

Social capital and children's wellbeing: a critical synthesis of the international social capital literature

Ferguson KM. Social capital and children's wellbeing: a critical synthesis of the international social capital literature Int J Soc Welfare 2006: 15: 2–18 © Blackwell Publishing, 2006.

Drawing on social capital literature from the international realm, this article presents a critical synthesis of this social resource in relation to children's and youth's wellbeing. Although considerable evidence indicates that social capital can have a positive impact on future outcomes for children and youth, no prior comprehensive review exists of the literature on social capital and children's wellbeing. Adopting the systematic review method (SR), the author explores how social capital has been conceptualised and operationalised as an explanatory variable in research on individual and collective wellbeing with children and youth. Oft-cited indicators of family social capital and community social capital are identified, together with common control variables, such as human and financial capital. The author concludes by examining several social capital trends in relation to children's wellbeing and offering recommendations for future research using a social capital theoretical framework to explore additional outcomes related to children's and youth's wellbeing.

Kristin M. Ferguson

University of Southern California, Los Angeles

Key words: social capital, human capital, financial capital, children, wellbeing, systematic review method

Kristin M. Ferguson, University of Southern California, School of Social Work, 669 West 34th Street, Los Angeles, CA 90089-0411, USA

E-mail: kmfergus@usc.edu

Accepted for publication October 28, 2004

Social capital keeps bad things from happening to good kids (Putnam, 2000: 296).

The extant literature on social capital indicates that this social resource can facilitate positive outcomes with respect to a broad range of social phenomena related to children's and youth's wellbeing, including reducing adolescent pregnancy, delinquency, academic failure and child maltreatment (Coleman & Hoffer, 1987; Furstenberg & Hughes, 1995; Putnam, 2000; Teachman, Paasch & Carver, 1996, 1997). In an effort to understand and explain the effects of social relationships on such outcomes, sociologists, social workers, anthropologists and psychologists alike have assumed a key role in developing a conceptual definition of the notion of social capital. Their definitions originate largely from the conceptual, practical and theoretical works of three principal authors: French Sociologist Pierre Bourdieu (1985, 1993), Sociologist James Coleman (1988, 1990), and Harvard Public Policy Professor, Robert Putnam (1993, 1995).

Given its dual focus on both intra- and inter-familial relationships, social capital theory can facilitate a better understanding not only of the interactions within families, but also of the mezzo-level interactions between families

and their surrounding communities, and how these may influence the wellbeing of children and youth (Coleman, 1988). Despite the conceptual development of and research interest in social capital over the years, an extensive review of the extant literature remains outstanding. This is surprising, in light of empirical precedents indicating the positive influence of social relationships and networks on children's and youth's wellbeing. This critical synthesis thus explores how social capital has been conceptually and operationally defined as a predictor variable in empirical research on individual and collective wellbeing, especially in relation to children and youth.

The article is divided into five sections. First, it describes the systematic review method, which was used to compile and synthesise existing social capital literature. Next, it reviews research on social capital as a predictor variable in order to explore and explain its effects on children's and youth's wellbeing. Oft-cited indicators of family social capital and community social capital are identified, along with variables related to human capital and financial capital, given their presence as control variables in the social capital literature. In the third section, it identifies a series of social capital trends that are apparent across multiple studies, populations

and geographical regions. It then delineates the limitations of previous research, which pose a threat to both the methodological rigour of the individual studies and the generalisability of the findings to other populations of children and youth. In the final section, it offers recommendations for increasing our understanding of the linkages between social capital and children's and youth's wellbeing via research.

Systematic review method

To determine the scope of empirical literature related to social capital and children's wellbeing, the systematic review method (SR) was adopted, with a focus on three specific areas: the *incidence* with which the concept of social capital appeared in the empirical literature, the *method* that was utilised in examining social capital and the *quality* of empirical research that explored the relevant variables related to social capital (Larson, Pastro, Lyons & Anthony, 1992). Consistent with the procedures of a comprehensive SR, five strategies were used to locate all existing peer-reviewed studies related to social capital within the following disciplines: social work, sociology, psychology, cultural anthropology, public health, nursing and the medical field. First, a variety of bibliographic databases were searched from 1980 to the present, including FirstSearch, OVID, Social Work Abstracts, Sociological Abstracts and Wilson. The selected bibliographic databases were searched from 1980 to the present, given that the majority of the social capital literature has been developed over the past two decades (Bourdieu, 1985; Coleman, 1988, 1990; Putnam, 1993, 1995, 2000).

Second, a manual search was conducted in both dissertations and academic journals related to social capital over the past decade (1990 to the present). Selected journals include both political and economic literary sources, as well as psychological and sociological sources: *American Journal of Political Science*, *American Behavioral Scientist*, *Journal of Applied Behavioral Science*, *The American Prospect*, *Political Science and Politics*, *Journal of Community Practice*, *Child Development*, *Critical Public Health*, *American Sociological Review* and *Sociologia Ruralis*. Third and related, the snowball technique was utilised with the concept of social capital to identify additional studies and references cited in the bibliographies from the articles that had been previously selected.

Fourth, three key pioneer theorists and empirical researchers were identified in the area of social capital, whose names resurfaced in close to all studies, namely, sociologist Pierre Bourdieu, sociologist James Coleman and Harvard professor, Robert Putnam. During this phase, extensive literary searches were performed on each of these three authors for their additional works. Lastly, several annotated bibliographies and working

paper series related to social capital were consulted, which have been compiled and produced by the *Social Capital Initiative* under the auspices of the World Bank, available online at: <http://www.worldbank.org>.

The methodology adopted to distinguish between relevant and non-relevant empirical literature concerning social capital consisted of four selection criteria. The study was included in the review cohort if: (1) it examined family social capital and/or community social capital and its effects on individual and/or collective wellbeing; (2) it utilised quantitative, qualitative and/or triangulation of research methods to assess levels of social capital; (3) it identified indicators of social capital at the family and/or community levels; and (4) it produced findings relevant to social welfare policy regarding the influence of social capital in determining positive outcomes for child welfare. The SR used to examine empirical literature on social capital produced 22 pertinent, peer-reviewed studies that complied with these criteria.

Subsequent to creating the cohort of relevant studies, all works were then tabulated to facilitate comparisons and contrasts among studies. To evaluate the quality of empirical research within the selected cohort, the studies were categorised according to the following criteria: context in which social capital was measured (i.e. family or community social capital), year of study, region, purpose, definition of population, research and sample methods utilised, sample size, response rate, mode of administration of instrument(s), existence of a comparison group, and statistical analysis adopted. The full details are in Appendix 1.

Empirical review of social capital literature

For this review cohort of social capital literature, the findings were grouped within two general categories: (1) indicators of family social capital and (2) indicators of community social capital. The common variables and indicators across studies have been identified within each category. According to Coleman (1988), family social capital refers to the relationships between parents and their children, which encompass the time, efforts, resources and energy that parents invest in their children. In contrast, exterior social capital – or community social capital – represents the family's interactions and relationships with the surrounding community, both with residents as well as with local institutions of socialisation, such as schools. Lastly, two additional dimensions of capital will be discussed, namely human capital (i.e. education) and financial capital (i.e. income). These tangent dimensions of capital frequently appear as control variables within the social capital literature, since considerable empirical evidence indicates that children's and youth's wellbeing can be influenced by parents' own stocks of education and income

(Coleman, 1990, 1988; Putnam, 2000). Likewise prior research reveals that parents with more educational and financial resources are able to mobilise greater social capital (Coleman & Hoffer, 1987; Furstenberg & Hughes, 1995; Putnam, 2000; Teachman et al., 1996, 1997).

Indicators of family social capital

Among the 22 cohort studies, eight examined the effects of family social capital on individual outcomes for children and youth (Coleman & Hoffer, 1987; Furstenberg & Hughes, 1995; Johnson, 1999; Runyan et al., 1998; Sampson, Morenoff, & Earls, 1999; Stevenson, 1998; Teachman et al., 1996, 1997). Using Coleman and Hoffer's (1987) *High School and Beyond* study of 4,000 randomly selected high school students as an empirical precedent, numerous subsequent studies have followed Coleman's initial operationalisation of family social capital into five main components, each with a separate set of measures. These five components found commonly in the social capital literature consist of family structure, quality of parent-child relations, adult's interest in the child, parents' monitoring of the child's activities and extended family exchange and support.

Family structure. Family structure comprises the first component of family social capital. All eight studies used this element of family social capital as a predictor of outcomes for children and youth. Across studies, high levels of uniformity exist among the indicators used to measure family structure: single-parent versus two-parent household, absence versus presence of a paternal figure – either biological or stepfather, and both parents versus one parent work(s) outside the home. Two-parent households were found to be consistently related to positive outcomes in successful social development among at-risk youth (Furstenberg & Hughes, 1995) and in successful physical and behavioural development among preschool children reared in unfavourable environments (Runyan et al., 1998). Three studies found two-parent households to be a buffer against youth at risk for dropping out of high school (Coleman & Hoffer, 1987; Teachman et al., 1996, 1997). Similarly, one study found two-parent households to be associated with lower levels of violent acts in youth (Johnson, 1999).

Quality of parent-child relations. Second, six of the eight studies sought to examine the quality of intra-familial parent-child relations. As originally proposed by Coleman and Hoffer (1987), measuring the strength of the relations between parents and children reflects the quality of intra-familial relationships in a given family. Common indicators used to measure this component of family social capital include: number of times the parent helps the child with homework per week, number

of sharing activities the parent and child participate in together per week, number of times per week the parent verbally encourages the child, and number of siblings in the household, which Coleman (1988) hypothesises can dilute adults' attention to children. Three studies found that a higher frequency of social interactions between parents and children decreased the children's likelihood of dropping out of school (Coleman & Hoffer, 1987; Teachman et al., 1996, 1997), while one study found that higher levels of social interactions between parents and children were related to a lower likelihood that children fared negatively in future outcomes (Furstenberg & Hughes, 1995). Two studies found a significant relationship between a fewer number of siblings in the household and positive outcomes for children in their educational attainment (Coleman & Hoffer, 1987) as well as in their physical and behavioural development (Runyan et al., 1998).

Adult's interest in the child. Third, six of the eight studies assessed the adult's interest in the child as an additional component of family social capital. Common indicators for this component were: the mother's academic aspirations for the child, the parents' levels of empathy for the child's needs, and the parents' involvement in the child's school-related activities. Parents' high expectations for children's school performance were found to be associated with positive outcomes for children in school as well as in social and behavioural development (Coleman & Hoffer, 1987; Furstenberg & Hughes, 1995; Runyan et al., 1998; Teachman et al., 1996, 1997). Furthermore, high levels of parental empathy towards children's needs were found to influence children's future outcomes positively (Furstenberg & Hughes, 1995; Runyan et al., 1998).

Parent's monitoring of the child. The fourth component representing family social capital across multiple studies consists of the parents' monitoring of their children's activities. Five of the eight studies operationalised this component via the following measures: number of school meetings the parents attend; number of child's friends that the parents know by sight or by name, and number of child's friends' parents that the parents know by sight or by name. In three studies, high levels of parental monitoring of children's activities, measured via parents' knowledge of their children's friends, were consistently associated with positive outcomes in the educational attainment of children (Coleman & Hoffer, 1987; Teachman et al., 1996, 1997) and in the socio-economic achievement of youth (Furstenberg & Hughes, 1995). Two additional indicators of parental monitoring of the child consist of knowing with whom the child is when not at home and knowing what the child is doing when not at home. Although not specifically included in the literature on social capital, these two indicators

can be found within parenting literature, as measures of parental monitoring of children's activities (National Commission on Children, 1990). In a study examining how certain parental and peer-related risk and protective factors influence adolescents' school and emotional outcomes, Voydanoff and Donnelly (1999) found that both of these measures of parental monitoring were related to positive outcomes in children, specifically, to better academic performance and to higher levels of psychological adjustment.

Extended family exchange and support. Lastly, three of the eight studies explored the degree of extended family exchange and support as a component of family social capital. Coleman and Hoffer (1987), Furstenberg and Hughes (1995) and Stevenson (1998) adopted the following three indicators to measure this component: number of extended family members who live in the home, number of interactions the child has with extended family members living in the home, and number of times the child visits extended family members living outside of the home. Two of the three studies found that high levels of social support from extended family members reduced the likelihood that children would drop out of school (Coleman & Hoffer, 1987) or experience depressive symptoms (Stevenson, 1998).

Indicators of community social capital

Twenty-one of the 22 studies in the review cohort examined community-level social capital and its effects on outcomes of intrapersonal and collective wellbeing. However, of these 22 studies, only 13 specifically assessed community social capital in relation to child welfare (e.g. young adult success among at-risk youth, high school dropout rates, emotional adjustment of youth in high-risk neighbourhoods, and developmental and behavioural outcomes in high-risk preschool children, among others) (Boisjoly, Duncan & Hofferth, 1995; Furstenberg & Hughes, 1995; Garbarino & Sherman, 1980; Johnson, 1999; Maccoby, Johnson & Church, 1958; Morrow, 2000; Putnam, 2000; Runyan et al., 1998; Sampson, Morenoff & Earls, 1999; Stevenson, 1998; Swanson Ernst, 2001; Teachman et al., 1996, 1997). The remaining eight studies explored the effects of community social capital on adults' wellbeing, as well as on the general wellbeing of the community (Brehm & Rahn, 1997; Butler & Flora, 2000; Díaz, Drumm, Ramírez, & Oidjarv, 2000; Falk & Kilpatrick, 2000; Krishna & Uphoff, 1999; Onyx & Bullen, 2000; Pantoja, 1999; Portney & Berry, 1997).

The most common existing instrument to measure community social capital in the general population consists of the Social Capital Index, developed and empirically tested by Australian researchers, Onyx and

Bullen. The instrument encompasses the following eight factors, which measure social capital at the community level: (1) participation in the local community (participation in formal community structures); (2) social agency or proactivity in a social context (sense of personal and collective efficacy or personal agency within a social context); (3) feelings of trust and safety (feelings that most people in the community can be trusted); (4) neighbourhood connections (informal interaction within the local area); (5) family and friends connections (conversations with family and friends); (6) tolerance of diversity (views of multiculturalism in community); (7) value of life (feelings of being valued by society); and (8) work connections (feelings of team at work). Across all review studies, seven used this instrument – or portions of it – as a measure of community social capital (Díaz et al., 2000; Falk & Kilpatrick, 2000; Krishna & Uphoff, 1999; Onyx & Bullen, 2000; Pantoja, 1999; Putnam, 2000; Runyan et al., 1998).

With specific reference to exterior – or community – social capital and its effects on children's and youth's wellbeing, Coleman and Hoffer (1987), in their seminal study on the effects of family and community social capital on high school dropout, propose four general components of community social capital: (1) social support networks; (2) civic engagement in local institutions; (3) trust and safety; and (4) degree of religiosity. The 13 studies assessing the relationship between social capital and child welfare have used one or several of Coleman and Hoffer's proposed components, in addition to additional elements of community social capital.

Social support networks. First, multiple studies measure the social support networks – or social relationships – among parents in a community as an indicator of a family's stock of community social capital. Across these studies, families who were embedded in rich social support networks were consistently found to have increased access to information, material resources and friends and neighbours to assist them in managing their daily lives, as well as in resolving occasional problems that arise. Numerous studies also revealed that increased parental social support had positive effects on children's outcomes (Furstenberg & Hughes, 1995; Maccoby et al., 1958; Putnam, 2000; Runyan et al., 1998; Stevenson, 1998; Teachman et al., 1996, 1997). Two studies found that parents' increased relationships with schools and other parents decreased the likelihood that their children dropped out of school (Teachman et al., 1997, 1996). Putman (2000) found that the children of parents who were embedded in rich social networks were less likely to pursue gang membership, while Maccoby and colleagues (1958) discovered that the children of parents who had strong relationships

with other parents were less likely to commit delinquent acts. Furstenberg and Hughes (1995) suggest that strong help networks for parents are related to favourable outcomes among youth in finishing school and attaining gainful employment. Likewise, high levels of social support for the primary maternal caregiver were associated with both positive behavioural outcomes for at-risk preschool children (Runyan et al., 1998) and lower levels of depression in at-risk teens (Stevenson, 1998). Common indicators of social support networks used across studies include: number of mother's close friends and number of visits to these close friends per week. Likewise, several studies used the five items from the factor, neighbourhood connections, on the Social Capital Index, or similar scales developed for the purposes of the particular study to measure social support networks (Boisjoly et al., 1995; Runyan et al., 1998; Stevenson, 1998).

Civic engagement in local institutions. Second, six studies examine the quantity and quality of relationships and interactions between parents and the social institutions within the community as a component of community social capital. Considerable empirical evidence indicates a positive relationship between parents' levels of civic participation in local community organisations and their children's overall wellbeing. Several studies found that there were more exchanges of resources and sharing of child-rearing responsibilities among families in neighbourhoods that had higher levels of participation and activism (Garbarino & Sherman, 1980; Sampson et al., 1999). Putnam (2000) also cites several findings that in communities rated with high civic engagement, teachers reported higher levels of parental involvement in school-related activities and lower levels of student misconduct (e.g. skipping school, fighting, carrying a weapon on school property and demonstrating apathy in the classroom setting regarding learning tasks). The common measures of civic engagement among the cohort studies are: volunteering in a local group, serving as an active member of a local organisation or club, participating in community meetings to solve local problems, organising with neighbours to address local problems or to improve the neighbourhood, and speaking with local politicians regarding neighbourhood problems.

Trust and safety. As a third component of community social capital, various studies explore the levels of trust and safety that parents feel within their neighbourhoods. Garbarino and Sherman (1980) discovered that mothers who felt safe in their surrounding environment were more likely to report a higher quality of life as well as to rate their neighbourhoods as a more positive place in which to rear their children. Similarly, Sampson and colleagues (1999) found that parents'

perceptions of vulnerability were lower in high-trust neighbourhoods, while in these same neighbourhoods, parents' willingness to assist their neighbours was higher. In addition, consistent with many of the contemporary findings within crime and delinquency research, Maccoby and colleagues (1958) found that delinquent acts by young people were lower in neighbourhoods in which people felt higher levels of interpersonal trust and satisfaction. Lastly, Putnam's (2000) centennial analysis of trends in social capital reveals considerable evidence indicating that high social trust in neighbourhoods can effectively break the existing link between social and economic impoverishment in neighbourhoods and the delinquent activity by youth residing there. Across studies, the general measure of trust and safety used was a single-item indicator, assessing the extent to which parents perceived that most people in the neighbourhood can be trusted, which was scored on a 4-point ordinal scale with responses ranging from 'no, never' to 'yes, always'. Additionally, several studies adopted the five items from the factor, feelings of trust and safety, on the Social Capital Index, to measure this element of community social capital (Onyx & Bullen, 2000; Runyan et al., 1998).

Degree of religiosity. Lastly, several studies include the mother's (or family's) degree of religious involvement as an indicator of community social capital. As demonstrated in Coleman and Hoffer's (1987) original study, family members' frequency of attendance at religious services was found to be a strong predictor of the dropout rate among high school students. A decade later, Teachman and colleagues (1996, 1997) found that the child's attendance at a Catholic school, a related indicator of social capital that was originally proposed by Coleman (1988), had a significant and strong negative effect on dropping out of school. Lastly, Runyan and colleagues (1998) found a mother's regular church attendance to be a significant predictor of positive behavioural outcomes for at-risk preschool children.

Quality of school. Although not included as an indicator in Coleman and Hoffer's (1987) original work, several studies have used the variable 'quality of school' as an indicator of a family's stock of community social capital. Furstenberg and Hughes (1995) created a scale comprised of six items about the quality of school; however, the perceptions of school quality were based on interviews with young people themselves, rather than with their parents. High ratings of the quality of school, as perceived by the adolescents, were found to be strongly related to positive socio-economic outcomes among youth, such as graduating from high school, enrolling in college, attaining gainful employment,

avoiding live birth by age 19 (females only) and remaining mentally and emotionally healthy.

Conversely, in a study assessing the parental and peer risk and protective factors affecting youth's academic achievement and emotional adjustment, Voydanoff and Donnelly (1999) measured the quality of school, as perceived by parents, using a scale containing eight items dealing with the teachers' level of concern for students, the principal's effectiveness as a leader, the skill of the teachers, the school environment as a safe place for children and several other aspects. Responses were scored on a 4-point ordinal scale consisting of letter grades from A, B, C, to D. It was discovered that the parents' perceptions of high quality of the child's school were associated with positive outcomes in their children's educational achievement.

Quality of neighbourhood. A final indicator of community social capital used widely among studies in the review cohort, although also not included in Coleman and Hoffer's (1987) original work, consists of parents' perceptions of the quality of the neighbourhood. Of the 13 studies reviewed, nine used this measure as a component of community social capital. Furstenberg and Hughes (1995) found that high neighbourhood quality was a significant predictor of the future enrolment of young people in college. Stevenson (1998) and Johnson (1999), on the other hand, discovered that poor neighbourhood quality was associated with high levels of depression in young people and high rates of violent acts by young people, respectively. Lastly, multiple studies indicate strong support for neighbourhood quality, operationalised by low levels of neighbourhood social and physical disorder, as a correlate of positive outcomes for children, including lower levels of child maltreatment (Garbarino & Sherman, 1980; Swanson Ernst, 2001); lower levels of youth delinquency (Maccoby et al., 1958); higher levels of children's physical and mental health (Morrow, 2000); higher levels of educational attainment for children (Putnam, 2000); and higher levels of collective efficacy for children (Sampson et al., 1999). The most common indicators of neighbourhood quality across studies include: parents' perceptions of the neighbourhood as a safe place to raise their children, parents' views as to whether the neighbourhood has any safe places for children to convene and to play, and parents' opinions as to the extent of visible incivilities, or signs of underlying social disorder, in the neighbourhood (e.g. litter, graffiti, abandoned buildings, gangs, drug trafficking, etc.) (see LaGrange, Ferraro and Supancic, 1992, for a conceptual review of the notion of social and physical incivilities).

Human capital

According to Coleman (1990), human capital encompasses

the acquired knowledge, intelligence, common sense, personal abilities and talents housed within a particular person. In research on children's welfare and outcomes, human capital is generally measured at the family level, commonly referring to the parents' educational levels, which can influence the type of cognitive environment within a home. The specific amount of support and aid that children receive from their parents in the home environment can either enhance or hinder their own learning processes (Coleman, 1988). Most frequently, prior empirical studies have operationalised this concept as the mother's educational level (i.e. maternal human capital), the father's educational level (i.e. paternal human capital), or as the average of maternal and paternal human capital (i.e. family human capital) (Coleman & Hoffer, 1987; Furstenberg & Hughes, 1995; Garbarino & Sherman, 1980; Putnam, 2000; Runyan et al., 1998; Teachman et al., 1996, 1997). In order to accurately capture the family-specific effects of family social capital and community social capital on an array of child-welfare outcomes, the majority of studies in the review cohort included the notion of parental human capital as a control variable.

Financial capital

Similarly, the effects of a family's income were consistently partialled out in the multivariate analyses performed in the review studies to assess the effects of family social capital and community social capital on different outcomes for children and youth (Boisjoly, Duncan & Hofferth, 1995; Coleman & Hoffer, 1987; Furstenberg & Hughes, 1995; Garbarino & Sherman, 1980; Maccoby et al., 1958; Putnam, 2000; Runyan et al., 1998; Sampson et al., 1999; Teachman et al., 1996, 1997). As per Coleman (1988), the notion of financial capital refers to the physical and material resources that a family has, which, depending on the specific amount, can either stimulate or thwart children's achievement and future outcomes, much like the effects of human capital mentioned above. In the literature on children's welfare and outcomes that emanates from developed countries, financial capital is typically measured as the family's total household income. However, findings from several studies conducted in countries in development, under the aegis of the World Bank, lend credence to the use of a more holistic conceptualisation of financial capital that incorporates alternative indicators of wealth, such as informal bartering, financial support networks and perceived financial need (Krishna & Uphoff, 1999; Pantoja, 1999). Analogous to human capital, financial capital consistently appears in the literature as a control variable, included in order to accurately assess the true effects of family social capital and community social capital on an array of child-welfare outcomes.

Discussion of systematic review and the social capital literature

The study of social capital as a predictor variable in influencing individual and collective wellbeing has provided new precedents regarding the role that this social resource plays in facilitating positive outcomes for children, youth and families alike. The systematic review performed here has exposed three basic trends that are apparent across multiple studies, which merit further attention in future research.

With respect to the first trend, families with high social capital are more likely to produce children who fare positively in areas of general wellbeing, including mental and physical health, educational attainment and formal labour-market participation. This consistent pattern across multiple studies and diverse academic disciplines may be the result of two principle influences. Foremost, ongoing stocks of parental human and financial capital are made available to children through their family social capital. Additionally, social resources, contacts and opportunities are presented to children as a result of their family's stock of community social capital and relationships with other community members and institutions.

Second, synthesizing the findings across studies, it is possible to create a profile of families with high family and community social capital. Empirical precedents suggest that families with high levels of family social capital have a two-parent family structure, with the presence of a paternal figure, either biological or a stepfather. They are typically families characterised by frequent parent-child interactions, high parental interest in children's daily lives and high parental monitoring of children's activities. The parents of families with high community social capital are more likely to be embedded in surrounding social networks, which are comprised of both immediate and extended family supports, as well as to participate in local social institutions. Levels of trust and safety with respect to community residents and environment, respectively, are perceived to be higher among these parents as well. Lastly, there is some evidence that regular church attendance by families and parochial education at Catholic schools for children are also positively correlated with high levels of community social capital.

Regarding the final trend, social capital – after poverty – is the best predictor of children's welfare. This social resource is an especially significant determinant of youth idleness and delinquency, high school dropout rates, teenage pregnancy and newborns' birth weights (Putnam, 2000). Nevertheless, while the presence of poverty in the lives of children and young people has been identified as a negative predictive factor that hinders their development – associated with such consequences as adolescent criminality, school dropout, teen pregnancy and infant mortality – social capital, in

contrast, is considered to be a positive predictive factor that can prevent similar social problems in children and youth (Putnam, 2000). Multiple studies suggest that a community's social institutions and infrastructure as well as the social support provided to parents via their participation in formal and informal social networks are strongly associated with the healthy development of children and their achievement of positive future outcomes. This pattern may be a result of the increased access to other forms of capital, together with the human and social resources for families, acquired through their social relationships in the community.

Methodological limitations of previous research

There are multiple similarities among the studies reviewed here from the literature on social capital. Research designs and techniques for both the data collection and analysis for individual studies were selected within the explanatory framework of social capital theory. Additionally, researchers generally took adequate measures to strengthen the internal validity of their studies: sample sizes were mostly large, numerous studies adopted random sampling techniques and acquired data via multiple sources and the majority of studies incorporated comparison or control groups.

Notwithstanding the methodological strengths identified among studies, there were also some limitations. First, there is extensive discord among researchers regarding the actual component factors comprising social capital as well as how one operationalises such components to measure them. For instance, researchers appear to be split by the relationships-benefits divide common within the social capital literature. In a little over half of the studies, social capital was defined as the relationships or interactions between children and their families (i.e. family social capital), or between individuals and their communities (i.e. community social capital). In contrast, the remaining studies tended to conceptualise social capital in terms of the benefits or assets that it provides to those individuals, families and communities who have invested in this social resource. Thus, it appears that social capital is considered to be both an end (i.e. tangible benefits), as well as a means to arrive at that end (i.e. social relationships). This conceptual duality of social capital complicates comparisons of findings among studies, as researchers are utilising a common term to signify and measure two separate concepts.

Likewise, studies vary with respect to the specific components that researchers select to operationalise the notion of social capital. For instance, Onyx and Bullen (2000) constructed an empirically grounded definition of social capital. Their Social Capital Index consists of eight specific factors: community participation, social agency, trust, neighbourhood connectedness, family and peer relations, tolerance of diversity, value of life, and work

connections. This multi-factor definition of social capital constitutes the most extensive of all others reviewed here.

On the other hand, several researchers have elected some of these factors to measure social capital, or rather, selected entirely distinct components, which are often divorced from existing theoretical explanations and/or empirical precedents. Butler and colleagues (2000) aimed to measure social capital on the community level, yet defined the concept as entrepreneurial social infrastructure, using indicators such as legitimacy of alternatives, diversity of internal and external networks, and expansive mobilisation of internal community resources. Brehm and Rahn (1997) chose to focus solely on civic engagement and interpersonal trust to represent social capital. Krishna and Uphoff (1999) measured social capital as the cognitive and institutional assets that produce tendencies for reciprocal collective action. Morrow (2000), in contrast, focused on some of Onyx and Bullen's factors, while incorporating additional measures: trust, reciprocal support, civic engagement, community identity and social networks. Pantoja (1999) operationalised the notion of social capital by assessing the social and cultural coherence of a society, its social norms and values and the local institutions and social infrastructure embedded in the community. Swanson Ernst (2001) also adopted a structural framework to measure social capital, examining the patterns and functions of formal and informal networks, institutions and organisations in a given community. Teachman and colleagues (1996) observed the density of interactions among parents and between parents and educational institutions in communities. To Runyan and colleagues (1998), social capital represented the specific benefits that people accrued from their individual and collective relationships within their families and communities. Sampson and colleagues (1999) focused on three factors, which are loosely derived from social capital theory: intergenerational closure, informal social control and reciprocated exchange. Lastly, Portney and Berry (1997) used social capital to connote strong democracy and sought to quantify the institutions within communities that offered residents the opportunities to participate with voice and action in the decision-making process. It is evident across studies that the social capital literature still lacks a reliable and validated conceptual template with consistent and systematic indicators to operationalise the term and compare findings from multiple studies.

Review of the literature concerning social capital also reveals the presence of contradictory empirical precedents with respect to the theory's propositions. Putnam (2000) suggests that social capital is deficient in disadvantaged and disorganised communities due to the vicious-circle phenomenon; that is, low levels of mutual trust and social cohesion lead to high levels of crime, which in turn result in even lower levels of mutual trust and cohesion. Existing literature does,

however, reveal numerous studies that find social capital within marginal areas, or ghettos, manifested in the intra- and extra-familial social support networks and elaborate systems of inter-familial bartering (Díaz et al., 2000; Fernández-Kelly, 1994; Krishna & Uphoff, 1999; Stack, 1974). Nevertheless, these social assets are often insufficient in quantity for residents to ultimately overcome their structural poverty, or even immeasurable by upper-middle class, contemporary, US-based social capital indicators (e.g. Internet use, GreenPeace membership and newspaper reading). Other researchers propose that social capital does, indeed, exist in abundance within impoverished communities. However, it tends to be loose and fragmented, which may offer an explanation as to why the stock of social capital within poor communities is often ineffective in enhancing the collective wellbeing of residents and the overall quality of life within the community (Krishna & Uphoff, 1999; Pantoja, 1999; Portes & Landolt, 1996).

The limitations discussed here may hinder the comparison of results across studies as well as the systematisation of a common set of indicators to measure social capital in the empirical realm. Until findings can be consistently and validly compared across studies, the generalisability of social capital will remain in its infancy. However, the similarities across studies regarding some of the basic components of social capital may help facilitate the integration of these components along with the theoretical development of the social capital framework.

Implications for future research: links between social capital and children's wellbeing

After reviewing the theoretical literature and empirical precedents regarding social capital and its effects on children and youth, along with the methodological limitations of existing studies, it is proposed that using a social capital theoretical lens can be beneficial to further explore various outcomes related to children and young people's wellbeing. This proposition is based on two principle premises: (1) that considerable empirical evidence indicates that family- and community-based interactions and relationships can have a positive impact on children and young people's overall wellbeing, and similarly, (2) of all the predictive factors associated with children's well-being, social capital – second only to poverty – has the highest influence on children's development and attainment of future outcomes (Putnam, 2000).

In conclusion, the systematic review of the existing social capital literature reveals various individual, family and community correlates of children and young people's wellbeing. Although these oft-cited predictors begin to explain why some children and young people fare positively on future outcomes, while others fare more negatively, further empirical scrutiny into how

social capital can serve as a protective factor – and how such a resource can be effectively mobilised in families and communities – is warranted. This gap in the existing knowledge presents social science researchers with an opportunity to examine additional aspects of families and communities that may also be important determinants of children's and youth's wellbeing.

References

- Boisjoly J, Duncan GJ, Hofferth S (1995). Access to social capital. *Journal of Family Issues* 16(5): 609–631.
- Bourdieu P (1985). The forms of capital. In: Richardson JG, ed. *Handbook of theory and research for the sociology of education*, pp. 241–258. New York, Greenwood.
- Bourdieu P (1993). *Sociology in question*. London, Sage.
- Brehm J, Rahn W (1997). Individual-level evidence for the causes and consequences of social capital. *American Journal of Political Science* 41(3): 999–1023.
- Butler Flora C, Flora JL (2000). Measuring and interpreting social capital on the community level: The difference and similarities between social capital and entrepreneurial social infrastructure. Available at: <http://www.worldbank.org> (accessed 19 September 2001).
- Coleman J (1988). Social capital in the creation of human capital. In: Dasgupta P, Stiglitz J, eds. *Social capital: A multifaceted perspective*, pp. 13–39. Washington, DC, World Bank.
- Coleman J (1990). *The foundations of social theory*. Cambridge, MA, Harvard University Press.
- Coleman JS, Hoffer TB (1987). *Public and private schools: The impact of communities*. New York, Basic Books.
- Díaz HL, Drumm RD, Ramírez J, Oidjarv H (2000). *Social capital, economic development and food security in Peru's mountain region*. Paper presented for publication. Berrien Springs, Michigan, Andrews University.
- Falk I, Kilpatrick S (2000). What is social capital? A study of interaction in a rural community. *Sociologia Ruralis* 40(1): 87–110.
- Fernández-Kelly MP (1994). *Towanda's triumph: Social and cultural capital in the urban ghetto*. Baltimore, MD, Johns Hopkins University, Institute for Policy Studies.
- Furstenberg FF, Hughes ME (1995). Social capital and successful development among at-risk youth. *Journal of Marriage and the Family* 57: 580–592.
- Garbarino J, Sherman D (1980). High-risk neighborhoods and high-risk families: The human ecology of child maltreatment. *Child Development* 51: 188–198.
- Johnson SD (1999). The social context of youth violence: A study of African American youth. *International Journal of Adolescent Medicine and Health* 11(3–4): 159–175.
- Krishna A, Uphoff N (1999). *Mapping and measuring social capital: A conceptual and empirical study of collective action for conserving and developing watersheds in Rajasthan, India*. SCI Working Paper No. 13. Washington, DC, World Bank.
- LaGrange RL, Ferraro KF, Supancic M (1992). Perceived risk and fear of crime: Role of social and physical incivilities. *Journal of Research in Crime and Delinquency* 29: 311–334.
- Larson D, Pastro L, Lyons J, Anthony E (1992). *The systematic review: An innovative approach to reviewing research*. Washington, DC, Department of Health and Human Services.
- Maccoby E, Johnson J, Church R (1958). Community integration and the social control of juvenile delinquency. *Journal of Social Issues* 14: 38–51.
- Morrow V (2000). 'Dirty looks' and 'trampy places' in young people's accounts of community and neighbourhood: Implications for health inequalities. *Critical Public Health* 10(2): 141–152.
- National Commission on Children (1990). *Survey of parents and children, United States* [Computer file]. ICPSR version. Washington, DC, Child Trends Inc./Princeton, NJ, Princeton Survey Research/Ann Arbor, MI, DataStat [producers], 1990. Ann Arbor, MI, Inter-University Consortium for Political and Social Research [distributor], 1999.
- Onyx J, Bullen P (2000). Measuring social capital in five communities. *The Journal of Applied Behavioral Science* 36(1): 23–42.
- Pantoja E (1999). *Exploring the concept of social capital and its relevance for community-based development: The case of coal mining areas in Orissa, India*. Social Capital Initiative, Working Paper No. 18. Washington, DC, World Bank.
- Portes A, Landolt P (1996). The downside of social capital. *The American Prospect* 26: 18–21.
- Portney KE, Berry JM (1997). Mobilizing minority communities: Social capital and participation in urban neighborhoods. *American Behavioral Scientist* 40(5): 632–644.
- Putnam RD (1993). The prosperous community. Social capital and public life. *The American Prospect* Spring: 35–42.
- Putnam RD (1995). Tuning in, tuning out: The strange disappearance of social capital in America. The 1995 Ithiel de Sola Pool Lecture. *Political Science and Politics* December: 664–683.
- Putnam RD (2000). *Bowling alone: The collapse and revival of American community*. New York, Simon & Schuster.
- Runyan DK, Hunter WM, Socolar RS, Amaya-Jackson L, English D, Landsverk J, Dubowitz H, Browne DH, Bangdiwala SI, Mathew RM (1998). Children who prosper in unfavorable environments: The relationship to social capital. *Pediatrics* 101(1): 12–18.
- Sampson RJ, Morenoff JD, Earls F (1999). Beyond social capital: Spatial dynamics of collective efficacy for children. *American Sociological Review* 64: 633–660.
- Stack CB (1974). *All our kin*. New York, Harper & Row.
- Stevenson HC (1998). Raising safe villages: Cultural-ecological factors that influence the emotional adjustment of adolescents. *Journal of Black Psychology* 24(1): 44–59.
- Swanson Ernst J (2001). Community-level factors and child maltreatment in a suburban county. *Social Work Research* 25(3): 133–142.
- Teachman JD, Paasch K, Carver K (1996). Social capital and dropping out of school early. *Journal of Marriage and the Family* 58: 773–783.
- Teachman JD, Paasch K, Carver K (1997). Social capital and the generation of human capital. *Social Forces* 75(4): 1343–1359.
- Voydanoff P, Donnelly BW (1999). Risk and protective factors for psychological adjustment and grades among adolescents. *Journal of Family Issues* 20(3): 328–349.

Appendix 1. Review of empirical literature of social capital: 1980–2002.

Study/SC level	Year of survey	Region	Purpose of study	Definition	Research method	Sample method	Sample size	Response rate	Mode of administration	Comparison group	Statistical analysis
Boisjoly, Duncan & Hofferth, 1995 Community Social Capital (CSC)	1980	United States	Explore patterns of perceived access to social capital & how patterns differ by family and neighbourhood characteristics	Social Capital: Potential access to gifts and loans of money or time assistance from non-household members in an emergency	Secondary data analysis of Panel Study of Income Dynamics (PSID) – longitudinal survey of US households	PSID is continuous representative sample of US population Non-probability; Study sample consisted of all PSID families with children present in 1980	3,311	N/A	Study used PSID data for measures of stock of social capital (time and money stock); Neighbourhood information comes from census data	Yes	Descriptive statistics; comparison of means (t-tests); Multivariate analyses: Logistic regression models explaining perceived access to time/money help from friends/relatives
Brehm & Rahn, 1997 CSC	1972–1994	United States	1) Identify specific causes for variability of reciprocal relationship across individuals; 2) Gain insight into dynamics affecting key components of social capital at the aggregate level	Social Capital: The tight reciprocal relationship between civic engagement and interpersonal trust	Secondary data analysis of pooled GSS from 1972 to 1994 in latent variables framework, incorporating aggregate contextual data	Population Authors analysed data from GSS Cumulative File from 1972 to 1994	32,380	GSS between 72 and 79%	Study uses GSS data and aggregate contextual data	No	Structural Equation Model IV Factor1 = Civic engagement; IV Factor 2 = Interpersonal trust; IV Factor 3 = Confidence in government; DV Factor 4 = Life satisfaction
Butler, Flora & Flora, 2000 CSC	1994–1995	Rural United States	Compare levels of ESI among rural communities of different sizes & relationship to poverty & economic development	Social Capital: (ESI) = Entrepreneurial Social Infrastructure	Mail surveys	Randomly selected sample; Cluster sampling used to compare communities among size	718 useable questionnaires	65.3%	Surveys mailed seeking information about community activities and development activity	Yes	In-depth case studies; Network analysis; Descriptive statistics/ Categorisation of outputs – benchmarks
Coleman & Hoffer, 1987 Family Social Capital (FSC)/CSC	1969: High School and Beyond Study	United States	Examine the effects of family social capital on educational outcomes of the children	Social Capital: Relations between parents & children; Time and effort spent by parents with children	Survey design within public schools	Random sample	4,000 students from public schools	N/A	Surveys administered to students from 10 th grade and from 12 th grade	Yes	Weighted logistic model; Logistic regression; Controlled for human and financial capital within family

Appendix 1. *Continued.*

Study/SC level	Year of survey	Region	Purpose of study	Definition	Research method	Sample method	Sample size	Response rate	Mode of administration	Comparison group	Statistical analysis
Díaz, Drumm, Ramírez & Oidjarv, 2000 CSC	1999	Latin America Peru's mountain region	Quantitatively test finding that ADRA programme performed outstandingly in area of community confidence-building and mobilization	Social Capital: Degree of participation in community (and 7 other factors identified by Onyx & Bullen)	Cross-sectional survey design with 10 experimental and 10 comparison communities in Peru	Experimental communities selected at random from list of ADRA project communities; Comparison communities matched for demographic characteristics; Random selection of subjects within communities	789 persons within 20 communities	N/A	Interviews conducted in Spanish and/or Quechua; Social Capital Index developed by Onyx & Bullen translated to Spanish and validated for Indian & Mestizo Peruvians; 2nd questionnaire used to collect demographic data	Yes	Descriptive statistics; T-tests/comparison of means between two types of communities; Chi-Square; ANOVA to explore association between social capital and economic development
Falk & Kilpatrick, 2000 CSC	N/A	Rural United States	Answer the question: <i>What is the nature of the interactive productivity between local networks in a rural community?</i>	Social Capital: The product of social interactions with the potential to contribute to the social, civic, or economic wellbeing of a community of common purpose	Whole-community case study using ethnographic techniques	Purposive technique checked with demographic variables; With social network map, first contact phoned and asked for 3 contacts (snowball)	Population of community = 2,500 Interviews = 10 Tapes = 11 Diaries = 20 Meetings = 10	N/A	Data collected from 4 sources: 1) Interviews; 2) Audio-taping of spontaneous stretches of conversation; 3) Self-maintained journal entries; 4) Tape-recorded formal community meetings and group activities	No	Data analysed: 1) Conversation analyses (ethnomethodological principles); 2) Manual thematic techniques; 3) NUD*IST – frequency of mentions; 4) Linguistic principles; 5) Indicator development

Appendix 1. *Continued.*

Study/SC level	Year of survey	Region	Purpose of study	Definition	Research method	Sample method	Sample size	Response rate	Mode of administration	Comparison group	Statistical analysis
Furstenberg & Hughes, 1995 FSC/CSC	1987	United States	Determine whether successful outcomes among sample of disadvantaged youth are related to measures of both family social capital (FSC) and community social capital (CSC)	Social Capital: FSC = outcome of relationships between parents & children; CSC = result of family embeddedness in social relationships with other families and institutions	Secondary data analysis from 'Baltimore Study', a 20-year longitudinal study of sample of young mothers & children (began in mid-1960s)	Original sample of pregnant teens was purposive; Current study used hospital-based sample (yet sample closely resembled population of Black women from original sample)	252 children of teenage mothers Children of original teens interviewed in 20-year follow-up in 1987	N/A	Beginning in mid-1960s, pregnant teens interviewed; then reinterviewed 1, 3, and 5 years after kids born; then when kids 15 & 17; then when 18 & 21	No	3 Stages: 1) Bivariate framework to assess which measures of social capital were related to youth's status 3 years later; 2) Logistic regressions to test social capital and youth's outcomes 3) Logistic regression to test that social capital in adolescence influences later success
Garbarino & Sherman, 1980 CSC	N/A	United States	Validate the concept of social impoverishment as characteristic of high-risk family environments	Neighbourhood Risk: Socially impoverished neighbourhoods	Mixed methods = Qualitative methods with semi-structured interviews with key informants; Quantitative methods with surveys to families	Pair of neighbourhoods selected from results of multiple regression screening analysis (3 criteria); families randomly sampled from pool of families with kids under 18: door-to-door canvassing	1) Total comments = 64; 2) Total families = 48	N/A	2-stage data collection: 1) Interviews with expert informants; 2) Interviews with families within each neighbourhood	Yes	Multiple regression analysis to screen communities; Content analysis of interviewee comments using 'blind' evaluator; Descriptive statistics and comparison between families in high-risk and low-risk communities
Johnson, 1999 FSC/CSC	N/A	United States	Examines viability of social systems' perspective in predicting violence in youth; Examines influence of factors at each social domain on outcome domain of violence	Family Social Capital = Youth's relationship to family; Neighborhood Quality: Social disorganisation; Young people's perceptions of quality of neighbourhoods in which they reside	Interviews as part of longitudinal study of high school African American youth This study comprises the fourth and final interview with youth	Volunteer sample = during freshman year, students recruited by guidance counsellor; only African American and first-time freshmen could volunteer	200 youth	N/A	Self-reports by students in small groups (5–10 per interviewer) or one-on-one interviews with interviewer	No	Pearson correlation coefficient to indicate strength of association among each construct and violence; Hierarchical multiple regression model with block entry of variables by social level with violence as dependent variable

Appendix 1. *Continued.*

Study/SC level	Year of survey	Region	Purpose of study	Definition	Research method	Sample method	Sample size	Response rate	Mode of administration	Comparison group	Statistical analysis
Krishna & Uphoff, 1999 CSC	N/A	Rajasthan India	Assess whether social capital can be identified and evaluated in quantitative terms	Social Capital: Cognitive or institutional assets that create propensities for mutually beneficial collective action	Mixed methods: Qualitative methods at village level: focus groups; direct observation Quantitative methods at household level: surveys with families	Non-probability, purposive: 64 villages selected, 16 in each of 4 districts in Rajasthan; 4 districts chosen because they represent 2 different approaches to watershed development	Villages = 64 Villages stratified to reflect high, medium and low project performance Individuals = 2,397 (simple random sample)	N/A	Data collected at two levels: 1) Village level (focus groups with village leaders, direct observation of plant survival rates and community infrastructure; and use of census data/ official records) 2) Household level (interviews with heads of households)	Yes	Multiple regression analyses
Maccoby, Johnson & Church, 1958 CSC	1954	United States	Devise an empirical study to re-test Shaw's hypothesis that community disintegration is a factor producing juvenile delinquency	Community Integration Religious homogeneity Residential stability Stronger networks (know more people)	Interviews with families in neighbourhoods stratified for juvenile delinquency rates	Non-probability, purposive 2 census tracts selected from Cambridge, one with high delinquency & one with low delinquency (income controlled) Dwellings chosen via probability sampling methods (area sampling)	129 in high delinquency area; 107 in low delinquency area	11% people refused interview 16% could not be reached	Semi-structured interview with open-ended questions (plus list of probes) with adult heads of household; Incident Report Sheets recording demographic data of children involved in incident	Yes	Descriptive statistics between two groups
Morrow, 2000 CSC	N/A	Great Britain 2 secondary schools in town of Springfield	Explore how the concept of social capital can relate to the health and wellbeing of children and young people	Social Capital: Trust, reciprocal support, civic engagement, community identity and social networks	Qualitative research methods combined with structured activities (e.g. freely written accounts)	Non-probability, purposive sampling: Schools chosen in less affluent areas with high minorities	99 children in two age bands: 12–13 year (8th grade) 14–15 year (10th grade)	N/A	1) Written accounts ('What do I do when not in school'; 'Who is important to me?'; 2) Visual methods (photos of important places); 3) Group discussion (perception of neighbourhoods)	Yes	Content analysis

Appendix 1. *Continued.*

Study/SC level	Year of survey	Region	Purpose of study	Definition	Research method	Sample method	Sample size	Response rate	Mode of administration	Comparison group	Statistical analysis
Onyx & Bullen, 2000 CSC	1995	Australia	Develop an empirically grounded definition of social capital	Social Capital: Participation in networks, reciprocity, trust, social norms, the commons, social agency	Mixed methods: Exploratory discussions among academics and practitioners; Surveys	Non-probability, purposive sampling in five communities stratified to reflect urban, suburban & rural areas	1,200 adults in 5 communities	N/A	In each community, Local Community Services Association went door-knocking, set up stalls in public places & sampled in community centres	Yes	Hierarchical factor analysis and inter-item reliability analysis; Structural equation modelling
Pantoja, 1999 CSC	1994–1995	Orissa, India	Examine various forms, dimensions and effects of social capital to approach assumptions that social capital represents new dimension of community development & facilitates access to other resources	Social Capital: Internal social and cultural coherence of society, norms and values that govern interactions among people & institutions in which people are embedded	Exploratory design using qualitative analysis focused on community-based development processes	Non-probability, purposive; 2 communities chosen among World Bank-financed projects (criterion: areas with low levels of conflict and unencumbered project implementation advancement)	2 communities selected based on factors: 1) geography; 2) regulatory environment; 3) social, political & economic contexts	N/A	Data collected by: 1) Household survey on each of the study areas; 2) Focus group sessions; 3) Unstructured interviews with key informants; 4) Stakeholders workshop; 5) Secondary data sources	Yes	Multi-level and multi-dimensional analysis, developed as <i>virtual matrix</i> , taking identified forms of social capital and their various dimensions to assess how issues of power and politics affect them
Portney & Berry, 1997 CSC	1986–1987	United States	Break down participation by race and explore what kinds of political organisations are most effective in mobilising minorities in city politics	Social Capital: Strong Democracy = institutions giving residents opportunities to participate with voice & action; Community Building = beliefs contributing to and attitudes about community & willingness to cooperate	Survey design	Non-probability, purposive: Cities selected because believed to have most impressive citizen participation rates in USA; Each city has city-wide systems of neighbourhood association	1,100 residents in each of 5 cities Surveys stratified by neighbourhood so that the number of interviews in each neighbourhood was proportionate to the total population	N/A	1) Surveys with city residents; 2) Direct observation/fieldwork 3) Elite interviews with key informants	Yes	Descriptive statistics; Chi-Square comparisons among neighbourhoods

Appendix 1. *Continued.*

Study/SC level	Year of survey	Region	Purpose of study	Definition	Research method	Sample method	Sample size	Response rate	Mode of administration	Comparison group	Statistical analysis
Putnam, 2000 CSC	1992–2000	United States	Amass, analyse and interpret multiple sources of data regarding civic life in US to determine causes of US civic disengagement	Social Capital: Connections among individuals – social networks & norms of reciprocity & trustworthiness that arise from them	Systematic, quantitative analysis of multiple sources of secondary data	Strategy: Triangulate among as many independent sources as possible	U.S. public from 1900 to 2000	N/A	Secondary data from instruments: Roper Social & Political Trends dataset; DDB Needham Life Style surveys; Market Facts; Census data; GSS; NES	No	Multiple regression and descriptive statistics
Runyan, Hunter, Socolar, Amaya-Jackson, English, Landsverk, Dubowitz, Browne, Bangdiwala & Mathew, 1998 FSC/CSC	N/A	United States	Examine extent to which social capital is associated with positive developmental and behavioural outcomes in high-risk children	Social Capital: Benefits that accrue from social relationships within communities and families	Secondary data analysis: Cross-sectional case-control analysis of two groups of children at baseline in four coordinated longitudinal studies	All subjects = LONG-SCAN study children, sharing common characteristic of unfavourable environmental factors putting them at-risk for child abuse	667 2 to 5-year-olds and their maternal care-givers participating in longitudinal study	N/A	Common measures and procedures related to risk and protective factors for child maltreatment and subsequent outcomes implemented across all studies; Mothers participated in 2-hour face-to-face interview; Children were administered developmental screening test	Yes	Case-control approach (cases doing well vs. all others as controls); Other statistical tests used: 1) Two-sample Wilcoxon rank sum test; 2) Chi-Square test of homogeneity; 3) Simple logistic regression/Odds ratios; 4) Linear regression
Sampson, Morenoff & Earls 1999 FSC/CSC	1995	United States	Examine variations in intergenerational closure, reciprocal local exchange & shared expectations for informal social control	Neighbourhood Level Social Organisation: Intergenerational closure; reciprocated exchange; informal social control	Survey design: Community Survey	3 Stages: 1) City blocks sampled within each cluster; 2) Dwelling units sampled; 3) One adult sampled per home	8,782 residents representing all 343 neighbourhood clusters	75%	One adult resident in each dwelling unit was interviewed in his/her home; Questionnaire included Likert scales designed around three factors of NLSO	No	Descriptive statistics; Bivariate Correlations; Multiple regression; Spatial typology mapping

Appendix 1. *Continued.*

Study/SC level	Year of survey	Region	Purpose of study	Definition	Research method	Sample method	Sample size	Response rate	Mode of administration	Comparison group	Statistical analysis
Stevenson, 1998 FSC/CSC	N/A	United States	Investigate the relative impact of self-reported neighbourhood and kinship social support and perception of fear of violent outcomes & their relative impact on emotional development	Social Capital: NSC = youth's perceptions that neighbours are supportive of activities/ relationships; FSC = youth's perceptions of amount of social/ emotional support that families receive from adult relatives in area	Survey design	Non-probability, purposive: Students recruited within the programme sponsored by local community-based organisations throughout various communities	160 students in urban community centre-based jobs summer support programme	N/A	Study used 5 measures: (All measures read aloud to subjects to control for reading difficulties among youth) 1) MDI 2) NSC 3) Neighbourhood Risk 4) KSS 5) FOC	Yes	Zero-order correlational analyses; two-way ANOVA; multiple regression
Swanson Ernst, 2001 CSC	1995	United States	Examine relationship between neighbourhood structural factors & child maltreatment rates in suburban county through replication of maltreatment study	Community Social Organisation: Patterns and functions of formal and informal networks and institutions and organisations in a locale	Secondary data analysis of data from neighbourhood census tracts	Population County in which study performed has 159 census tracts	159 census tracts	N/A	DV = Child Maltreatment Rate calculated by dividing number of families investigated one or more times for abuse by total number of families with children under 18 in each tract IVs = consistent with literature on community social organisation	No	Created map showing distribution of child abuse and classified abuse rate into five groups using natural breaks method; Principal components factor analysis; Ordinary Least Squares regression analysis
Teachman, Paasch & Carver, 1996 FSC/CSC	1988, with follow-ups in 1990 & 1992. Study = 1990 data	United States	Examine the effects of various measures of social capital on the likelihood of dropping out of school early	Social Capital: Density of interaction among parents, children and schools (FSC = CSC)	Secondary data analysis of data from National Educational Longitudinal Survey	3-stage sampling procedure: Wave 1 = 1988 Wave 2 = 1990 Wave 3 = 1992	16,014 8th graders in 1990 (641 = 4% dropouts)	N/A	NELS contains information from students, parents, teachers and school administrators, with attention to group interactions	Yes	Principal components factor analysis; Weighted and unweighted regressions (OLS regressions)

Appendix 1. *Continued.*

Study/SC level	Year of survey	Region	Purpose of study	Definition	Research method	Sample method	Sample size	Response rate	Mode of administration	Comparison group	Statistical analysis
Teachman, Paasch & Carver, 1997 FSC/CSC	1988 (Wave 1) with follow-ups in 1990 (Wave 2) & 1992 (Wave 3).	United States	Examine effects of financial, human and social capital on the likelihood of dropping out of school; Test whether social capital mediates the effect of parental financial and human capital on dropping out	Social Capital: A filter through which financial and human capital of parents is transmitted to and used by children	Secondary data analysis of data from National Educational Longitudinal Survey	3-stage sampling procedure: Wave 1 = 1988 Wave 2 = 1990 Wave 3 = 1992 Respondents are followed longitudinally	10,889 students for whom information is available from each of the 3 Waves of data for 8th graders in 1990 (641 = 4% dropouts)	N/A	NELS contains information from students, parents, teachers and school administrators, with attention to group interactions	Yes	Logistic regression models