Social Capital and Health in a Digital Society

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Abstract

Quality of life is directly influenced by the quality of social relationships. Social capital, a reflection of the cohesiveness of social networks, is considered a significant determinant of health outcomes. Among social beings, lack of quality social connections correlates with poor health consequences. Membership in social networks and social bonds enhance individual's self-worth and self-esteem, and improve access to information, resources and support critical to well being. Moreover, communities with higher levels of social capital demonstrate higher levels of trust, reciprocity, caring association and a social environment that is conducive to health.

Recent technological advances such as the Internet have largely replaced the need for face-to-face interactions. The increasingly fast pace of our society has undermined social relationships and thus is accountable for declining levels of social capital. As collaboration gives way to competition, autonomy, and self-sufficiency, individuals are becoming increasingly isolated with suffering health outcomes. It is essential for health educators to bolster levels of social capital through interventions that address declining social connectivity, by promoting healthy relationships and a greater sense of community. The purpose of this article is to discuss declining social capital and health outcomes in light of increasing automation in the United States and make suggestions for health education interventions.

Introduction

The hectic pace of our daily lives and our increasingly automated society have both diminished the quality of our relationships and threatened the strength of our communities. Studies have suggested that disadvantaged neighborhoods substandard health status cannot be entirely attributed to the individuals that reside therein or in the lack of amenities and available services. In the examination of the ecological association between neighborhood level social capital and mortality rates, in over 300 neighborhood clusters of about 8000 residents each, it was found that neighborhood social capital was associated with lower neighborhood death rates. Other studies have also concluded that lower level of social capital were related to higher rates of heart disease, cancer,

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infant mortality and violent death including homicide (Lochner, Kawachi, Bernnan and Buka, 2003).

Increasing levels of isolation and apathy have resulted in lower levels of participation and self-determination of individuals and communities across the nation. Putnam (2000) presented extensive data documenting downward trends in political, civic and religious participations across the nation. Additionally, presented data supported a decline in "connections" related to informal social relations and workplace associations. At the root of this deterioration of our nation's social fabric are technological innovations that obviate interpersonal communication. Statistical information by Putnam (2000) has demonstrated proliferation of "screens" including TV, VCR, PC, and Internet in homes in America and that "screen watchers" do not keep in touch with others and don't feel as good in terms of their health. A disturbing result of this degraded social fabric is the increasingly poor health of the U.S. population as social health interactively influences other dimensions of health.

Although the U.S. has established the most expensive and technologically advanced research and medical care systems in the world, Americans do not rank among the healthiest people globally. According to Gorski (2000), the U.S. is ranked below many other nations in infant mortality, premature birth, chronic illness and adult mortality. In the western world, the U.S. has the highest rates of child abuse, teen pregnancy, homicide, suicide, and drug abuse. The paradox of such a high U.S. total expenditure on health care delivery and research (representing 18% of the Gross National Product), or more than double that of any other nation, paired with unimpressive health outcomes, is partly explained by the appalling gaps in accessibility of health care to various U.S. sub-populations (Satcher, 2006).

Currently, about 20% of the population cannot afford health care, over 40 million live without insurance, and millions more have only limited medical coverage. Tragically, about 90% of uninsured children live in families with one employed parent. These disparities clearly fall along lines of race and family income. African American children are twice as likely, and Hispanic children are three times as likely to have poor health as White children. Life expectancy for African American men is 69.2 compared to White males' life expectancy of 75.4 years. (Gorski, 2000; Satcher, 2006). However, even if equal access to health care were achieved, access to quality medical care alone does not guarantee good health. The way we live together and the quality of our relationships in our families, communities and society overall directly influence individual and population health outcomes.

Studies have documented the declining quality of social relations in the U.S. The subsequent negative concomitants are reported as fragmented communities, weak political participation, and poor health outcomes. On the other hand, positive results for health are noted where strong social ties exist. The purpose of this article is to discuss declining social capital and health outcomes in light of increasing automation in the United States and make suggestions for health education interventions.

The concept of *social capital* is frequently used in discussions of the myriad ramifications that social support, caring networks and levels of social integrations, or lack thereof, can have upon individuals and communities. Public health experts are increasingly identifying greater community involvement and the development of social capital as means of reducing health inequalities among U.S. populations (Farquhar, Michael & Wiggins, 2005). According to Smedley (2006), improving the health status of marginalized groups requires addressing fundamental social and economic determinants of health.

A Conceptual Framework for Social Capital

From the inception of the aggregated theories that formed the groundwork for what is now called social capital, scholars have proposed a variety of definitions of the term. However, a common core runs through them, including the key components of trust, reciprocity, cooperation, and civic involvement, from which social capital result. These elements foster the development of a civic community that is able to address public issues collectively, as a community of citizens rather than a collection of private individuals (Borgida, 2002).

Kawachi, Kennedy, and Glass (1999) noted that social capital consists of social organization characteristics that facilitate collective actions. Hawe and Shiell (2000) stated that social capital is not "one thing." It has relational, material, and political aspects as well as positive or negative effects. It can refer to both dense and loose networks and it takes on a different form depending on whether one is concerned with the individual, immediate group membership, or the interaction between social institutions. Yet another definition is offered by Hancock (1999), who stated that social capital constitutes the "glue" that holds communities together. It has both an informal aspect, related to social networks, and a more formal aspect, related to our social development programs. High levels of "social cohesion" and "civicness" are rooted in social networks and in participation in society's processes, including the processes of governance through which decisions are made.

In a broader ecological perspective, social capital is not merely concerned with individuals having a multitude of relationships, but with quality relationships that are rooted in features of social organization. The end goal of social capital is not just to produce trust, reciprocity, and civic involvement as a stagnant endpoint. These characteristics are cornerstones of a dynamic and circular process that continually accrues positive dividends for individuals and

communities. Social capital does not depreciate with use like physical assets, rather it undergoes a multiplier effect whereby the more it is used the larger it becomes (Hawe & Shiell, 2000). It typically produces dividends from the initial investment that was made, and reciprocity is generally a by-product of the transaction. Social capital cannot accrue to an individual unless he or she interacts with others (Macinko & Starfield, 2001).

Benefits of Social Capital

A wide variety of studies have underscored the benefits of high levels of social capital. A study by Seeman (1996) indicated that, based on available data, social integration is generally associated with better health; and quality of relationships influence the extent of health benefits. The author noted, "clearly, individual's networks of social relationships represent dynamic and complex social systems that effect health outcomes" (p. 442). Other benefits include positive community outcomes. Social capital relates directly to levels of social cohesion in a community, and the strength of social networks, social ties and social support among its members can determine individual and community self-determination These factors are potent ammunition in the battle to develop healthy environments based on individuals' ability to work together to combat a sense of shared powerlessness or helplessness. Ideally, this nucleus of power can then set its sights on the political and economic processes of a nation, influencing them in a mutually beneficial manner. Seeman (1996) encouraged further research by stating that much information available is based on the epidemiological and quantitative data. However, there is a need for more comprehensive approach to include structural and qualitative factors to measure varied aspects of the social environment and their impact on health.

Social capital can also be seen in terms of its benefits to individuals. It endows holders with advantages and opportunities that accrue through membership in certain communities (McClenaghan, 2000). Parental and kinship support is provided through membership in social networks (Hawe & Shiell, 2000), and the observance of norms established by networks leads to improved levels of trust and reciprocity The very benefits of social capital reinforce the same norms, trust, and support that created it (Macinko & Starfield, 2001). It has been proposed that increasing social capital could lead to reduction of health inequalities, as the health of communities and individuals are bolstered by strong community networks (Lochner et al., 2005; Macinko & Starfield, 2001).

Negative Consequences

Social capital is not without its negative aspects, as in the example of membership in anti-social organizations such as the Mafia. The solidarity and effectiveness displayed by this subgroup constitutes social capital for the members of the group, but is detrimental to society at large (Inkeles,

2001). Membership in such a network may also constrain the opportunities of non-network members, place excessive demands on network members, and restrict individual freedom, where such social mores are enforced by group membership. Additionally, dangerous delinquent behaviors are reinforced when these behaviors are the defining characteristic of group membership (Hawe & Shiell, 2000). Thus, greater social integration is not always desirable when it is accompanied by greater interpersonal conflict resulting in negative psychological and physiological outcomes of those interactions. Clearly social capital is not a panacea for all that ails communities, rather the cultural and contextual relevance ought to be applied to the population in question.

Social Capital and Health Outcomes

A leading Victorian public health reformer, Sir Benjamin Ward, placed on the masthead of *The Sanitarian Journal* the poignant slogan, "A nation's health is a nation's wealth" (Hancock, 1999). The health of the members of a society is indeed a form of capital valuable to the society at large. Healthy individuals are able to contribute to the establishment of healthy communities, healthy economies and robust political systems. In addition, scholars have long noted an association between social relationships and individual health status. Lynch (1977) identified dialogue as "an elixir that sustains our lives" (p. 215). Furthermore, reciprocal relations, sharing, and caring communication with others involve processes that go beyond what scientific instruments can measure. Description of these processes can be traced back to ancient Greek philosophy related to collective consciousness that can be experienced intuitively but not explained as material objects.

Health is the product of multiple levels of influence including, biological makeup, individual behaviors, and the context within which people live, the social environment. A multilevel approach to health requires taking into consideration social capital as a characteristic of the social environment and thus a potential determinant of health. Socially isolated individuals are less psychologically and physically healthy, and are more likely to suffer morbidities and mortalities than more socially integrated individuals (House, Landis & Umberson, 1988, Gorski, 2000). Humans seem to have an innate understanding that there is a link between loneliness or isolation and deleterious physical effects. A common example is provided by stories of elderly individuals who pass on with unexpected rapidity after the death of a spouse.

Of all the domains in which Putnam (2000) traced the consequences of varying levels of social capital, in none was the importance of social connectedness so well established as in the case of health and well being. This insight has been reflected in public health research on virtually all aspects of physical and mental health (Berkman & Glass, 2000; Henderson & Whiteford, 2003), and through both epidemiological and qualitative studies (Baum & Ziersch, 2003). Evidence suggests that, in general, the size of one's social network or degree of "connectedness" is inversely related to high-risk health behaviors. Kawachi et al. (1999) found that states with low social capital had higher numbers of residents who reported their health status as being only fair or poor. These findings are typical and replicated in multiple other studies. Studies have also showed strong correlations between lack of social ties and poor post-stroke and post-heart attack recovery, increased mental disorders and lowered immune function (Berkman & Glass, 2000). Availability of social support and access to information that comes from network connections are necessary for survival and health.

The degree to which an individual is connected to and embedded within the networks of a community is vital to his or her health and well-being, as well as to the health and vitality of the community. Individuals who lack social support and social ties live in a situation that is not conducive to optimal health. Obviously, these factors cannot all be isolated for experimental purposes to produce conclusive evidence of causation. However, a wealth of studies on the topic has nonetheless identified a significant impact of social factors on individual and population health outcomes.

Social Capital, Technology and Community Health

Community health is achieved through continuous collaborative efforts of individuals and groups with shared values and common goals. Collaboration implies that high levels of trust, care, and connectedness exist among those involved in order to create a sense of membership, commitment, and participation that generate community spirit. Social capital describes the patterns and intensity of network connectedness, which include families, workplaces, neighborhoods, and other formal and informal meeting places such as schools and religious gatherings. The concept of social capital suggests that greater interaction among people leads to more meaningful relationships, which ultimately are conducive to better individual and community health outcomes (Wakefield & Poland, 2005).

As vital as social capital is to society and individuals, a notable decline has been and continues to be experienced as a result of various social and environmental factors. There has been a dramatic decline in the level of participation in group activities which threaten the quality of life (Sobel, 2002). These include volunteerism and participation in civic, religious and political process. Furthermore, Sobel (2002) indicates that greater responsibility for the decline of social capital is placed on generational differences, television, increasing commuting times, and increased female-labor-market participation. The causes for decline in social capital are extensive, but often are greatly associated with technological advancements that largely replace the need for face-to-face social interaction. The lack of human contact and socialization produces harmful consequences such as reduced quality of relationships, mistrust, alienation, and deterioration of mental and physical health.

The introduction of technology into the market has historically been met with a combination of glee, suspicion, and a consumer response. After the initial fascination wears off, it is typically supplanted with societal normalization and widespread adoption of the new technology. One need only look at the fairly recent phenomena of the cellular phone and the Internet for an example of culture-wide saturation of a new invention and the effects of technological advancement upon social relations.

Advances in technology offer more choices that allow individuals not to interact or relate to others in person. Although this serves the lifestyle needs of time-conscious individuals in a rushed society, increasingly people feel lonely and out of touch with their own lives and their loved ones (Pappano, 2001). According to Prensky (2001) the time spent on reading by today's average college graduates is less then 5,000 hours of their lives compared to over 10,000 hours playing video games. Additionally, this population spends 20,000 hours of their lives watching television. Students today are called digital natives (natives speakers of the digital language) and rest of us who were not born into the digital world as digital immigrants. Prensky (2001) indicated "the single biggest problem facing education today is our digital immigrant instructors, who speak an outdated language (that of the pre-digital age), struggling to teach a population that speaks an entirely new language" (p. 2). In regards to students, Prensky stated, "computer games, email, the internet, cell phones and instant messaging are integral parts of their lives" (p. 1).

In a "push button" society, cell phones and computers are not the causes of loneliness, they are rather tools that make it possible for people to control and limit their interactions. They create a figurative and literal fortress that makes it difficult for others to break in and connect. Craving speed and making choices based on convenience, many ignore the trade-offs in dwindling emotional relationships. The subsequent shift in perspectives has been shaping us into people with shorter attention spans, minimal patience and oriented to machines instead of humanity.

Social Capital and Internet Use

The Internet is a medium that touts the forming of connections as a beneficial by-product of its use. One can stay in contact with geographically distant friends and exchange information through chat rooms, electronic mail, and social networking Web sites. The Internet can also increase organizational involvement by facilitating the flow of information and rendering unnecessary face-to-face meetings (Wellman, Haase, Witte & Hampton, 2001). In a survey of 5,000 people, respondents universally reported that their use of the Internet for information exchange had a positive impact across the three domains: civic engagement, interpersonal trust, and contentment (Shah, Kwak & Holbert, 2001).

The aforementioned applications are obviously beneficial to the user in that they conserve time and maximize information exchange. In a society that holds efficiency in productivity in paramount esteem, this seems good but one must explore the other side of the coin. If the Internet purportedly increases social capital, then high utilization of Internet-based networking capabilities should be accompanied by more offline interpersonal contact, organizational participation, and commitment to community. However, quite the opposite is true in American society (Wellman et al., 2001).

Researchers have conducted experimental surveys on measures of life contentment, interpersonal trust, and civic engagement, relating these domains to levels of Internet usage. However, where studies examining Internet use have run afoul is in their failure to differentiate between the amount of time people spend online and the specific types of Internet activities engaged in. Some studies found that subjects were able to retain meaningful associations with people if their use of the Internet was informational in nature and their online interactions supplemented their face-to-face and telephone conversations. Others reported that when subjects were primarily engaged in social-recreational activities such as video games, chat rooms, and multi-user dungeons the immersive nature of these Internet activities turned people away from community organizations, political involvement, and domestic life (Shah et al., 2001; Wellman et al., 2001).

Some people perceive that Internet use approximates traditional personal interaction quite well, so they have substituted virtual worlds for real ones. This alternative sets a dangerous, self-deceptive precedent. Since online "relationships" are seen by some as equivalent to real flesh and blood ones, people increasingly get involved in these pseudounions that can bear minimal fruit for them as individuals or for society at large. Social norms are eroded by the anonymous nature of online chat rooms, dating services, and social-networking Web site. These allow participants to freely engage in deviant activities, such as sexually inappropriate materials. Immersion into the escapism that these sites provide shields individuals from the traditional mores and norms of society that would otherwise regulate deviant behavior. The individual who frequently engages in Internet pornography and develops convoluted ideas of what constitutes intimacy provides an example. When this individual goes on to form a relationship with an actual partner, this experience may undermine his or her relationship.

Those supportive claim that digital networks have increasingly connected us while extraordinary changes are taking place within society (Nachison, 2005). These changes include providing individuals an unprecedented capacity to access or create information. A new breed of publishers is now taking advantage of powerful and inexpensive Web publishing tools. Internet technologies now enable financial transactions that supersede any geographic restrictions. Today's virtual, digital mediascape provides information that crosses all physical boundaries. Although Internet has been credited for its power in the availability of information, it is questionable if technology leads us to an information utopia (Nachison 2005). The long-term consequence of living in a

digitally connected society is uncertain but information overload may render apathy and other negative consequences on health. Without quality control, there are risks when these digital tools and capabilities are in the hands of anyone interested. Unfortunately, dissemination of misinformation or misuse and abuse of information occur. Global communication network is a great idea but how are we going to insure accuracy and credibility of information to prevent confusion and chaos? Meanwhile, spending too much time with technologies diverts potential and powerful in-person meetings. When social capital resources are squandered to unproductive ends everyone loses.

The downside of forming Internet "connections" includes isolation, convoluted social norms, heavy consumerism of materials and becoming immersed in fantasy worlds, all of which erode social capital. These behaviors create breaks in the chains of social networks, social ties and social organization. How can people learn to foster caring relations while isolated from situations in which they could gain those skills? If one does not have face-to-face engaging debates with others about culture, arts, politics or economics, one's condition is not conducive to developing social capital, a key determinant of improved quality of life.

Discussion

Declining social capital is not something that can be rectified overnight. People need to be given the appropriate knowledge that will enable them to empower themselves, their families and their social networks. Care must be taken not to alienate people with accusatory or denigrating communication that will only serve to worsen the situation. Also, social capital needs to have a generally agreed upon definition, standardized measurement instruments, and standardized interpretation of measurement results. The definition is important because social capital, inexplicitly defined, is open to varied interpretations as it relates to health. A clearer definition would aid in dissemination of the tenets of social capital to facilitate its widespread adoption as a theoretical concept.

A society-wide effort needs to be undertaken at the neighborhood level to develop attractive and effective alternatives to staring at a screen for hours engaged in "relationships." In areas with high Internet usage and low social capital, neighborhood-wide needs assessments can identify interests of the local residents and programs can be designed to incorporate their interests. A good example is a community garden project. Engagement in the physical environment can be conducive to social interactions, and benches need to be built, structures need to be painted, and plants need to be planted and plotted out. This alone encompasses carpentry, artistry, horticulture, and drafting, in addition to myriad other opportunities. The most important factor, however, is that the community would be interacting in promoting civic involvement. This could also function as a stepping-stone for other powerful community activities.

It is essential to study Internet utilization among various ethnic populations to investigate variability in outcomes, particularly in terms of consumer values. Inequities in some ethnic communities are based upon outward signs of ostentation that adorn the body such as jewelry, clothing, and personal grooming. Social ties in these communities, which often inhabit physically dilapidated neighborhoods, are often contingent upon possession of valued "gear." Further research should focus on technological inadequacy and changing norms in these communities.

In increasingly high-tech lifestyles, health education must take a stronger position in promoting the ethic of caring relationships. As cited in Rogerson and Webb (1991), the notion of care expands from not hurting others to acting responsively toward oneself and others and sustaining connection. A consciousness of the dynamic of human relationships then becomes central to the moral understanding of joining the heart and eye in an ethic that ties activity of thought to the activity of care. This may sound very philosophical; however, it is fundamental to public health.

Implications for Health Education

With a focus on relationships, health educators must demonstrate care through modeling, dialogue, and practice. Such performance must be characterized by continuity, reflections, and confirmation. To develop social capital, effective health education must favor curricula that focus on developing such virtues and strengths as:

Empathy	Generosity
Kindness	Courage
Cooperation	Contemplation
Perseverance	Patience
Responsibility	Sensitivity
Trust	Respect
Self-discipline	Self-control
Positive attitude	Citizenship

Social capital requires that relationships be created, strengthened, and maintained to produce optimal outcomes for individuals and communities. Building social capital requires time, effort, trust, and most importantly, commitment. Levels of social capital within a community depend directly on each individual's ability to prioritize their values as it relates to relationships. Community leaders and public health professionals have called for a plan of action in attempts to reestablish social capital (Gorski, 2000; Hancock 1999; Howe & Shiell, 2000; Macinko & Starfield, 20001). These include:

·   Erect the human building blocks of health through improving health care, public policy, health behaviors and living conditions.

·   Consider human development the central purpose of public health by advancing ecological and

economical conditions through reducing such factors as unemployment and poverty.

· Expand on capacity building within the community by promoting participation whereby people develop the skills critical for healthy social interactions.

· Develop healthy relationships and prioritize activities in order to allow time for personal relationships, networking, and in-person communications. Engage in social activities such as joining a sports team not only as a gateway to improve health but also for its characteristic of interdependence.

· Shift from managed care to community health with the primary goal being the public's health in terms of physical, mental, social, and spiritual well-being.

· Increase grassroots engagement in order to encourage community members to become directly involved with community decisions, therefore, creating a sense of belonging and citizenship.

· Increase collaboration, advocacy, and coalition-building critical to the realization of successful community participation.

· Incorporate diversity and embrace all races/ethnicities without prejudice in order to enhance the community's vision.

· Conduct more research to clarify the basis for social capital as a determinant of health and its implications for health education interventions.

Conclusion

A relationship can be beneficial to health just as it can be unhealthy; it requires knowledge of the difference and commitment to produce a change. In order to connect with others and generate greater levels of social capital, it is first necessary that individuals have the ability to know themselves and prioritize their values, reflected in lifestyle choices, as it relates to health.

Heavy Internet use can be correlated with a decline in social capital and subsequently deteriorating health outcomes. Internet use deserves attention for its ability to usurp the rightful place of face-to-face interaction. However, there is an inherent danger when people equate automated communications as more constructive and desirable compared to any in-person talk situations. A conscious effort needs to be made to reintroduce people to the joys that can be gleaned from real-world caring associations. In a public health perspective, it is erroneous to assume that people may be surly or hermits by nature and we ought not to interrupt their choices in communication or lifestyles. What would the quality of life be if we set aside extending a genuine hand to our fellow human from a place of true love and respect? To develop social capital, effective health education interventions are needed for bringing individuals and communities in touch and together!

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