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Psychometric features of Social Capital Questionnaire and its relation with mental well-being in teachers in the city of Kamyaran

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ABSTRACT

The present paper aimed to explore psychometric features of Social Capital Questionnaire and its relation with mental well-being in teachers in the city of Kamyaran. The research is descriptive and survey-based format and falls under correlative categories. The research universe consists of teachers at three primary, junior school and high school segments in the said city. A sample of 301 people was selected via Morgan Table and by means of appropriate classified sampling method. Participants responded to Social Capital Questionnaire by Delaviz and Mental Well-being by Molavi et al. After the determination of data normalcy distribution by the Kolmogorov-Smirnov Test, 0065ploratory factorial analysis questionnaire was done. The KMO index value was found to be 0/751, confirming sufficiency of sampling. The value obtained for the Bartlett's Sphercity Test was smaller than 0/05, indicating it is significant for a factorial analysis. The factorial analysis having been done by using Varimax rotation with Kaiser Normalization, four factors with eigenvalue higher than one were extracted and the extracted common value, based on a factorial analysis, was found to be over 0/5 for all questions, suggesting there was no need for eliminating any of the questions in then questionnaire. The first factor indicates 13.021%, the second factor 7.053%, the third factor 5.713% and the fourth one 5.032% of the research data variances. The findings obtained from Pearson Correlation Coefficient Test indicated that the Social Capital Questionnaire and its subscales were found to be directly and positively correlated with the variable of mental well-being. Regression results showed that social capital and its components were able to significantly anticipate changes in mental well-being among teachers.

Keywords: validation; social capital; mental well-being; teachers

1. INTRODUCTION

One of the subject matters which have drawn much attention in recent decades is positive psychology. This view places emphasis on individual abilities, and states the aim of psychology should be to improve individual's life and to actualize his latent talents. Hence, positive psychology deals with positive subjects of life such as happiness, well-being, health, etc., and seeks to lay the ground for these positive components in life with a scientific and practical look. Well-being includes positive sense and sense of general satisfaction of life which includes self and others in different fields of family, profession, etc. In the past two decades, psychological well-being has been studied considerably, and has included studies on individual to social life. Mental well-being includes individual's reception from the level of coordination between certain and delineated goals and functional outcomes which are obtained in the process of continued assessments, and thus leads to internal and relatively stable satisfaction in life succession. Well-being implies a sense of helath which involves full awareness of integrity in all dimension of the individual. Mental well-being consists of people's' cognitive values of their lives. People value their conditions differently; conditions which depend on their previous values and experiences (Diener et al, 2002).

Such problems as poverty, failure in education, and factors like negative events in life, namely parents' separation, loss of work are among social factors that affect peoples' well-being and mental helath. Thus, social capital can only be achieved through membership in entities and social capital networks, in particular, bring about effective roles in providing affective and mental support in regards to peoples' psychological capital. Social capital is a combined concept which describes value or level of norms and networks in a certain society and at a certain time. Social capital refers to norms and networks which enable people to get engaged in a collective action which involve reciprocal profit. Reciprocal communication is altruistic behaviors and trust is one of norms which are focused attention in this communication. Networks can thus be official or unofficial (Tajbakhsh, 2005). Fukuyama (2001) defines social capital to be a clear set of norms or informal values which contribute to the cooperation being legal among them. For him, special capital is regarded as an informal norm which provides co-op between two or several people; these norms which constitute social capital can start from one reciprocal norm between two persons and extend to complex and detailed norms. Social capital has been identified as the strongest encountering force for a successful coping on the part of people at the time of engagement with tense conditions, and thereby facilitates tolerating problems for people. Also, social capital, via playing an intermediate role between stressful life factors and emergence of somatic and mental problems, and also through enhancing peoples' understanding, causes reduction of tension, increase of mental helath level, life quality a d well-being among people (Ghaedi & Yaghoubi, 2008). Therefore, social capital, with the role it has in helath, could reduce stressful factors in life and lessen the risks arising from these factors. It can also reduce negative events in life and leads people to adjust in their lives. The rate of staffs' well-being can influence their functioning in organizations.

For instance, in a research in 2009, Garg and Rastogi examined the effects of well-being on staffs' organizational commitment and the relevant step by step regression analysis results indicated significant impacts of mental well-being on organizational commitment (Garousi & Anjom Sho'a, 2013). Teachers and the Education system in general have a major role to play in increasing social capital in each society. Today, the education process of each person is

done in different levels of education and this issue is not useless in the social capital situation in the society. To understand this matter assumes importance because our society develops from one stage to the other. In line with explaining this psychological notion, various theories have been offered, where some f which might be contradictory. However, while explaining the role of various factors in forming psychological well-being, the role of individual and social factors have been focused much attention compared to others and in line with this, various researches have been done. Research findings in this field have brought about clear conflicts, such that one cannot attain a clear explanation in regards to the role of individual and social factors affecting psychological well-being.

On the other hand, since the phenomenon of mental helath is one of the basic needs of the 21th century and the WHO has placed emphasis on providing grounds for its formation and it is required to identify factors involved, thus, the conduct of this research can be of great help in identifying these factors. It is thus clear to have such researches. However, the context of this research in general helath can add to the significance of this type of research. Thus, given conflicting findings, we intend, in this research, to concern ourselves with this question: what impacts can social capital have on teachers' mental well-being? And can social capital lead to increased mental well-being? Concerning the findings of this research, one can refer to research literature. In a research by Naderi Baldaji, Mobasheri, Mirzaiyan and Yousefi (2013), titled "Exploration of relationship between social support and attachment styles on psychological well-being of pregnant women in the city of Boroujen", findings suggested that social support would affect pregnant women's psychological well-being considerably, and adding the variable of attachment styles to that of social support, would increase their power in psychological well-being. Given the need pregnant women have for relatives' support, social support and attachment styles could have a major role on physical and mental helath of these people for going through these periods.

In a research titled "exploring the relationship between social capital and "life quality related with helath in teachers", Rajabi Gilan et al (2013) found out that there was a positive relationship between social capital and life quality as related with helath level in teachers. It appears that development of teachers' group activities in form of volunteer associations can lead to increase of trust and expansion of personal networks, and consequently, renders in improvement of mental and psychical helath.

In another research by Bahadori Khosrawshahi, Hashemi Nosrat Abad, Babapur Kheir Al-din (2013), with the heading of "social capitals' relation with psychological well-being in students at Tabriz University", they found out that social capital and its components were positively and significantly related with psychological well-being. Meanwhile, regression analysis results suggested that social capital and its components were able to significantly anticipate psychological well-being changes among students. Research findings showed that from among components of social capital, group participation with Beta coefficient of 0/15 and relations in social networks with Beta coefficient of 0/21 were positively and significantly related with psychological well-being, and variables of trust and participation in local community, with Beta coefficients of 0/11 and 0/01 did not have significant impacts on mental well-being; and based on data, people with more favorable social capital, did enjoy higher psychological well-being.

Nielson et al (2015), in a research with the heading of "School's social capital and its impacts on social, economic inequality in regards to mental helath", showed that the prevalence of affective symptoms in students in school classes with lower trust, were higher

compared to those with higher trust. In school classes with lower rate of trust, the ratio of chance of getting affected with daily sensual signs in the low social and ecobomic groups, was higher than the economic and social group. In classes with higher and medium trust, there was a significant difference in regards to affective signs among higher and lower social and economic groups. Though there is a need for more studies, this cross-sectional study suggest that school's social capital may reduce psychological problems and reduction of social and economic inequalities can affect mental health. Addai et al. (2014), in a research with the heading of mental well-being predictors, in Ghana demonstrated that happiness with life among people in Ghana has arisen from economic, cultural factors, social capital and variables of helath. There, helath was considered to be the most significant predictor of happiness and satisfaction with life. In addition to religiosity, all religious variables were evaluated as predictors of mental well-being in Ghana. As well, Income, ethnicity, and variables of social capital were regarded as explaining happiness and satisfaction with life at a micro level in this country. In a research with the title of "Social participation and mental well-being among the retired people in Chine", Zhung and Zhung (2014) demonstrated that the retirees were having positive tendency to reports of mental well-being; meanwhile, the effects of social participation on well-being, except for state run jobs, were found to be positive, meaning people with more participation in social activities, have provided more reports of mental well-being. Even when the role of physical helath, income and other social-cognitive variables is controlled for, physical helath and income are two string factors in anticipating mental well-being in analysis models.

In a research with the title of "combined associations of social capital and mental happiness in Seoul, South Korea". Han et al (2013) indicated that all individual levels and the trust level of social capital variables were positively accompanied by mental happiness. Findings suggested a need for more complex studies with a set of longitudinal data based on multi-level context using analyzing instrumental variables in order that our knowledge is made clear with regards to the impacts of social capital on mental well-being. In a research with the heading of "the Impacts of perceived social capital on mental well-being". Gülacti (2010) stated that perceived social support would explain 43% of mental well-being variance. Moreover, it was determined that family' perceived support can predict mental well-being and on other hand, support by a certain individual and support on the part of friends cannot predict mental well-being. In another research titled "Social support and mental well-being in Japan". Matsushima and Matsunaga (2010) concluded that social capital was positively and significantly related with mental well-being in general and they always stated that volunteer behavior and trust was correlated with mental well-being. It was also stated clearly that volunteer behavior in each stage of life was related with age significantly such that volunteers with over 50 were found to be less happy compared to those over 60.

2. METHODOLOGY

The statistical population was comprised of all teachers in Kamyaran in the academic year of 2014-2015, who were working and teaching in the said period of time. This number amounted to 1350 people. Also, the sample size was found to be around 300 persons based on the Morgan Table. In general, in order to prevent more errors, the number of 320 people was considered. In the end, data relating to 301 people were analyzed. The number of 19

questionnaires was crossed out due to incompleteness. The information obtained was analyzed by way of factorial analysis and by using SPSS22 software.

Common methods of descriptive statistics, such as frequency distribution, central tendency indices and scatteredness index were applied. In order to determine the level of correlation, Pearson Correlation Coefficient was used. To determine internal consistency and validity of the questionnaire, Cronbach's alpha was applied. In order to examine Test validity, analysis of primary components was used and in order to examine whether or not the test was saturated with several factors. Primary components Test or Varimax rotation were applied. As well, multiple regression analysis was applied for measuring the extent to which social capital components were explained on mental well-being. In examining reliability, Cronbach's alpha, as the overall index of internal coordination of items, was found to be 0/96, suggesting only 8% of scores variances was as a result of error of measurement. Cronbach's alpha coefficient for the subscales of cheerfulness, determination, neuroticism, stress-depression, positive and negative affection were 0/93, 0/88, 0/90, 0/84, 0/95 and 0/92 respectively.

3. FINDINGS

The number of female teachers was while the number of male counterparts was 160 people. As much as 46.8% of the respondents were females while male counterparts accounted for 53.2%. The information relating to the respondents' age has been provided in this part. As seen in this table and graph 6.6% of the respondents were between 20-29 years of age, 60.5% between 30to 39, 30.9% between 40to 49 and 2% over 50. The information related with the education level of respondents has also been provided in this part. 44.37% of the respondents were in the primary level, 29.69% in the junior level, and 25.94% in the high school level.

Research questions

Does Social Capital Questionnaire enjoy sufficient reliability?

In this research, in order to determine reliability, Cronbach's alpha was used. This method is applied for estimating internal consistency of the measurement tool. The acceptable limit of the Cronbach's' alpha for applied uses is minimum 0/7. In order to examine the research question, parametrically statistical method of Cronbach's alpha was used. Each question in the test is compared with each and every question.

Does Social Capital Questionnaire enjoy sufficient validity?

In order to measure validity, exploratory factorial analysis Test was utilized. In this test, KMO index and Bartlett's Sphercity Test were applied. According to these two tests, temporal data are found to be appropriate for a factorial analysis, where the KMO index is greater than 0/6 and close to 1, whereas the significance of the Bartlett's Sphercity Test is less than 0.05. In analyzing primary components, factorial load of 0/3 is a good criterion. In this research, the factorial load with coefficient of 0.3 is accepted as the good factorial load. The KMO sampling index and Bartlett's Sphercity Test results for the matrix of correlations arising from the Social Capital Inventory have been offered in the Table (1).

Table 1. KMO and Bartlett's Sphercity Test for questions

KMO		**.751**
Bartlett's Sphercity Test	Approximate Chi-Sqaure	2881.773
	Freedom degree	861
	Sig.	.000

KMO value is equal to 0.751, which is greater than 0.7, and also Bartlett's Sphercity Test feature is equal to 2881.77 and is statistically significant ($p < 0.05$). Thus, it can be concluded that the execution of factorial analysis based on correlation matrix obtained from the control group can be explained. In addition to this, the primary output of the analysis indicated that the value of non-zero numerical correlation matrix determinant equals 0.000000409, where based on these data, it is possible to extract the factors.

How many factors have saturated the Social Capital Questionnaire?

To answer the third question, exploratory factorial analysis was applied. Given the fact that KMO and Bartlett's Sphercity Test results have been found to be sufficient and appropriate for the factorial analysis, thus, the exploratory factorial analysis can be implemented on research questions. Primary statistical features which have been obtained with the execution of primary components are presented in Table 2.

Table 2. Primary statistical features in implementing primary components analysis for a set of 42 question of the Social Capital Questionnaire

Accumulative per	Variance per	Eigenvalue	factor	question
13.021	13.021	5.469	1	1
20.074	7.053	2.962	2	2
25.787	5.713	2.400	3	3
30.820	5.032	2.114	4	4
34.690	3.871	1.626	5	5
38.245	3.555	1.493	6	6
41.490	3.244	1.363	7	7
44.675	3.185	1.338	8	8
47.707	3.032	1.273	9	9

50.516	2.809	1.180	10	10
53.238	2.722	1.143	11	11
55.888	2.650	1.113	12	12
58.381	2.493	1.047	13	13
60.736	2.355	.989	14	14
62.978	2.242	.942	15	15
65.179	2.202	.925	16	16
67.300	2.120	.891	17	17
69.362	2.062	.866	18	18
71.310	1.948	.818	19	19
73.222	1.911	.803	20	20
75.026	1.804	.758	21	21
76.782	1.756	.738	22	22
78.506	1.724	.724	23	23
80.215	1.709	.718	24	24
81.817	1.602	.673	25	25
83.314	1.497	.629	26	26
84.776	1.462	.614	27	27
86.199	1.423	.598	28	28
87.549	1.350	.567	29	29
88.853	1.304	.548	30	30
90.065	1.212	.509	31	31
91.240	1.175	.494	32	32
92.367	1.127	.473	33	33
93.483	1.117	.469	34	34
94.511	1.028	.432	35	35
95.445	.934	.392	36	36

96.355	.911	.382	37	37
97.236	.881	.370	38	38
98.027	.790	.332	39	39
98.751	.724	.304	40	40
99.438	.686	.288	41	41
100.000	.562	.236	42	42

As seen in Table (2) analysis of main components is indicative of the fact that eigenvalues of 13 factors are greater than 1, which, altogether, explains 58/38% of total variables variances. After factorial analysis was several times executed and factors extraction was dine through various rotations and comparison of extracted factors with theoretical structure, and also considering factorial analysis assumptions, it was decide to extract four factors. The four factors, altogether, explain 30.820% of all variances.

Table 3. Eigenvalue, percentage of variance explanation and accumulative percentage of Social Capital Factor

Factor	Eigenvalue	Variance per.	Accumulative per.
1	5.469	13.021	13.021
2	2.962	7.053	20.074
3	2.400	5.713	25.787
4	2.114	5.032	30.820

As seen in Table (3), the factor 1 with eigenvalue of 5.469, explains 13.02% of total variances, where based on main components analysis features, this feature contributes most to explaining total variances and no other factors can explain more variance compared to the first factor. Factor 3, too, with eigenvalue of 2.96, explains 7.05% of total variance. Factor 3 with eigenvalue of 2.40, explains 5.71% of total variance. Factor 4 with eigenvalue of 2.11 explains 5.03% of total variances, contributing to the explanation of total variance least. Given the above table, 3.82% of total variance can be explained by the four factors extracted. Later, to arrive at the simple structure, four factors were rotated through varimax method. The results, after several experimental rotation, arrived at a simple structure, where this structured matrix is shown in Table 4.

Table 4. Simple structure matrix for factors.

Factor				questions
4	3	2	1	
.101			.690	4
-.190			.628	7
.125	-.195		.591	5
-.153			.566	6
-.144		.159	.502	30
-.240	.254		.463	17
		.379	.441	34
	.227		.416	18
			.409	13
-.165	.369	.142	.372	31
.138	.117		.327	29
.232	.148	.246	.294	41
-.255			.290	42
	-.134	.268	.284	14
		.107	.283	1
.194			.276	28
		.141	.176	11
	.174	.731		38
		.687		35
	.112	.621	.125	37
		.548	.158	33
-.105	.153	.535	.105	39
		.448		8
-.206	.183	.444	.183	27

	Factor			questions
4	3	2	1	
.100	.144	.439		40
.196	.119	.435		36
	.101	.365	.217	26
		.272	.230	9
	-.157	.202	.185	10
	.742			20
.120	.727	.192		23
	.726			21
.137	.693	.106		22
-.151	.627		.168	19
.104	.467	.311		25
	.302	.151	.205	32
.651		-.130	.190	15
.595	.120			2
.543			-.133	16
-.525			.233	12
.485	-.205		.182	3
.249	.218			24

Given the properties of each cluster (group) for the variables which are placed on one factor, an appropriate name should be chosen. In this stage, variables are categorized as a function of factors. Based on factors' structures matrix, set of questions which should have been correlated commonly are named as following:

Factor 1: 17 questions incudes questions numbered 42, 41, 34, 31, 30, 29, 28, 18, 17, 14, 13, 11, 7, 6, 5, 4, 1 have had higher correlation with this factor, indicating social trust.

Factor 2: 12 questions numbering 40, 39, 38, 3, 35, 33, 27, 26, 1, 9, 8 are highly correlated with this factor, suggesting relations in social networks.

Factor 3 with 7 questions including 32, 25, 23, 22, 21, 20, 19 are highly correlated with this factor, indicating group participation.

Factor 4: 6 questions numbered 24, 16, 15, 12, 3, 2 are highly correlated with this factor, indicating participation in local community.

Given exploratory analysis test results, it is now clear that Social Capital Questionnaire is comprised of four factors as determined earlier.

To what extent social capital components contribute to explaining mental well-being?

To examine this question, concurrent multiple regression was applied.

a. Regression of predicting mental well-being from social trust, group participation, participation in local communities, and relations in social networks

Table 5. Multivariate regression analysis results of mental well-being from predictive variables.

Model	Index of variations sources	Sum of squares	Freedom degrees	Average square	F	Sig.
1	Regression	160.251	4	40.063	26.900	.000[b]
	Residual	440.839	296	1.489		
	Total	601.090	300			

Regression analysis results in Table (5) indicate that mental well-being components regression from social trust, group participation, and participation in local communities and relations in social networks is statistically significant and these components explain part of mental well-being variance. Put it other way, the results suggest that regression coefficients are significant and there is enough evidence for confirming the hypothesis. In other words, there is a statistically significant relationship between components of trust, group participation, participation in local community and relations in social networks with mental well-being.

Table 6. Mental well-being multiple regression coefficient results from predictive variables.

Criterion variable	Predictive	Non-standard coefficients		Beta standard coefficient	t	Sig.
Mental well-being		B	non-standard coefficient error	Beta		
Predictive	Constant	-6.563	.759		-8.647	.000
	Group participation	.067	.017	.223	3.941	.000

	Relations in social networks	.035	.015	.141	2.282	.023
	Participation in local communities	.019	.020	.058	.922	.357
	Social trust	.088	.014	.320	6.271	.000
1	R	0.516		R^2	0.267	

Given R^2 value in Table 6, it can be concluded that components of social trust, group participation, participation in local communities, and relations in social networks in the model recommended explain 27% of the variance of Variable mental well-being. The Beta value in the model offered indicates the extent of explanation of predictive variables variance on the criterion variable. According to these beta coefficients, the component of social trust assumed the highest role of explaining mental well-being, such that with each unit of change in the variance if social trust, mental well-being variance will change for 0.320. Component of group participation will also change for 0.223, component of relations in social networks will change for 0.141.

4. CONCLUSIONS

To examine the question: to what extent each of the social capital components contribute to mental well-being? Concurrent multiple regression was used. Results of regression analysis indicate that regression of mental well-being components from social trust, group participation, and participation in local communities and relations in social networks is statistically significant and these components explain part of mental well-being. Put it other way, the results suggest that regression coefficients are significant and there is enough evidence for confirming the hypothesis. In other words, there is a statistically significant relationship between components of trust, group participation, participation in local community and relations in social networks with mental well-being.

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The research results are in line with those of Baradaran and Hussein Pur's research (2010) who found out that social trust did have the highest effects on mental well-being and remain in contradiction with those of Bahadori Khosroashahi et al (2013) in which social trust was found to be having no significant effects on mental well-being. The results are also in

concert with those found by Matsushima and Matsunaga (2010) in which volunteer trust and behavior was having positive relationship with mental well-being. Given Beta coefficient, the variable of group participation has significant impacts on the variable of mental well-being; i.e. as level of group participation increases, mental well-being will also rise. Research results are also conforming to those found by Bahadori et al (2013). The variable of participation in local community does not have meaningful effects in mental well-being; i.e. as participation in local communities increases, mental well-being will not rise.

The variable of relations in social networks did have significant impact on mental well-being; i.e. as relations in social networks rises, mental well-being will also rise. The results of this research are in line with those of Bahadori Khosroashahi et al. while they are contradictory with the findings found by Hussein pur (2013), in which social participation and social networks were found to have little effects on mental well-being. To explain this, social capital can be regarded as a major factor that can lead to satisfaction with life ad peoples' mental well-being. Social capital has been identified as the strongest encountering force for a successful coping on the part of people at the time of engagement with tense conditions, and thereby facilitates tolerating problems for people. Also, social capital, via playing an intermediate role between stressful life factors and emergence of somatic and mental problems, and also through enhancing peoples' understanding, causes reduction of tension, increase of mental helath level, life quality a d well-being among people (Ghaedi & Yaghoubi, 2008).

Pathenam has stated that in none of social capital realms, nothing is more important than the role of social capital in well-being. The results of this research are in line with those of Khosrowshahi et al (2013) in which social capital and its components are positively and significantly related with mental well-being and remain in conflict with those of Hussein Pur (2013) research findings.

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