Social Capital in General Population of Tehran Province in Comparison with Other Provinces of Iran

Mohammad Reza Mohammadi[1], Ali Khaleghi[1], Rahim Badrfam[1*], Seyyed Salman Alavi[1], Atefeh Zandifar[2], Ameneh Ahmadi[1], Javad Mahmoudi-Gharaei[1], Zahra Hooshyari[1], Mahdi Rezaei[3], Mahbod Fadaei Fooladi[4], Motahare Fasanghari[5], Foad Khosrowshahi[4], Shaghayegh Namjoo[6], Elmira Hayati[6], Mahkameh Torkashvand[4], Omolbanin Hozhabrkhah[7], Mahsa Rahbarian[8], Samane Narimani[6], Hadi Zarafshan[1]

1. Psychiatry and Psychology Research Center, Roozbeh Hospital, Tehran University of Medical Sciences, Tehran, Iran
2. Imam Hossein Hospital, Alborz University of Medical Sciences, Alborz, Iran
3. Islamic Azad University, Science and Research Branch, Tehran, Iran
4. Faculty of Psychology and Educational Sciences, Allameh Tabataba'i University, Tehran, Iran
5. Department of Clinical Psychology, College of Psychology and Education, Al zahra University, Tehran, Iran
6. Islamic Azad University, Garmsar Branch, Garmsar, Iran
7. Department of Mental Health, faculty of Behavioral Sciences and Mental Health, Tehran Institute of Psychiatry, Iran
8. Department of Clinical Psychology, Roozbeh Hospital, Tehran University of Medical Sciences, Tehran, Iran

* Corresponding author

Rahim Badrfam, MD
Psychiatry and Psychology Research Center, Roozbeh Hospital, Tehran University of Medical Sciences, Tehran, Iran
Email: rbadrfam@gmail.com

Abstract

Background: Social capital is described on the basis of the quality of social relations between individuals and it includes the capacity of quantifying or solving the problems that are usually experienced. It is a means to improve the quality of life and facilitate community progress through the provision of social communication resources.

By considering the importance of monitoring the process of social capital and informing about its functions, and the changes related to its components and paying attention to the results in terms of mental health programs, we examined the status of social capital among the residents of Tehran province who were over the age of 18.

Methods: This cross-sectional analytical study is part of The Iranian Children and Adolescents' Psychiatric Disorders Research (IRCAP) which is being carried out in various urban and rural areas of Iran. IRCAP includes different background features such as social capital, culture, ethnicity and economic status from different provinces. In our community-based study, 29776 men and women over the age of 18 years were selected by multistage cluster sampling (cluster sampling and random sampling). They were examined by Social Capital Questionnaire. One-sample t-test and multivariate analysis were used to analyze the data.

Results: In Tehran province from a total of 2065 participants, 1841 remained in the study for examination of all variables. Based on the one-sample t-test the results show that all variables for province of Tehran was higher than those for the other provinces (p<0.001). The average social capital of trust in the province of Tehran was 18.77 while it was 17.52 for other provinces (with minimum and maximum range of 5-25) (p<0.001). However the social capital status in Tehran was above the average for all variables, it was still far from optimal level.

Conclusion: Our results show that social capital in Tehran is higher than other provinces in Iran. This includes both total social capital and its all components. However, the province of Tehran is above the average level in all components of social capital, it is still far from optimal level.

Keywords: General Population, Mental Disorders, Physical Illnesses, Social Capital, Trust

Introduction

Iran is the 17th largest country in the world with a population of 79,926,270 million, of which 51% are men and 49% are women. 71.2% live in urban areas and 28.8% live in rural areas. The total number of households in the country is 24.196 million. It is believed that the unemployment rate among adults is 11 percent. Different ethnicities live in Iran and the official language of the country is Persian.

Social capital represents the concept of quantitative and qualitative relationships between members of a community. By increasing the amount of variables of this concept, the cost of interpersonal communication is reduced, as well as more opportunities for group-based activities. Other benefits include creating human capital and improving the economic situation of the community[1].

Social capital is described on the basis of the quality of social relations between individuals, which includes the capacity of quantifying or solving the problems that are usually experienced[2]. In fact, the focus is on social relations that leads to the creation of various benefits for the people[3].

In other way social capital is a means to improve the quality of life and facilitate community progress through the provision of social communication resources[4].

Some scholars also consider social capital as a value of social networking for the community and believe that it is of a multivariate nature[5]. From various sources, it is seen that there is a positive correlation between social capital and physical and mental health[6]. It is also referred to a way of mental status and educational outcome improvement[7].

We examined the status of social capital among people over the age of 18 who were resided in different provinces of Iran considering the importance of monitoring all processes of social capital, the value of informing about its functions, changes related to its components and paying attention to its results in terms of mental health programs. The components of this study in the field of social capital include networks, relationships, collaboration, values, mutual understanding, trust and commitment.

The Metropolitan of Tehran, as the capital of Iran has its own cultural and social status. Interpersonal relations and the existence of different ethnicities have built up special social conditions in this city[8]. This study show that the different results from previous studies on this topic require careful evaluation. We also examined the status of social capital among people with psychiatric disorders or physical illnesses.

Materials and Methods

This cross-sectional analytical study was part of a national project which was for all provinces of Iran including in Tehran[9]. Also, the National Institute for Medical Research Development (NIMAD) supported the project. The principal applicant has extensive research in the field of psychiatric disorders and has special expertise in use of the tool applied in this study.

In a community-based study, 29776 men and women over the age of 18 years were selected by multistage cluster sampling (cluster sampling and random sampling). 170 blocks were randomly collected from each province (6 samples each) and blocks were randomly selected according to postal code.)

The criteria for entering this study are as follows: Iranian women and men over 18 years of age. People with severe physical illness were excluded.

Clinical psychologists have been trained to encourage all participants to complete the Persian version of Social Capital Questionnaire (Nahapyt and Ghoshal, 1998). They went people's homes and interviewed them. In indigenous areas, in order to improve the quality of information gathering, native psychologist who had the same language with participants had been sent to gather information. The time required to complete a questionnaire was about 30 to 40 minutes. Also in this interview, demographic information such as gender, age, education, occupation, and economic status were recorded.

This study is a part of IRCAP research in various urban and rural areas of Iran's provinces that has included different background such as social capital, culture, ethnicity and economic status in of people and each individual's level of emotional problems. This may be required to provide differential services. All data was obtained in Persian language.

In a screening and diagnostic phase, a random sample of over 18 years old was selected and were examined by questionnaires (Social Capital Questionnaire)

(Nahapyt and Ghoshal, 1998). This large amount of data enables us to makecomparison between a wide range of social capital in Tehran province and other provinces as well as between Iranian and non-Iranian societies.

This IRCAP project is a national project that runs across all provinces of Iran so the sample size was calculated for Tehran province and all provinces. It was assumed that the prevalence of psychiatric disorders was 0.3 and the type 1 error was 0.05 and the accepted error was 0.05 and the sample size for each province was at 825 people. Assuming the effect of cluster sampling as 1.2, the final sample size of each province reached 990(1000), therefore the final sample size reached 29776. A total of 170 clusters (6 sample each) were selected from each province. In Tehran, 1841 people were included and in other provinces a total of 27935 people. In Tehran province, in addition to the city of Tehran, other neighbor cities and rural population were randomly selected (using cluster sampling). In next step, different blocks were randomly selected from Tehran province based on the postal code, The social capital questionnaire "Nahapit and Ghoshal" (1998) contains 28 questions that are related to social, cognitive and structural capital. The questionnaire also consists of 7 sub-scales including networks, trust, collaboration, mutual understanding, relationships, values, and commitments[10]. Content validity was used to determine the reliability of the questionnaire. In addition, comments on the reform of professors were used in this area. In this research, Cronbach's alpha coefficient was used for evaluation. The confidence coefficient of the questionnaire reliability was 85.0 and the reliability coefficient of the correlation coefficient of social cognitive capital was 89.0, the social capital correlation coefficient was 9.0 and the social capital structure was 8.0[11].

Statistical analysis

In addition to descriptive statistics, one-sample t-test and multivariate analysis were used to analyze the data. Before analysis, the data files were refined to ensure about the distribution of variables, the absence of overflow or endpoints and how to deal with unanswered data.

Ethics

The consent form was given to all people over 18 years old in Tehran province if they wished to enter the study. All information about children and their families was kept confidential. The National Institute for Medical Research Development (NIMAD) has ethically approved the study protocol (IR code: IR.NIMAD.REC.1395.001)

Results

The following results were obtained:

Of 2056 selected participants from Tehran province, 215 individuals did not answer to all variables so were removed from the data set. In the next step, the scores of all social capital components were converted to into Z scores, and with regard to this fact of 2.5<Z or -2.5>Z for each variable, the single-variable pristine values were identified. The number of people with standard scores higher than 2.5 or less than 2.5 were as: 31 in the network variables, 24 in the relationship variable, 32 in the collaboration variable, 21 in the value e variable, 17 in the mutual comprehension variable, 29 in the trust variable, and 17 in the commitment variable. Investigating the form of the distribution index and the deviation from the normal, after removal of single-variable pristine values, showed that the inclination and elongation indices in all variables were not more than 0.5 or 0.5+. The review of charts and tables shows that there are no distracting values in the distribution of data, however the relationship variable had 78 and the cooperative variable had 90 final values, which were excluded from the statistical analysis. Finally, 1956 data (data is the number of cases obtained from a total of 2056 subjects after removing defective items at each variables.) for network variables, 1885 data for relationship variables, 1865 data for collaborative variables, 1966 data for value variables, 1970 data for mutual understanding, 1958 data for trust variables, and 1970 data for commitment variables were included. In total, the number of data that remains for all variables at the same time was 1841.

In Tehran province from a total of 2065 participants, 1841 subjects remained in the study to be examined for all variables. In terms of demographic characteristics, the average age of women participating in the study was 38.5 and 43.5 years for men. According to the

degree of education, the largest group belonged to people who completed their secondary education at school with a degree of diploma in both men and women groups with a prevalence of 44.2% and 36.8% respectively. The lowest prevalence was among illiterate participants2.5%) in the woman and 1.8% in the men).

In terms of job status, the most common occupational group in this study was housewives / unemployed women (82.3%) and men in labour job (3.9%). The lowest occupational groups among the women and men were university professor (0.3) and agriculture (0.4%) respectively faculties (Table 1).

The total number of participants in the province of Tehran, was 1841 and the total number of participants in other provinces of Iran was 27935. The average level of social capital in province of Tehran is higher than the level of the other provinces (Table 2). For

Table 1. Demographic characteristics of the study groups (1841 persons)

Demographic variables		Women N(P)/M(sdt)	Men N(P)/M(sdt)
Age		38.5(6.4)	43.5(7.1)
Education	Illiterate	44(2.5)	32(1.8)
	Elementary / Unemployed No response Total	152(8.6)	165(9.5)
	Middle school and high school	245(13.8)	333(19.1)
	Diploma	784(44.2)	643(36.8)
	Bachelor	445(25.1)	400(22.9)
	Bachelor and higher	105(5.9)	173(9.4)
	No response	66	95
Job	Faculty member	5(0.3)	16(0.9)
	Teacher	60(3.4)	24(1.4)
	Employee	160(9)	500(28.5)
	Retired	14(0.8)	74(4.2)
	Tradesman	7(0.4)	58(3.3)
	manual worker	69(3.9)	1042(59.3)
	Housewife	0	7(0.4)
	Housewife / Unemployed	1467(82.3)	36(2)
	No response	59	84
Total		1841(100)	1841(100)

N: Number, P: Percent, M: Mean, Sdt: Standard Deviation

Table 2. Comparison of social capital status in Tehran province with other provinces of Iran

	T single-sample comparative test df:1840		Other provinces of Iran N=27935	Tehran N=1841	
	p value	T value	Mean	Standard deviation	Mean
Networks	<0.001	19.566	13.89	2.27	14.92
Relations	<0.001	19.603	14.07	2.19	15.07
Collaboration	<0.001	18.352	14.22	2.17	15.15
Values	<0.001	16.673	10.57	1.71	11.23
Mutual understanding	<0.001	12.768	14.07	2.46	14.80
Trust	<0.001	18.630	17.52	2.88	18.77
Commitment	<0.001	13.196	14.05	2.46	14.81
Total Social Capital	<0.001	18.630	98.39	14.66	104.75

example, the average social capital of trust in the province of Tehran was 18.77 and in other provinces was 17.52 (in minimum and maximum range of 5-25) (p<0.001), (Table 3).

Results show that Tehran province was higher than average in all components of social capital, but was still far from optimal.

Comparing social capital among status of people with mental or physical disorders (397 person) with people who did not have these problems (1399 person) in Tehran province (Table 4) and the results from multivariate analysis using statistical tests of Pylia (0.017), Lamboeda Wilkes (0.983), T Hoteling (0.017)

and Maximum rooy root (0.017), F value (4.289) and degrees of freedom (error: 1788, hypothesis 7) showed that ,in total, there was a difference between the two groups in terms of the linear composition of social capital components with p<0.001 (Table 4).

Table 5 compares two groups mentioned in each of the components of social capital. Based on the multivariate analysis of each of the variables, there is a significant difference between the two groups in the network variables, values, mutual understanding and trust. In all of these cases, those without a history of mental or physical disorders had higher scores. There does not depict a significant difference between the

Table 3. Minimum and maximum range of social capital components

	Minimum	Maximum
Network	4.0	20.0
Relationship	4.0	20.0
Cooperative	4.0	20.0
Values	3.0	15.0
Mutual understanding	4.0	20.0
Trust	5.0	25.0
Commitment	4.0	20.0

* 45 subjects in this variable are uncertain.

Table 4. Status of social capital among people with mental disorders or physical illnesses compared with those who do not suffer these in Tehran province

	Have a mental disorder or physical illness N=397		No mental disorder or physical illness N * = 1399	
	Standard deviation	Mean	Standard deviation	Mean
Network	2.27	15.00	2.28	14.72
Relations	2.19	15.11	2.20	15.01
Collaboration	2.16	15.20	2.17	15.06
Values	1.66	11.31	1.83	11.02
Mutual understanding	2.39	14.94	2.63	14.49
Trust	2.82	18.89	3.01	18.51
Commitment	2.40	14.92	2.66	14.53

two groups in terms of collaboration and relationship.

Discussion

This study showed that the amount of social capital in the province of Tehran was higher than other provinces, and the social capital was lower among people with mental disorders or physical illnesses.

Shiani *et al* in 2015 evaluated the various dimensions of social capital among people over the age of 15 living in Tehran and examined five social capital aspects including associational relationship, norms and social trust, social bonding and interpersonal trust, social cohesion and social support.

They found that almost all dimensions of the social capital status was at an average level and the total score of its components was at moderate level[2].

Their study showed the difference between the various levels of social capital variables in Tehran while our study showed that the total amount of social capital and its various components were higher than the average and about three quarters of the highest possibility.

The differences that they reported between the above mentioned levels and the diversity in the levels that was measured in some of the variables in our study, while raising the difference between measuring instruments, can be due to the variability of social capital proportional to the different social and economic conditions that have arisen and whether this components are variable[12].

Nedjat *et al* in 2012, investigated the relationship between socio-economic variables and social capital in Tehran stating that participants achieved more than

50 percent of the related scores to the variables of trust, collaboration, social cohesion and political action, while they only earned 18/9 percent of the scores related to the networks dimension. They emphasized that there would be a demand for designing effective interventions to improve the recent indicator[13].

Our study showed an increase in the amount of score for the network variable by maximum 75% , which, in addition to increasing of the rate to the mentioned study[13], is significantly higher than the average of other provinces in Iran ($p < 0.001$).

A higher score for network dimensions can be regarded to an introduction to intergroup communication among Tehran residents because of their need to more social interaction for resolving interpersonal problems in the context of socioeconomic complexities.

Mehregan *et al* reviewed the status of social capital in different provinces of Iran during the years 2000-2009. They reported that among the provinces of Iran within a ten-year period, the province of Tehran had the lowest and South Khorasan Province had the highest average amount of social capital.

They found low social capital in Tehran for factors such as low per capita marriage, high per capita divorce rates, and the amount of reported crimes which had an impact on the level of public trust and trust to people around them[3].

From our estimation, the differences between social capital scores could be caused by the re-establishment of inter-personal relations within recent years in Tehran. The formation of a large range of inter-group and intra-group relationships over the past few years in Tehran,

Table 5. Comparison between persons with mental disorders or physical illnesses and people without these in Tehran province in relation with social capital

	Significance level	F value	Mean squares	Freedom degrees	Total squared
Networks	0.029	4.759	24.541	1	24.541
Relations	0.429	0.633	3.046	1	3.046
Collaboration	0.278	1.176	5.489	1	5.489
Values	0.003	8.982	26.014	1	26.014
Mutual understanding	0.001	10.477	62.584	1	62.584
Trust	0.021	5.338	43.823	1	43.823

in neighborhoods, residential and commercial complexes and markets, and the direct impact of these in formulation of social capital, are the causations that we suggest to be reasons[14,15].

In 2011, Amini *et al* examined the relationship between social capital and social health in Iran. They compared the status of social capital in more advanced provinces, such as Tehran (in terms of complex Socio-economic processes), with other Iranian provinces.

They described the characteristics of social capital in less developed provinces in terms of inter-group communication and pointed out the lack of new concepts in the field of modern social capital based on intra- group communication along with generalized and public trust[16].

In our study, the status of social capital in Tehran province is higher than other provinces of Iran. The formation of new social processes in the form of the expansion of intra-group aspect of social capital and the development of intra-ethnic communication can be the probable causation.

Vanneman *et al* examined the status of social capital in a number of Indian states and emphasized on the impact of subjective and individual variables on social capital. They suggested that the quantitative components of social capital to be highly dependent on the geographic patterns of the study population. They also reported improvements in the status of social networks in better economic conditions and higher levels of education[17].

In our study, the difference between the amount of Tehran's social capital and other provinces in Iran can be referred to the apparent difference between the underlying and different variables among Tehran's multi-ethnic population in comparison with other provinces. This could also be due to the improvement of the status of social networks in Tehran caused by complex and different economic conditions and the higher education of the residents.

Marzuki *et al* in a similar study, examined the status of social capital in northern Malaysia and reported a high level of social capital in some aspects such as the sense of trust and the modest level of social capital in other aspects such as the values of life[4], however In our study, all social capital funds were at a moderate level. Pronyk *et al* in a study on the possibility of impact of external interventions on the formulation of social capital, emphasized that higher social capital was effective in reduction of the major health problems and the consolidation of social and economic development. They designed a study in South Africa, where they included employment through the formation of investor economic institutions and concluded that it improved the general level of social and health education[18].

we found a the wide range of complex economic processes and formation of various types of self-helped groups in the context of financial issues at different regions within recent years and in the spread of academic education and public awareness. According to our study, more than 30% of the population living in Tehran province had a bachelor degree or higher.

Kassani *et al* examined the effects of various factors such as age, gender, occupational status, and physical and mental health status on the components of social capital in Tehran. They stated that the physical dimensions of health in terms of its relation with quality of life could influence the concept of trust as an important part of social capital[19].

We also identified a significant difference between the status of social capital among people with mental disorders or physical illnesses with those who did not suffer from the same conditions ($p<0.0001$) and the amount of social capital was higher among the group without the disorders.

In recent years, we have seen a relative increase in social capital in Tehran's province compared to the past, as well as in comparison with other provinces of Iran, so that our results were contrary to the previous studies[3].

This could be due to the expansion of the formation of a new concept of social capital in Tehran province as the capital city, based on the expansion of intra-group and intra-ethnic relations and the increase of social relations caused by complexities of the economic and social situations[16].

We believe that the role of other social and economic factors such as increasing level of education, higher employment increasing social interactions[20,21], and the changes in some socio-economic structures in other provinces of Iran, still requires further investigations.

Increasing awareness among policy makers and mental health program implementers about

the changes that are being made to Iran's social capital can be effective in improvement of current conditions and mental health across Iran.

Conclusion

According to our results, social capital in Tehran is higher than the average of other provinces of Iran. This includes both total social capital and its components. Also, the province of Tehran in for all components of social capital is above the average level, although it is still far from optimal. We believe that there is a lower level of social capital among people with mental disorders or physical illnesses compared to those who are not suffering from the same disorders for components of networks, values, mutual understanding, trust and commitment.

Acknowledgments

Conflict of Interest

There is no conflict of interest.

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