

Social capital and health: a return to social and sociological traditions

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Introduction

With the heightened popularity of social capital concept in academic debates over the past two decades, it has been extensively explored (theoretically and experimentally) by different researchers of various fields including families and youths' behavioral problems, education, social life, employment and organizations, democracy and governance, economic development, crime and violence, public health, and environmental issues [1]. In the field of health, the effect of this factor on the health of individuals and populations in different social contexts has been frequently studied, with contradictory results.

Although the concept has been popularized in the past two decades as "social capital", its theme is not so new. Around a hundred years

Abstract

Social capital as a concept which is related to social context and as a new element besides other factors like environmental, Genetic and individual factors has attracted interests of professional and authorities in national and international levels. This approach has attracted attentions in low-income countries which have source limitations for interventions. This paper introduces concepts regarding social capital and health relationship, and a review on experimental and theoretical literature as well. A review research conducted by reviewing scientific databases on the net. The study includes English & Persian papers published thought 1990-2009 which studied empirically or theoretically the relationship between social capital (and its components) and physical or mental health. Empirical results shows some evidence for the positive relationship between the two, but in some social contexts, factors like poverty, violence and individual differences (like gender) may result in decreasing of intensity of or disappearing the relationship. There are three main theoretical mechanisms to explain the relationship: promoting pro-Health behavior, facilitating access to services and the effect of psychological process. Finally critics and limitations in the study of social capital and health relation is explained.

Keywords: Behavior, Capital, Health, Social

ago, Durkheim and Townies referred to themes like "social cohesion" and "sense of community", of course, not exactly synonymous with social capital, but they referred to aspects of social structure that emerge from social interactions.

Adler and Vaughn [2] according to Schiff, Baker, Portes, Kawachi and Berkman [3], according to Putnam, Coleman [4], and Bourdieu [5] regard social capital an aspect of social structure, or derived from it, which makes possible actions not possible in its absence [4]. It provides access to resources for activists through membership of groups [5] or assures their positions in social network [6], and thus, provides mutual benefits for them [7, 8].

An overwhelming number of theorists believe that social capital is a multidimensional concept that includes structural as well as cognitive dimensions. The structural dimension is more objective and refers to quantity and quality of social relationships, and its indicator is network characteristics of individuals' relationships. The cognitive dimension refers to the mental aspects of these relationships [9]. Even though there is no clear agreement about this, cognitive social capital deals with such aspects as values, norms, and behaviors. In different studies, cognitive social capital includes components of "trust" and normal reciprocating action (Reciprocity), also some associate it with social participation, social support, and a sense of social belonging.

Furthermore, in recent years the concept of health has also been the target of debates. The World Health Organization (WHO) defines "health" as a condition of total physical, mental, and social well-being, and not just absence of illness or disease, which is equivocal both in theoretical and experimental terms. In his criticism of this definition, McDonald [10] points out that the concept of well-being, which is the key part of this definition, is wholly equivocal. Thus, in experimental research, "absence of disease" is preferred as the basis for practical definition of health. In some studies mortality rate, infant mortality, life expectancy, incidence of coronary heart disease in populations have been considered as the basis for practical definition and assessment of health.

Alongside all the debates on the definition of health in recent decades, analysis of factors affecting health and disease have also witnessed changes. Although previously personal, environmental, infection and genetic factors, and later, social class and material standards in life, were considered risk factors in diseases, today, attention is drawn to social contexts. This becomes more apparent when we compare the rates relating to health and disease in similar populations (for example in a country) at different times, or from place to

place at the same time. These differences are evident, even in similar levels of economic development, political system structure, and social development. Theoretically, how social factors, besides material factors affect physical and mental health is hugely important. In practical terms too, identifying mechanisms of this effect could provide implications for improving service system and designing low-cost interventions for health promotion. The above considerations, together with popularity of social capital concept, turned the social capital effect on mental and physical health into a hot topic and focal point of debate in research literature and practical public health and health promotion, and become a subject of some interest to public health experts.

Since there are two major approaches in planning health promotion; one based on centralized planning from above, and the other with a holistic, community-oriented, decentralized approach, attention to social capital in line with the second approach has found popularity among specialists, policy makers and advocates of health. The reason is that understanding the processes of social capital effects on incidence and prevalence of diseases helps health practitioners design collaborative community-oriented and decentralized strategies for prevention of diseases. By understanding these processes, the potential effects of official policies on development of course of diseases could be predicted, and more appropriate evidence for public health promotion policies can be achieved.

In the present article, a review of theoretical mechanisms of impact of social capital and its dimensions and aspects on health of individuals and populations is presented. Experimental findings of this impact are also presented, and finally, critiques of these studies are considered.

Method

This study was conducted in review design. The search for studies outside Iran was

carried out in scientific research data bases like Google Scholar and Science Direct with single and combined keywords of social capital, health, and mental health to identify theoretical and experimental studies on the effect of social capital. In the above data bases, articles in English were selected from 1990 to 2009. Having read through titles and abstracts, those studies with direct reference to social capital and its effect on physical and mental health were selected.

Additionally, some Persian articles in the scientific database of university Jihad (SID) and articles translated into Persian, prior to 2009, which were found to be well documented, were also used. Given the high rates of errors in Persian databases, keywords used were; "social capital". Then studies that had analyzed the relationship between social capital (or its components) and health were selected.

Results

Historically, it was probably Emile Durkheim that first pointed out that social characteristics have a strong influence on mortality rates due to suicide in 1890's. He realized that social cohesion has an inverse relationship with suicide rate. The reason is that a cohesive society monitors its members, and those unified in a group are less likely to experience frustration and despair with group bonding and interactive actions, and therefore less likely to commit suicide [11].

The more recent attentions to social capital relationship with health occurred in the 1990's. In 1996, Richard Wilkinson showed that social cohesion along with other factors like material deprivation affects mortality. Afterwards, Kawachi et al. in 1997 showed that there was a positive linear relationship between lack of trust and mortality in the United States of America, even with age parameter controlled [3]. These studies are still live after a decade. Details and results of some of these studies are shown in Table 1.

On the other hand, some studies [28] have reached the conclusion that classic parameter of poverty, and even violence, more than social capital affect a person's mental health. Also, there is evidence that show lack of significant correlation, or even positive correlation between social capital (or its components) and health, which require further investigation. In studying homeless alcohol and substance addicts, it was revealed [40] that there was a positive significant correlation between alcoholism and social capital, while the correlation between substance addiction and social capital was positive, but insignificant. Care must be taken in interpreting such findings since strong inter-group links in some groups, including disadvantaged or criminal groups could lead to maladaptive and destructive behaviors. This is the very dark side of social capital that Ports mentions [41], and in describing social capital performance, it was mentioned as negative consequences of social capital.

Therefore, it can be seen that there is considerable evidence in relation to the direct effect of social capital on physical and mental health in various studies. Yet, in some cases, inverse effects have also been observed. It seems people are more exposed to risks with higher social capital, particularly in cases where lack of health is related to high risk behaviors like addiction and substance abuse. Also, in some social contexts, the impact of some parameters may be less than that of social capital. For instance, the effect of violence, per capita income, or inequality on health may be much more than social capital effect. Furthermore, the relationship mentioned is different in some social groups like women and men. For example, some studies have reported an inverse relationship for women. Other than these cases, it should be noted that conceptual and theoretical approaches of scholars have had a direct impact on indicators and parameters of health and social capital, which has led to different results in quantitative studies.

Table 1- Relevant literature on social capital and health outside Iran

Author	Year/place of study	Design	Findings
Kawachi, Kennedy and Glass [12]	1986-1990 USA	Quantitative (survey)	The effect of social capital (using trust indicator) was significantly high even after controlling income, education and tobacco use on self-report health in the United States.
Fujiwara and Kawachi [13]	1995-1996 USA	Quantitative (survey)	Social capital was correlated with health. Social capital was not correlated with acute depression.
Veenstra [14]	1995-1997 Canada	Quantitative (survey)	Winstra found that social capital was negatively associated with mortality rate in provinces.
Lofors and Sundquist [15]	1997-1999 Sweden	Quantitative (survey)	Social capital was significantly associated with hospitalization period for depression and psychosis.
Rose [17]	1999-2000 (USA)	Quantitative (survey)	Beyond the amount of human capital, and despite controlling age, gender, education, socioeconomic status, and income, social capital was associated with physical and emotional health.
Scheffler, Brown, and Rice [17]	1999-2001 USA	Quantitative (survey)	Social capital was negatively associated with psychological stress among people with below average income in the region.
Hyypaand Maki [18]	2001 Finland	Quantitative (survey)	Relationship with friends and registration at religious societies was positively correlated with health and negatively correlated with lack of trust.
Cattell [19]	2001 England	Qualitative	More varied network provides resources and potential advantages for health
Granfieldand Cloud [20]	2001 ?	Qualitative	Individual social capital improved substance abusers without medical treatment by increasing stability, increasing responsibility toward others, maintaining the relationships that provided employment, and providing access to other resources.
De Silva, Huttly, Harpham and Kenward [21]	2005Peru, Ethiopia, Vietnam, Andhra Pradesh India	Quantitative (survey)	Despite controlling several confounding variables at individual and social levels, individual cognitive social capital of mothers with one-year-old children was negatively associated with common cognitive disorders. The results of structural social capital were a little more complicated and varied according to different social contexts.
Kumar, Calvo, Avendano, Sivaramakrishnan and Berkman[22]	2005-2009 139 countries	Quantitative (survey)	The relationship between social capital (volunteering in organizations and social support) and self-report health was significant and not limited to rich countries.
Mohnen, Groenewegen, Volker and Flap [23]	2006 The Netherlands	Quantitative (survey)	Social capital was positively correlated with health at neighborhood level
Berry and Welsh [24]	2006 Australia	Quantitative (survey)	Higher levels of participation was correlated with higher levels of social unity and all forms of health but women had worse psychological health despite higher social participation and social unity.
Giordano and Lindstrom [25]	2000-2007 Great Britain	Quantitative (survey)	Of the components of social capital, generalized trust was positively correlated with psychological health in multivariate models.
Ahnquist, Wamala and Lindstrom [26]	2009 Sweden	Quantitative (survey)	Low financial and social capital (social participation, interpersonal trust, and political trust) was significantly associated with inappropriate health status.
Fiorillo and Sabatini [27]	2011 Italy	Quantitative (survey)	There was a positive and significant association between self-report health status and frequency and quality of relationship with friends (based on mental satisfaction of the relationship).
Harpham, Grant and Rodrigues [28]	2001 Columbia	Quantitative (survey)	Classic variables of poverty such as low education, inappropriate employment, gender and being the victim of violence were more effective in psychological health than social capital.

Table 2- *Relevant literature on social capital and health in Iran*

Author	Year/ place of study	Sample	Design	Findings
Lehsaezad, Moradi [29]	NA	Kermanshah immigrants	Quantitative (Survey)	The relationship between social capital and psychological health of immigrants was positive and meaningful.
Iman, Moradi, HosseiniRudbar aki [30]	2007	Non-local students of universities in Tehran and Shiraz	Quantitative (Survey)	A significant positive relationship was found between social capital and psychological health. Association was stronger among students in Tehran. Psychological health of those with stronger social capital was more that those with lower social capital.
Khajehdadi, SharifianSani, Shiani, Karimloo [31]	NA	Mothers in south of Tehran	Quantitative (Survey)	There was a direct significant relationship between cognitive social capital with both dimensions of health, physical and mental. Furthermore, structural social capital was inversely correlated with mental health.
Sae and Namvar [32]	2005-2006	Patients with cardiovascular diseases in Bushehr	Quantitative (Survey) + Medical Documents	There was an inverse relationship between capital (financial, social and cultural) of individuals and the severity of cardiovascular diseases.
Kamran, Ershadi [33]	2008	Sari personnel of Education Department	Quantitative (Survey)	The results showed that mental health increases as functional aspect of social capital increases. Employed and married people had higher social capital and mental health. Furthermore, perceptions and attitudes of people about members of the network affected their mental health.
ZahediAsl, Farrokhi [34]	2005	Household heads in Tehran	Quantitative (Survey)	The relationship of social capital with physical health, mental health, social relationship health and environmental health was positive and significant. The effectiveness on physical health was the lowest and on mental and environmental health was the higher in order.
Shakerinia [35]	2009	Women who were victim of violence and went to Legal Medicine Organization in Rasht	Quantitative (Survey)	The variables of social capital and meaningfulness of life could predict mental health of the subjects. Young women who were exposed to domestic violence had lower social capital, weaker meaning of life and lower general health as compared to old women.
Enayat, Aghapour [36]	2005	Residents of Shiraz	Quantitative (Survey)	There was a significant positive relationship between social capital, religious orientation and self-esteem with quality of mental health.
Seyedan, Abdosamadi [37]	NA	Employees of technical schools of Tehran	Quantitative (Survey)	Social capital and its indicators including social participation, social support network, social trust, individual trust, and generalized trust had a positive significant relationship with mental health. Gender confounds the relationship between independent and dependent variables.
Shoja, Nabavi, Kasaie and BagheriYazdi [38]	2010	The elderly in zone 9 of Tehran	Quantitative (Survey)	There was a significant relationship between individual trust, social unity and support components of social capital and mental health of the elderly. But no relationship was found between social trust and society relations components of social capital and mental health of the elderly.
HashemiNosratabadi, BabapourKheirodin, BahadoriKhosroshahi [39]	School 2010-2011	Students at Tabriz University	Quantitative (Survey)	There was a positive and significant relationship between psychological well-being and social capital.

Discussion

Since social capital is a multidimensional variable, it can affect well-being and physical and mental health of people and societies through different mechanisms. Researchers have enumerated three main mechanisms for this effect as follows:

a. Promoting pro-health behavior-Since social capital relies on stable social relationship network with cooperation and trust, it can be a suitable vehicle for dissemination of information and influence of health-related innovations. Social capital can lead to the adoption of appropriate lifestyles and healthy behaviors, and pro-health trends including encouragement of physical activity (exercise) and healthy eating habits. Also, closer relationships between societies and groups can lead to more monitoring of their members. Therefore, if behaviors of members of the society are inconsistent with the pro-health norms, then the social control mechanisms are activated to prevent such behaviors (or their propagation).

b. Psychological processes-Kawachi and Berkman [40] believe, by providing more trust in interpersonal relationships, and also formation of reciprocating norms, social capital could lead to the formation of intimate relationships that improves different forms of support. This, directly through provision of resources (commodities and services), improves people's physical health. It can also protect the person against mental stresses and help the person's mental health by reducing the risk of mental disorders like depression and anxiety.

In the opinions of sociologists, mild associations such as involvement in society and volunteer organizations, due to generating a sense of belonging, security, identity, and self-esteem and instilling a sense of purpose, are associated with promotion of psychological well-being [40]. However, although it may be assumed that more intimate, closer, and stronger bonds have more positive effects on psychological health of people, Kawachi and Berkman [40] believe

that the traditional form of commitment could be both protective and harmful at the same time because too much commitment may impose psychological pressure on people. Also, too strong a social solidarity could lead to anxiety disorders due to strong social controls. Thus, Almedom thinks it is possible that psychological health is achieved through a balanced mix of security (as a consequence of solid or strong relationship) and flexibility of weaker relationships [41]. According to Wilkinson, trustfulness at the heart of social capital concept may reduce anxiety and fear of others' behavior. Thus, trust can reduce harmful psychological effects of chronic stress [42].

Access to services-Studies by Simpson et al. have shown that local communities, sociologically have more solidarity (higher social capital), and are more successful for acquiring budgets for local services [7]. Cohesive societies can gather in social organizations like voluntary societies, or create local pressure groups to lobby for provision of services, to facilitate access to services such as transportation, health clinics, and recreational facilities. These types of services, directly or indirectly affect physical and mental health of people in the community.

Inasmuch as has been said of the effects of social capital on health, there are conflicting results in this area, nonetheless, and attempts have been made to find explanations for these. In different social settings (full of violence or poverty), and in people with different characteristics (gender difference), social capital has different impacts in terms of amount or direction. Muntaner et al. and Navarro argue that attention to social relationships as an influencing health factor diverts attention from structural material inequalities that affect health of communities [15]. It means that material inadequacies rooted in macroeconomic and socio-political structures threaten public health more than lack of social capital does, and access to resources and greater material prosperity

guarantees public health more than high social capital does. Some studies confirm this hypothesis. Lynch et al. [43] did not find a relationship between social capital and mortality in 16 developed countries, and correlation between social capital and mortality for specific reasons was very weak. The response to this criticism was that societies with high social capital and stronger civil solidarity are also better in dealing with poverty [15]. Therefore, even if access to material resources is regarded as the most important effective factor on health, higher social capital, facilitates access to material resources. Therefore, the social capital relationship with health claim does not deny wealth and health relationship.

On the other hand, some scholars have spoken about limitations brought about by social capital through social engineering from top to bottom. Even though public policy could help health promotion, collective efficacy, and economic progress through support and reinforcement of bottom to top social actions [41], potential production and increase of social capital in order to improve health and well-being of societies must not be overstated. Other than the above cases, it should be noted that the effects of social capital and social cohesion parameters on physical and mental health of people varies depending on which society they are being studied in. For example, Kawachi and Berkman [40] state that social cohesion in poverty and inappropriate infrastructure exposes women more than men to mental disorders because of women's tendency to provide services rather than to receive them, as well as the pressure of expectations and norms in their relationships. They also argue that in such conditions, social capital has a negative effect on women's health.

Positive effects of social capital on health have been shown in numerous studies; however, studies also show that distribution of social capital among the population is not the same as other capitals. For example, Field points out the strong correlation between

social capital and education, and states that more educated people tend to possess more of the social capital compared to less educated people [44]. Possessing different types of social capital is not the same among the population. Some believes that rich people more than the poor possess Bonding and bridging social capital [44], whilst of these two types, poorer people tend to have the limited one [44]. Field also expresses several pieces of experimental evidence which show, those with high levels of financial and cultural capitals, desire to have high social capital as well, therefore, relate more with people [45]. Also, deprived people generally tend to relate to similar people. This means that this type of relationships does not provide them with access to new resources. Generally, it could be asserted that since physical and mental health require access to various resources of material, information, mental/emotional, and social capital in its various types can facilitate access to these resources, the unequal distribution of social capital in the society leads to unequal access to resources, and hence lead to inequality across the health and well-being of people.

Due to limitations in time and resources, this study was restricted to use of internet databases only, which may have biased the results.

Conclusion

As Coleman [4] rightly points out "social capital is like other types of productive capital, and makes attainable access to specific objectives that would be otherwise impossible". Thus, with different forms and functions, social capital can facilitate access to material and non-material resources, which would be impossible in its absence. Direct or indirect possession of these resources could elevate physical and mental health of people or lead to improvement or reduction of their illness. These mechanisms may be behavioral, and with changing lifestyle help improve health, or by influencing psychological processes reduce mental disorders and affect

incidence of physical-mental symptoms, or facilitate access to services and means that would improve health.

However, distribution of social capital like other forms of capital is unequal, which makes its effect of the population unequal as well. Also, it should be noted that despite the new emphasis on and attentions to influential social elements on health such as social capital, structural inequalities in accessing standards of material life is still an effective factor in health and illness of societies and people. Besides, some studies have noted negative effects of social capital on some health threatening behaviors like substance abuse, violence and crime that should not be neglected. More recent research processes are directed toward assessment of different effects of social capital on health in different social groups.

Contributions

Study design: M N

Data collection and analysis; Manuscript preparation: N R

Conflict of interest

"The authors declare that they have no competing interests."

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