

Neighbourhood Social Capital and HIV/AIDS: Assessing Neighbourliness and Social Attachment in Rural South African Villages

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ABSTRACT Although neighbourhood social capital is considered useful and beneficial for individual health, supporting evidence in South Africa is very scant and thin. Against this backdrop, this study assessed the association between neighborhood social structure as a source or dimension of social capital and HIV/AIDS prevention. The purpose of the study was to assess the roles of a neighbourhood measure of social capital and its effects on HIV/AIDS avoidance. It draws mainly on qualitative ethnographic data gathered in the northern parts of KwaZulu-Natal in South Africa. Semi-structured interviews were used to collect information from villagers who were purposively sampled. In this study, the researchers aimed to establish the net effect of neighbourhood social capital on individual health particularly in the context of HIV/AIDS. Evidence gathered in this study tends to single out the rural neighbourhood as a rich source of HIV/AIDS knowledge and information that can benefit every citizen who is actively engaged or involved in it. The study also established that neighbourhood social capital in rural communities is responsible for the avoidance of HIV/AIDS infection and transmission. Community networks and associations have been identified useful in facilitating the sharing of critical information on HIV/AIDS. Associational membership and the asymmetric exchange of HIV/AIDS knowledge including instrumental resources has been found to be correlated to the adoption of protective behaviour and HIV/AIDS prevention.

INTRODUCTION

The role of social capital in development has received widespread and increasing attention. Research and current publications have noted the benefits that accrue from the use of social capital in health and development efforts (Morgan and Haglund 2009; Borges et al. 2010; Duke et al. 2010; Lenzi et al. 2011). There are various studies that have been undertaken to assess the link between social capital and community health (Lomas 1999; Hawe and Sheill 2000; Kawachi 2001; Wallerstein 2002). However, there is still a lack of academic, scholarly and empirical research into the relationship between social capital and HIV/AIDS. The challenge in this study is on how can social capital be used, generated and maintained in the context of HIV/

AIDS. Literature is quite fragmented and inconclusive regarding the nexus between social capital and HIV/AIDS prevention. What is clear from current literature is that social capital in all its various dimensions has got potential positive effects on health. This growing body of literature supports the view that social capital can be applied to solve community health problems and challenges (Lomas 1998; Kawachi et al. 1999; Hawe and Shiell 2000; van Kemanade 2003). In other words, social capital is viewed as a valuable community asset (Putnam 2000; van Kemanade 2003; Lyons and Santo 2004). Social capital as an asset is considered as affecting health positively through encouraging health-related behaviours and discouraging those that are unhealthy (Kawachi et al. 1999; Berkman et al. 2000; Putnam 2000). To date, there have been very few studies that have looked at the connection between social capital and HIV/AIDS especially in the context of rural South Africa. Campbell et al.'s (2002) is one of the very few studies that successfully looked at the relationship between social capital and HIV/AIDS in South Africa. In their study, they measured so-

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cial capital in terms of membership to a variety of associations including churches, youth groups, sports clubs, women's groups, and stokvels. They found that membership in a community group or association was a form of positive social capital for men because those who were members of any group were less likely to engage in risky sexual practices thereby decreasing their risk of HIV infection. In this case, this form of social capital was an asset for HIV prevention. In addition, Campbell et al.'s (2002) study also revealed that women who were members of community groups like '*stokvels*' were less likely to get HIV infection because of information they acquired through the groups. The information which these women reportedly gained was related to condom use, the effects of multiple sexual partnerships and other risky sexual behaviours (Campbell et al. 2002).

The current study looks at the significance of social community networks, neighbours and community groups in dealing with HIV/AIDS. It examines existing sources of social capital in rural societies like the neighborhood structure and its effects on HIV/AIDS prevention.

Defining Neighbourhood Social Capital

The notion of social capital is a contested one and various conflicting meanings and definitions have been attached to it. Reimer (2002:22) defines social capital as "...one type of asset or resource that can be used to achieve valued outcomes. As capital, it is part of production that is reinvested into future production. As social capital, it refers to social forms as reflected in organizations, collective activities, networks, and relationships. From this point of view, social capital is a relational, as opposed to an individual characteristic". On the other hand, Putnam (1993b:36) conceptualises social capital as "features of social organization, such as networks, norms, and trust, that facilitate coordination and cooperation for mutual benefit". It is quite clear that social capital has several dimensions and the common key ones include social networks, ties and relationships that people share within society.

One form of social capital which is increasingly receiving the attention of scholars and researchers is 'neighbourhood social capital'. Sampson (2009) conceptualises neighbourhood social capital mainly in terms of the different ways

communities are organised. In other words, the benefits of neighbourhood social capital stem from the structure of social organisation and not from individuals (Sampson and Graif 2009). Reading through several articles and books on neighbourhood theory, we identified several dimensions of neighbourhood social capital which include; collective efficacy, social control, social cohesion and attachment, and group membership (Sampson et al. 1997; Sampson 2002; Matsueda 2006; Tambubolon 2009). It has to be stated that in this current study, we based our assessment and measurement of neighbourhood social capital on these key dimensions or indicators as identified in literature.

Theoretical Framework

This study was informed by Putnam (1993a), notion of social capital particularly what he referred to as 'bonding social capital'. Theories on social capital highlight the potential effects of the concept in the sense that it is a community resource that can be readily accessed and used by anyone in the society. What distinguishes social capital from all other forms of capital is its ability to be accessed, used and reinvested at any time by anyone at no cost and hence it is a useful public good. Putnam (1993b) postulates that social capital is a result of peoples' connections. Putnam's work on participation in voluntary organisations highlights the importance of civic participation and connectedness in promoting and enhancing collective norms and social trust.

For Putnam there are four main reasons why networks of civic engagement are beneficial. The first reason is that the networks constitute an obstacle for opportunities in inter-individual transactions. Secondly, the networks foster robust reciprocity. The third reason is that the networks facilitate communication and contribute to the growth of trust. Lastly, the networks promote the survival of historical heritage (van Kemanande 2001). In short, Putnam is of the assertion that networks of associations and participation promote and enhance collective norms and trust, which is central to the production and maintenance of the collective well-being (Putnam 1993a, 1995). In line with Putnam's theoretical assertions, the rural neighbourhood in this study is idealised as useful in facilitating the creation of social capital in the form of associations, so-

cial ties and reciprocity based on trust. Social capital which is a shared resource generated through community networks will facilitate the sharing of HIV/AIDS knowledge and resources which will make community members better placed to avoid HIV/AIDS infection.

Objectives of the Study

The central and basic objective of this study was to establish whether there is an association between neighbourhood attachment and the avoidance of HIV/AIDS risky behavior and infection in rural South African communities. The other objectives of this study were:

- (a) To establish the net effect of neighbourhood social capital on HIV/AIDS education and awareness.
- (b) To assess the role of a neighbourhood measure of social capital in promoting social spaces for HIV/AIDS communication.

METHODOLOGY

Study Design

The study adopted an exploratory research design mainly in the form of a case study. A case study is defined by Yin (2003) as a form of empirical inquiry in which the real focus is on a contemporary phenomenon within its own unique real-life context and boundaries. A case study for Yin (2003) is useful and appropriate for studying complex social phenomena and this justifies its use in studying the complex relationship between HIV/AIDS and social capital. In this study only qualitative methods of data collection were employed.

Sampling and Data Collection

Our sample was drawn from individuals living in eight villages of the Umkhanyakhude District. Eighty (80) individuals were interviewed over a period of twenty-four (24) months. A purposive sampling strategy was employed with a purpose of generating 'rich and thick' descriptive data. In purposive sampling, the researcher only selects cases which are considered productive to answer the research questions (Marshall 1996). It is for this reason that purposive sampling gives the best chance to get 'rich' qualitative data (Bryman 1984).

In the present study, only qualitative methods of data collection were used. The qualitative data collection methods mainly comprised of in-depth interviews with key informants. A flexible interview guide was used to assist in capturing information relating to village participation, social cohesiveness, and social attachment. Interview responses were audiotaped and then transcribed. The major reason for the use of in-depth interviews was to enhance the quality of the responses and deepen our understanding of the relationship between HIV/AIDS and neighbourhood social capital. By allowing the respondents to freely express themselves, the researchers had an opportunity of capturing the "inner perspectives" of the respondents thereby allowing the researchers to learn throughout the entire process of interviewing (Patton 1990; Dicco-Bloem and Crabtree 2006). Semi-structured interviews were useful in the present study as they created an environment of free expression and information exchange (David and Sutton 2004; Turner 2010).

Data Analysis

Data analysis in this study proceeded through the form of content analysis where information collected through in-depth interviews was broken down into different themes and categories. Content analysis allowed the researchers to identify, establish and collate the relationship between themes emerging from the data. The information collected was synthesised and used to make valid and necessary inferences on the relationship between neighbourhood social capital and HIV/AIDS prevention.

In the following sections, we present the results of our study by first looking at group membership as a source or dimension of neighborhood social capital and its reported effects on HIV/AIDS information exchange and sharing.

RESULTS

Rural Social Organisations, Group Membership and HIV/AIDS Information Exchange

Evidence from this study highlight the role played by different forms of social organisations in facilitating HIV/AIDS information exchanges within a community. Community level social capital has been seen as useful and instrumental in

dealing with the problems posed by HIV/AIDS. Of great significance is the way established formal groups generate and transmit knowledge and information on HIV/AIDS within the community. In this study, a number of key formal community organisations were identified as central in transmitting information on HIV/AIDS and other related health issues. These formal organisations included cooperatives, burial societies, empowerment groups, church groups and cultural associations. One participant reported that, *"being a member of a community group has been so beneficial for me. I have learnt so many things about HIV/AIDS and how the virus can be transmitted from one person to the next. As a member of a local cooperative, I am always empowered on both health and financial matters"*.

Evidence from this study shows that ninety percent (90%) of the participants were of the view that the sharing of information on HIV/AIDS and other health related issues is the most important benefit they derive from formal groups. Most of these participants reported that they have gained a deeper understanding on what HIV/AIDS is all about only through their participation in community groups. Table 1 indicates that group membership was singled out by the participants as the most significant form of neighbourhood social capital useful in transmitting HIV/AIDS information and education.

Table 1: Sources of neighborhood social capital

Source of neighbourhood social capital	Number of respondents	
	(N)	(%)
Group membership	48	60
Social support	16	20
Social sanction/control	12	15
Collective efficacy	04	05
Total	80	100

Basing on the researchers' findings, formal groups were perceived as conduits of HIV/AIDS information through which community members can benefit from. However, the participants also highlighted that they are other benefits that are associated with membership in community groups. They reported that formal organisations or groups are platforms through which they can share and learn to solve individual problems. One participant revealed that, *"it is because of my association with this group that I have learnt to deal with my personal anger, disappoint-*

ments and problems. Having lost family members to HIV/AIDS was not easy coming to terms with. I have managed to deal with all this through sharing of experiences with my group members". What emerged from this study was that the set up of community organisations allows members to open up and discuss their individual problems. Hence, these organisations are seen as promoting a collective identity. The formation of collective norms and identity makes individuals to become free and open to share even things one might regard as 'a top family secret'. The assurance will be that fellow group members will act in utmost good faith and they will help the person out of the problem.

The participants who were not part of formal groups reported that they lack information on HIV/AIDS. This group of participants reported that they only depend on their neighbors and friends as sources of HIV/AIDS information. Evidence gathered in this study suggests that the lack of knowledge, information and public awareness contributes to higher prevalence rates in rural South Africa. This study has highlighted that as sources of social capital, community organisations like clubs, burial societies and cooperatives play a significant role in the dissemination of HIV/AIDS information. Participants in this study identified group membership as a useful component or source of social capital as it allows community members to access HIV/AIDS knowledge. Campbell et al.'s (2002) findings also highlight the importance of associational membership in HIV/AIDS prevention and the benefits that accrue from such membership.

However, evidence gathered in the current study also highlights that the access to HIV/AIDS knowledge and information tends to be restrictive in the sense that only those people or households that belong to a particular organisation or group will benefit from such information. Forty-three percent (43%) of the participants revealed that information is shared and diffused only among those people who are seen as rightful members of a burial society, cultural group or empowerment group. This implies that the knowledge and information acquired is only for the benefit of a member. Given such a scenario, the 'public-ness' of social capital is destroyed as only few community members will benefit by virtue of their membership. The boundaries created by community organisations and groups have resulted in many people outside

these groups or organisations being victims of HIV/AIDS.

Neighbourhood Social Capital and Access to Health Promoting Resources

In this study, it has been established that neighbourhood social capital facilitates greater access to health promoting resources. A majority of the participants (61%) indicated that they rely on their neighbours and group members for both material and non-material resources which help them in maintaining their health. Such resources include food, condoms or social support. One participant reasoned that, *“in this local area, we have learnt to rely on each other for social and economic support. We share resources such as food, money, information on sexual behavior, and even condoms so as to protect each other from risky sexual infection”*. This finding is consistent with literature and prior research looking at ways through which neighbourhood social capital can contribute to safer sexual practices and healthy living among individuals (Boneham and Sixsmith 2006; Carpiano 2008). A growing body of literature on neighbourhood social capital suggests that the usefulness of neighbourhood social capital lies in its ability to facilitate a much greater access to resources (Carpiano 2008). For example, in his ‘neighbourhood resource advantage hypothesis’, Robert (1999) argues that there is a positive association between the level of social resources available to residents in a particular community and their level of personal well-being. The results of this study support such a hypothesis. Basing on this evidence, it is quite logical to propose that neighbourhood social capital can better place residents to avoid HIV/AIDS infection.

Rural Education, Awareness and Community Health

The lack of HIV/AIDS information and knowledge is still a major factor contributing to the high prevalence levels of the epidemic in rural communities as the study reveals. Sixty-eight percent (68%) of the participants in this study highlighted that they are not properly or well informed on HIV/AIDS. A participant in this study revealed that, *“we do not get any formal teachings on HIV/AIDS in this area. We have*

learnt to rely on each other as neighbours and residents for any news on HIV/AIDS. We teach each other on how best to adopt HIV/AIDS protective lifestyles. We have realised that there is a possible danger of HIV/AIDS infection if we do not get to teach one another mainly because there is no formal teaching happening here on HIV/AIDS”. In this study, a lack of formal educational programmes on HIV/AIDS was reported to have serious negative implications on individual and community health as most participants feared that they might end up getting infected. This was well captured from the view of a participant who revealed that, *“we live in fear in this community because we do not get formal teachings on the trends of the HIV virus. Our situation is precarious because we lack formal knowledge...”* Close to seventy-eight percent (78%) of the study participants highlighted that they have seen leaflets or pamphlets in their community but they did not bother to read them, twelve percent (12%) revealed that they disposed them off soon after getting these leaflets while eight percent (8%) indicated that they read but did not understand anything and two percent (2%) percent of them highlighted that they did not receive any leaflets at all in the past few years. In Table 2, the researchers illustrate these views from the respondents.

Table 2: Readership levels on HIV/AIDS issues

<i>Leaflets and pamphlets availability and usage</i>	<i>Percentage (%)</i>
Seen the leaflets or pamphlets but did not bother to read	78
Read but did not understand them	08
Disposed them off as soon as they get them	12
Did not receive any at all	02

The evidence gathered tends to suggest that the usage of leaflets, pamphlets or books does not have any significant impact in equipping community members with HIV/AIDS information and education. Low literacy levels and lack of a reading culture have been identified as the major reasons behind the non-usage of HIV/AIDS information sources thereby making them inappropriate models of HIV/AIDS intervention. Evidence gathered in this study proposes that the only way to reach the community with HIV/AIDS information is through community dialogues or conversations where every citizen participates

and engages in all issues under discussion. Such a process is seen as yielding positive effects on both the individual and the community. The common method of giving out flyers, leaflets and pamphlets without making people deliberate and even critique the information was perceived by participants as failing to disseminate HIV/AIDS information. One participant argued that, “*we need methods of teaching on HIV/AIDS that promote active participation and interaction among us. We do not need to be passive recipients of any information on HIV/AIDS*”. This kind of a sentiment is consistent with findings from prior studies on education and HIV/AIDS prevention which have shown the importance of formal education programmes promoting dialogue and participation (Kelly 2000; Gregson et al. 2002; Wallerstein 2002). Being recipients of information is considered disempowering and limiting in making rural citizens take charge of their lives. It is only through community dialogue that any HIV/AIDS initiative can be useful in addressing the problem. Besides the leaflets and pamphlets being considered as ‘irrelevant’ by the participants in rural villages of KwaZulu-Natal, there is no any other source of HIV/AIDS information which is context-specific and which tries to appeal to the local villagers or citizens. This has created a huge gap in the effort to try and mitigate the epidemic in most of the villages.

Rural Neighborhoods as Knowledge Fields

Literature on HIV/AIDS in rural parts of South Africa laments the lack of public information, education and knowledge on HIV/AIDS in communities (Campbell et al. 2002; Gregson et al. 2004). High levels of illiteracy and difficulties in accessing information from the media are among other structural issues which have impacted greatly on the transmission of HIV/AIDS related information and facts to rural communities (Gregson et al. 2004). However, there is growing consensus among academics and researchers that the community neighbourhood can be used to generate knowledge, information and awareness on HIV/AIDS issues (Campbell et al. 2002; Sampson 2009). Evidence gathered in this study establishes that the community neighbourhood is a reliable source of information and knowledge on HIV/AIDS. One participant had this to say, “*...this community is the only place we*

rely on HIV/AIDS information. I do not have to go to school or any other place to be taught about HIV/AIDS. It is in this community where we learn about proper sexual behavior, descent dressing and ways of avoiding risky sexual encounters”. In this study, eighty-seven (87%) percent of the participants revealed that they rely and depend on their neighbours for information concerning HIV/AIDS. These participants highlighted also that the kind of information sharing that exist in the neighbourhood is open and interactive between neighbours and this makes learning and knowledge acquisition an easier process. Asked on whom they rely on in situations where they cannot handle or understand, the participants reported that they rely on their fellow neighbours. The reliance on fellow community members on all issues that one cannot deal with clearly locates the role of community or village neighbours not only as information providers but as people who play a central role in the community. What this study establishes is that mutual trust and understanding among village neighbours is critical in the generation of knowledge and information on HIV/AIDS. Social trust as a dimension of social capital is seen in this regard as facilitating the flow of HIV/AIDS relevant information from one neighbour to the other. Evidence emerging from fieldwork is suggestive of the fact that the level of mutual trust and understanding in the society determines the asymmetric flow of information among neighbours. This will imply that the higher the degree of social cohesion in a village, the more community members will be able to interact or share information on HIV/AIDS. Social cohesion as an indicator of social capital is suggested to be useful and critical in the generation of knowledge that community neighbours may use to empower themselves and avoid the chances of HIV/AIDS infection. These findings are in line with those from previous research on the role of the local neighbourhood context in the fight against HIV/AIDS (Gabrysch et al. 2008; Kayeyi et al. 2009; Singh et al. 2009). In Kayeyi et al.’s (2009) study, the neighbourhood social structure was found to be a strong determinant of HIV/AIDS infection in Zambia. In such a study, HIV/AIDS prevalence was reported to have decreased as a result of neighbourhood activities and processes such as education and group interactions (Kayeyi et al. 2009).

DISCUSSION

In this study, the participants identified the various pathways through which neighbourhood social capital can play a role in the fight against HIV/AIDS. Emergent themes from our data suggest that all the different sources or dimensions of neighbourhood-level social capital are useful in mitigating the effects of HIV/AIDS on either individual or community level. However, trends in our data showed that group membership is the most significant form of neighborhood social capital facilitating the sharing and exchange of HIV/AIDS information within communities. Membership in a local community network or organisation has been reported as enabling village members to freely share and discuss issues related to HIV/AIDS. Such discussions and interactions have been perceived as useful in promoting a common sexual identity or any other behaviour that is protective against HIV/AIDS. Being a member of a community group is associated with the adoption of a health living lifestyle. A majority of the study participants revealed that they have benefited on more than a single occasion from their neighbours in form of HIV/AIDS information and material support. In other words, this study has underscored the utility of neighbourhood social capital in mitigating the effects of HIV/AIDS in rural communities. The exchange of knowledge, ideas and social support among village members help in creating an enabling environment for HIV/AIDS prevention.

Our study illustrates how neighbourhood social capital facilitates greater access to health promoting resources. Evidence emanating from our data demonstrates that social capital facilitates and promotes the sharing of embedded instrumental resources and social support essential for HIV/AIDS prevention. Associational membership has proven to be an important source of social capital facilitating the asymmetric exchange of resources, social support and HIV/AIDS information. Our findings do suggest a positive and strong correlation between associational membership and the adoption of safer sexual practices. Access to health promoting resources is strongly linked to HIV/AIDS protective behavior. Also emerging from data is an understanding that group membership allows for free discussion and dialogue on HIV/AIDS. The results of this study also confirm the significance of community groups or associations in creating an enabling context for HIV/AIDS com-

munication and empowering debate. Previous studies conducted in many parts of rural Africa have also supported such a view (Kelly 1999; Kelly 2000; Campbell et al. 2002; Matsueda 2006).

Basing on anecdotal evidence gathered in this study, it is quite possible to draw some conclusions that are consistent with prior studies on neighbourhood-level social capital and its effects on HIV/AIDS prevention (Robert 1999; Sampson and Graif 2009; Borges et al. 2010). First and foremost, the local neighbourhood context is a significant source of HIV/AIDS knowledge and education. The study establishes that neighbourhood social capital in most rural communities is responsible for the avoidance of HIV/AIDS infection and transmission. Evidence gathered in this study also suggests that the village neighbourhood creates a form of social capital useful for HIV/AIDS avoidance. Through constant interactions community neighbours can develop any identity and character that is HIV/AIDS protective. The establishment of a common norm of behavior might in most cases imply that they avoid any behaviour exposing them to the danger of HIV/AIDS infection. A high degree of neighbourliness was considered in this study as generating high levels of social capital useful for HIV/AIDS avoidance or prevention. The research establishes that the local neighbourhood is not only an arena of reciprocal exchanges or transactions but a generator of social capital. Neighbourhood associations are suggested in this research to be responsible for the cultivation of higher degrees of citizenship responsibility and HIV/AIDS activism. In all the villages we interacted with, there is resounding evidence of neighbourhood initiated campaigns against HIV/AIDS. Although these are small-scale campaigns initiated by villagers but they are reported to be useful towards the avoidance of HIV/AIDS transmission. Several participants who formed part of these campaigns revealed that they take it as their responsibility as citizens to at least do something to prevent the further transmission of HIV/AIDS. The activities of these participants are reported as enhancing their knowledge and competence on HIV/AIDS prevention.

CONCLUSION

The article suggests that the rural neighbourhood is an essential platform for HIV/AIDS information and knowledge exchange. The rural

neighbourhood is centralised as a rich source of HIV/AIDS- specific knowledge and information that can benefit every citizen. Research findings gathered in this study strongly suggest that neighbourhood social capital in all its various constituents is useful and relevant towards HIV/AIDS avoidance and prevention. These findings build on existing literature on social capital and HIV/AIDS especially in the context of developing countries. The conclusions arrived at in this study are based on the evidence gathered in a single South African province. As such, it might be difficult to generalise these findings as reflecting social reality across all provinces of South Africa. Thus, a national study or survey would be necessary in order to clearly understand the relationship between neighbourhood social capital and HIV/AIDS in South Africa.

LIMITATIONS

This study has notable limitations. The researchers sampled participants from one district of KwaZulu-Natal and only ten villages were selected to be part of the study. This limited external validity to other groups and settings. Our focus on only one form of social capital is another possible limitation.

RECOMMENDATIONS

Social capital by its own nature exists in different forms and neighbourhood social capital being one. Thus, there is need for future research to clearly explore the association between social capital in all its various dimensions and its contribution in reducing HIV/AIDS prevalence. There is also a need to look at the reverse side of neighbourhood social capital and how it can contribute to HIV/AIDS infection and transmission. Looking at neighbourhood social disadvantage or antisocial capital and its association with the adoption of risky behaviours predisposing individual to HIV/AIDS still remains as an important area for future research. Future studies on neighbourhood social capital and HIV/AIDS in urban townships and informal settlements will be also essential in helping to understand the complex association between social capital and HIV/AIDS in different settings of the South African society.

REFERENCES

- Berkman LF, Glass T 2000. Social integration, social networks, social support and health. In: LF Berkman, I Kawachi (Eds.): *Social Epidemiology*. Oxford: Oxford University Press, pp.137-173.
- Boneham MA, Sixsmith JA. The voices of older women in a disadvantaged community: Issues of health and social capital. *Social Science and Medicine*, 16: 269-279.
- Borges CM, Campos AC, Vargas A, Ferreira EF, Kawachi I 2010. Social capital and self-rated health among adolescents in Brazil: An exploratory study. *BMC Research Notes*, 3(338): 1-6.
- Bryman S 1984. *Doing Research in Organizations*. Leeds: Routledge Press.
- Campbell C, Williams B, Gilgen D 2002. Is social capital a useful tool for exploring community level influences on HIV infection? An exploratory case study from South Africa. *AIDS Care*, 14(1): 41-54.
- Carpiano RM 2008. Actual or potential neighbourhood resources and access to them: Testing hypotheses of social capital for the health of female caregivers. *Social Science and Medicine*, 25: 489-516.
- Cene CW, Akers AY, Lloym SW, Albritton T, Hammond WP, Corbie-Smith G 2011. Understanding social capital and HIV risk in rural African American communities. *J Gen Intern Med*, 27(7): 737-744.
- David M, Sutton, CD 2004. *Social Research the Basics*. London: Sage Publications
- DiCicco- Bloom B, Crabtree, BF 2006. The qualitative research interview. *Medical Education*, 40: 314-321.
- Duke NN, Skay CL, Pettingell SL, Borowsky IW 2009. From adolescent connections to social capital: Predictors of civic engagement in young adulthood. *J Adolesc Health*, 44: 161-168.
- Gabrysch S, Edwards T, Glynn JR 2008. The role of context: Neighbourhood characteristics strongly influence HIV risk in young women in Ndola, Zambia. *Trop Med Int Health*, 13(7): 959-960.
- Gregson S, Terceira N, Mushati P, Nyamukapa C, Campbell 2004. Community group participation: Can it help young women to avoid HIV? An exploratory study of social capital and school education in rural Zimbabwe. *Social Science and Medicine*, 58(11): 2119 -2132.
- Hawe P, Shiell A 2000. Social capital and health promotion: A review. *Social Science and Medicine*, 55(9): 1603-1617.
- Kawachi I, Kennedy B, Glass R 1999. Social capital and self-rated health: A contextual analysis. *American Journal of Public Health*, 89(8): 1187-1193.
- Kayeyi N, Sandoy IF, Fylkesnes K 2009. Effects of neighbourhood-level educational attainment on HIV prevalence among young women in Zambia. *BMC Public Health*, 9: 310.
- Kelly JA 1999. Community-level interventions are needed to prevent new infections. *American Journal of Public Health*, 89: 299-301.E
- Kelly MJ 2000. *The Encounter between HIV/AIDS and Education*. Harare: UNESCO.

- Lenzi M, Vieno A, Perkins DD, Pastore M, Santinello M, Mazzardis S 2011. Perceived neighbourhood social resources as determinants of prosocial behaviour in early adolescence. *Am J Community Psychol*, (In Press).
- Lomas J 1998. Social capital and health: Implications for public health and epidemiology. *Social Science and Medicine*, 47(9): 1181-1188.
- Lyons DE, Santos LR 2004. Ecology, domain specificity and the origins of theory of mind: Is competition the catalyst. *Philosophy Compass*, 68: 571-588.
- Marshall MN 1996. Sampling for qualitative research. *Family Practice*, 12(6): 522-525.
- Morgan A, Haglund BJA 2009. Social capital does matter for adolescent health: Evidence from the English HBSC study. *Health Promotion International*, 24(4): 363-372.
- Putnam R 1993a. *Making Democracy Work*. New Jersey: Princeton University Press.
- Putnam R 1993b. The prosperous community: Social capital and public life. *The American Prospect*, 4(13): 27-40.
- Putnam R 1995. *Bowling Alone: Democracy in America at the End of the Twentieth Century*. Uppsala: Nobel Symposium.
- Reimer JJ 2002. Estimating the Poverty Impacts of Trade Liberalization. The World Bank Research Group. From < <http://www.wds.worldbank.org> > (Retrieved November 15, 2008).
- Robert SA 1999. Socio-economic position and health: The independent contribution of community socio-economic context. *Annual Review of Sociology*, 25: 489-516.
- Singh SM, Quesnel-Vallee A, Curtis S, Lynch J 2009. Assessing the role of individual and neighbourhood characteristics in HIV testing: Evidence from a population based survey. *Open AIDS J*, 3: 46-54.
- Turner DW 2010. Qualitative interview design: A practical guide to novice investigators. *The Qualitative Report*, 15(3): 754-760.
- van Kemenade S 2002. *Social Capital as a Health Determinant-How is it Defined?* Ottawa: Policy Research Unit, Health Canada.
- Wallerstein N 2002. Empowerment to reduce health disparities. *Scandinavian Journal of Public Health*, 59: 72-77.
- Yin R 2003. *Case Study Research: Design and Methods*. Thousand Oaks: Sage.