – Dec 2006) we made the assumption that social capital remained stable over a period of one year and fits the theoretical construct that allows it to be modelled as a diffuse and generic variable (Kawachi et al., 1999; Rose, 2000; Lochner et al., 2003) other than a situational one. The reasoning on the stability

of social capital stocks in this study setting is informed by the observation that socio-cultural norms such as trust, reciprocity and collective action are peculiar to African villages and are often identifying characteristics (Batuuka and Nkanda, 2006; Ayé et al., 2002). Therefore, in a period of one year, one would expect that these neighbourhood characteristics remained constant. Secondly, the limits of data availability from a secondary source meant that the study did not take into account other perspectives of social capital such as social participation which could be important for the study outcome (Zukewich and Norris, 2005). Also we do not adjust for health services system factors such as the quality of care and levels of ongoing promotional interventions for the uptake of effective health care services both of which invariably influence user choice of care provider (Gulliford et al., 2002; Kiwanuka et al., 2008; Rutebemberwa et al., 2009).

## **Discussion of results**

The generally moderate to high levels for the different aspects of social capital is supportive of previous findings that show a high level of collective efficacy in similar African settings (Ayé et al., 2002; Ware et al., 2009). In terms of size of informational support networks, it seems that small sized ones (1 to 5) compared to larger ones (more than 5 persons) had a more positive influence on the use of a public health facility. This was an unexpected observation and further qualitative research may throw more light on how and why number of persons providing informational support produces different effects on the use of health care services.

The positive association of trust with use of a health care service are found in other studies (Ayé et al., 2002; Hendryx et al., 2002; Whetten et al., 2006). There is less empirical evidence for the role of community informational support on use of health care services. However, the combination of high trust and informational support is a plausible mechanism for giving villages with higher stocks an important advantage over those without. For instance, support supervision reports indicate that increased use of OPD services in Uganda has been linked to availability of medicines at a health facility, with a one and a half times increase in new attendances soon after a delivery of supplies is made. Anecdotal evidence suggests that this increase in OPD use of public health facilities was more related to information spread on arrival of stocks of medicine rather than heightened morbidity.

The negative association of reciprocity with health service use can be attributed to an absence of effective links within the reciprocal relationship to appropriate resources (Cleaver, 2005). Thus the negative association observed in this study suggests that reciprocity or the nature of transactions enabled by it did not aid the decision to take the child to a public health facility.



## Conclusion

This exploratory study shows an independent effect of community social capital on treatment choices made by child caregivers. This observation places social capital amongst the other contextual level factors that influence use of health care services. Such information can be used retrospectively or prospectively by health planners to identify which communities need more targeted technical support in terms of facilitating uptake of effective health policies and strategies.

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