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INVESTIGATING THE CORRELATION BETWEEN THE ORGANIZATIONAL INTELLIGENCE AND STAFF EMPLOYEES' EMPOWERMENT AT SHAHID BEHESHTI UNIVERSITY OF MEDICAL SCIENCES

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ABSTRACT

This study aims at investigating the relationship between the organizational intelligence and empowerment in staff employees at Shahid Beheshti University of Medical Sciences. The statistical population consists of all staff employees and 217 subjects are selected as the statistical samples according to Morgan Table. The research has descriptive-correlative method. The data collection tools include the standard organizational intelligence questionnaire (Albrecht, 2003) with Cronbach's alpha of 0.98, and the standard employee empowerment questionnaire (Spreitzer, 1992) with Cronbach's alpha of 0.85. The multivariate linear regression of statistical method is utilized for data analysis and the results indicate that the organizational intelligence variable has explained a total of about 68% of variance in staff employee empowerment as the dependent variable at Shahid Beheshti University of Medical Sciences; consequently, there is a significant correlation between the organizational intelligence and staff employees' empowerment at Shahid Beheshti University of Medical Sciences.

Keywords: *Organizational Intelligence, Employees' Empowerment*

INTRODUCTION

The rapid environmental changes enforce the organizations to utilize different management mechanisms in order to adapt to various management mechanisms; the empowerment is one of these mechanisms and plays a key role in the survival of modern organizations. The organizations of new era have become far from the traditional and hierarchical structures (vertical) and have utilized different horizontal, network and team structures. These structures pay more attention to the social relationships and dynamics and consider the human as the center of affairs. The organizations need people who can make the best use of advanced technology, can find the innovations, and able to improve their products and service (Madhoushi and Niazi, 2011).

Despite the challenges facing the today's organizations, the attention to organizational intelligence process is essential for enhancing the performance and growth through investigating and promoting the strategic outlook, common fate, tendency to change, mood, unity and performing, knowledge application, and performance pressure which are the dimensions of organizational intelligence.

Terlakson defines the empowerment as the process of staff performance change from the status of "they do what they are told" to "they do what is needed".

Conger & Kanungo believe that any management strategy or technique which increase the employees' self-determination and self-sufficiency, will lead to their empowerment (Paktinat and Fathizadeh, 2008).

The organizational intelligence is among the variables affecting the employees empowerment. Simic defines the organizational intelligence as follows: The intellectual ability of an organization to solve problems and emphasis on the integration of man and his technical ability to solve problems (Simic, 2005).

William Halal believes that the organizational intelligence is a capacity of an organization for knowledge creation and its strategic application in order to adapt to its surroundings (Halal, 2007).

Karl Albrecht, the organizational intelligence author and designer, refers to three factors of intelligent people, groups and organizations for success of business. He concludes that when the intelligent people

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are gathered in an organization, they tend to the stupidity and idleness. He uses the organizational intelligence term as the accountability and avoidance of group idleness (Abzari, 2006).

Therefore, according to the importance of organizational intelligence variables and the staff empowerment in the organization, this research seeks to respond to the following question: What kind of relationship is there between the organizational intelligence and staff employee empowerment at Shahid Beheshti University of Medical Sciences?

MATERIALS AND METHODS

This study has descriptive correlative type. The statistical population consists of all 500 staff employees at Shahid Beheshti University of Medical Sciences. From this population, the sample size is estimated equal to 217 according to Morgan table. This research has simple random sampling method.

The measurement tools in this research include 1- Organizational intelligence questionnaire by "Albrecht" (2003) with 7 components and 47 items based on four-choice Likert scale (very high= 4, high= 3, low= 2, and very low= 1).

2- Spreitzer's empowerment questionnaire (1992) with five components, 19 items and based on the four-choice Likert scale (Strongly agree=4, agree=3, disagree=2, and strongly disagree= 1).

- Cronbach's alpha of Organizational Intelligence Questionnaire is equal to 0.98; and equal to 0.85 for staff empowerment questionnaire.

The descriptive and inferential statistics are utilized to analyze data. The tables of frequency distribution and percentage, median, mean, and mode, etc are utilized in descriptive statistics; and the correlation test and linear multivariate regression in inferential statistics.

RESULTS AND DISCUSSION

Results

Main Question: What kind of relationship is there between the organizational intelligence and staff employees' empowerment at Shahid Beheshti University of Medical Sciences?

Table 1: Summary of regression results about the relationship between the organizational intelligence and employee empowerment

Multiple correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Standard error of approximation
0.829	0.687	0.685	7.770

The results of table (1) indicate that the multiple correlation coefficient is equal to 0.82 and the coefficient of determination equal to 0.68 and the adjusted coefficient of determination equal to 0.68 (p=0.05 and F=470.909). Therefore, the coefficient of determination indicates that the organizational intelligence explains a total of about 68% of variance in staff employees' empowerment at Shahid Beheshti University of Medical Sciences.

Table 2: ANOVA

	Sum of squares	Degree of freedom	Mean square	F	Significance level
Regression	28428.227	1	28428.227	470.909	0.000
Residual	12979.303	215			
Total	41407.530	216			

According to the f-value of 470.909, the significance level presented in the table (2) is less than 0.05 which confirms the regression model; and the independent variable is able to predict the variance in the dependent variable.

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Table 3: Coefficients of variables associated with the regression equation

Independent variable	Non-standardized coefficients		Standardized coefficients	t	Significance level
	B	Standard error	Beta		
Constant value	-2.002	2.429		-0.824	0.411
Organizational intelligence	0.410	0.019	0.829	21.700	0.000

As shown in Table (3), the multiple-correlation between the organizational intelligence and empowerment indicates that the organizational intelligence with beta value of 0.82 has the power of explaining the dependent variable; in other words, with one unit standard deviation in the organizational intelligence, 0.82 of standard deviation is created in empowerment.

According to the coefficients of Table (3), the regression line equation is as follows:

$$\text{Empowerment} = -2.002 + (0.410) \text{ organizational intelligence}$$

First Sub-Question: What kind of relationship is there between the strategic outlook and staff employees' empowerment?

Table 4: Summary of regression results about the relationship between the strategic outlook and employee empowerment

Multiple correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Standard error of approximation
0.804	0.646	0.645	8.255

The results of table (4) indicate that the multiple correlation coefficient is equal to 0.80 and the coefficient of determination equal to 0.64 and the adjusted coefficient of determination equal to 0.64 ($p=0.05$ and $F=392.693$). Therefore, the coefficient of determination indicates that the strategic outlook explains a total of about 64% of variance in staff employees' empowerment.

Table 5: ANOVA

	Sum of squares	Degree of freedom	Mean square	F	Significance level
Regression	26757.657	1	26757.657	392.693	0.000
Residual	14649.873	215	68.139		
Total	41407.530	216			

According to the f-value of 392.693, the significance level presented in the table (5) is less than 0.05 which confirms the regression model; and the independent variable is able to predict the variance in the dependent variable.

Table 6: Coefficients of variables associated with the regression equation

Independent variable	Non-standardized coefficients		Standardized coefficients	t	Significance level
	B	Standard error	Beta		
Constant value	-3.131	2.712		-1.155	0.250
Strategic outlook	2.878	0.145	0.804	19.816	0.000

As shown in Table (6), the multiple-correlation between the strategic outlook and empowerment indicates that the strategic outlook with beta value of 0.80 has the power of explaining the dependent variable; in

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other words, with one unit standard deviation in the strategic outlook, 0.80 of standard deviation is created in empowerment.

According to the coefficients of Table (6), the regression line equation is as follows:

$$\text{Empowerment} = -3.131 + (2.878) \text{ strategic outlook}$$

Second Sub-Question: What kind of relationship is there between the common fate and staff employees' empowerment at Shahid Beheshti University of Medical Sciences?

Table 7: Summary of regression results about the relationship between the common fate and employee empowerment

Multiple coefficient	correlation	Coefficient of determination	Adjusted coefficient of determination	Standard error of approximation
0.807		0.651	0.650	8.212

The results of table (7) indicate that the multiple correlation coefficient is equal to 0.80 and the coefficient of determination equal to 0.65 and the adjusted coefficient of determination equal to 0.65 (p=0.05 and F=399.807). Therefore, the coefficient of determination indicates that the common fate variable explains a total of about 65% of variance in staff employees' empowerment.

Table 8: ANOVA

	Sum of squares	Degree of freedom	Mean square	F	Significance level
Regression	26963.299	1	26963.299	399.807	0.000
Residual	14432.326	214	67.441		
Total	41395.625	215			

According to the f-value of 399.807, the significance level presented in the table (8) is less than 0.05 which confirms the regression model.

Table 9: Coefficients of variables associated with the regression equation

Independent variable	Non-standardized coefficients		Standardized coefficients	t	Significance level
	B	Standard error	Beta		
Constant value	3.091	2.385		1.296	0.196
Common fate	0.496	0.125	0.807	19.995	0.000

As shown in Table (9), the multiple-correlation between the common fate and empowerment indicates that the common fate with beta value of 0.80 has the power of explaining the dependent variable; in other words, with one unit standard deviation in the common fate, 0.80 of standard deviation is created in empowerment.

According to the coefficients of Table (9), the regression line equation is as follows:

$$\text{Empowerment} = 3.091 + (2.496) \text{ common fate}$$

Third Sub-Question: What kind of relationship is there between the tendency to change and staff employees' empowerment at Shahid Beheshti University of Medical Sciences?

Table 10: Summary of regression results about the relationship between the tendency to change and employee empowerment

Multiple coefficient	correlation	Coefficient of determination	Adjusted coefficient of determination	Standard error of approximation
0.788		0.621	0.619	8.547

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The results of table indicate that the multiple correlation coefficient is equal to 0.78 and the coefficient of determination equal to 0.62 and the adjusted coefficient of determination equal to 0.61 (p=0.05 and F=351.873). Therefore, the coefficient of determination indicates that the tendency to change explains a total of about 62% of variance in staff employees' empowerment.

Table 11: ANOVA

	Sum of squares	Degree of freedom	Mean square	F	Significance level
Regression	25702.757	1	25702.757	351.873	0.000
Residual	15704.773	215	73.045		
Total	41407.530	216			

According to the f-value of 351.873, the significance level presented in the table is less than 0.05 which confirms the regression model; and the independent variable is able to predict the variance in the dependent variable.

Table 12: Coefficients of variables associated with the regression equation

Independent variable	Non-standardized coefficients		Standardized coefficients	t	Significance level
	B	Standard error	Beta		
Constant value	4.655	2.457		1.894	0.060
Tendency to change	2.532	0.135	0.788	18.758	0.000

As shown in Table, the multiple-correlation between the tendency to change and empowerment indicates that the tendency to change with beta value of 0.78 has the power of explaining the dependent variable; in other words, with one unit standard deviation in the tendency to change, 0.78 of standard deviation is created in empowerment.

According to the coefficients of Table, the regression line equation is as follows:

$$\text{Empowerment} = 4.655 + (2.532) \text{ tendency to change}$$

Fourth Sub-Question: What kind of relationship is there between the mood and staff employees' empowerment at Shahid Beheshti University of Medical Sciences?

Table 13: Summary of regression results about the relationship between the mood and employee empowerment

Multiple correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Standard error of approximation
0.742	0.550	0.548	9.305

The results of table indicate that the multiple correlation coefficient is equal to 0.74 and the coefficient of determination equal to 0.55 and the adjusted coefficient of determination equal to 0.54 (p=0.05 and F=263.278). Therefore, the coefficient of determination indicates that the mood variable explains a total of about 55% of variance in staff employees' empowerment.

Table 14: ANOVA

	Sum of squares	Degree of freedom	Mean square	F	Significance level
Regression	22793.618	1	22793.618	263.278	0.000
Residual	18613.912	215	86.576		
Total	41407.530	216			

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According to the f-value of 263.278, the significance level presented in the table is less than 0.05 which confirms the regression model; and the independent variable is able to predict the variance in the dependent variable.

Table 15: Coefficients of variables associated with the regression equation

Independent variable	Non-standardized coefficients		Standardized coefficients	t	Significance level
	B	Standard error	Beta		
Constant value	7.728	2.647		2.919	0.004
Mood	2.592	0.160	0.742	16.226	0.000

As shown in Table, the multiple-correlation between the mood and empowerment indicates that the mood with beta value of 0.74 has the power of explaining the dependent variable; in other words, with one unit standard deviation in the mood, 0.74 of standard deviation is created in empowerment.

Empowerment = 7.728 + (2.592) mood

Fifth Sub-Question: What kind of relationship is there between the unity and performing and staff employees' empowerment at Shahid Beheshti University of Medical Sciences?

Table 16: Summary of regression results about the relationship between the unity and performing and employee empowerment

Multiple coefficient	correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Standard error of approximation
0.785		0.617	0.615	8.593

The results of table indicate that the multiple correlation coefficient is equal to 0.78 and the coefficient of determination equal to 0.61 and the adjusted coefficient of determination equal to 0.61 (p=0.05 and F=345.729). Therefore, the coefficient of determination indicates that the unity and performing variable explains a total of about 61% of variance in staff employees' empowerment.

Table 17: ANOVA

	Sum of squares	Degree of freedom	Mean square	F	Significance level
Regression	25530.672	1	25530.672	345.729	0.000
Residual	15876.858	215	73.846		
Total	41407.530	216			

According to the f-value of 345.729, the significance level presented in the table is less than 0.05 which confirms the regression model; and the independent variable is able to predict the variance in the dependent variable.

Table 18: Coefficients of variables associated with the regression equation

Independent variable	Non-standardized coefficients		Standardized coefficients	t	Significance level
	B	Standard error	Beta		
Constant value	2.674	2.582		1.036	0.302
Unity and performing	2.489	0.134	0.785	18.594	0.000

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As shown in Table, the multiple-correlation between the unity and performing and empowerment indicates that the unity and performing variable with beta value of 0.78 has the power of explaining the dependent variable; in other words, with one unit standard deviation in the unity and performing, 0.78 of standard deviation is created in empowerment.

Empowerment = 2.674 + (2.489) unity and performing

Sixth Sub-Question: What kind of relationship is there between the knowledge application and staff employees' empowerment at Shahid Beheshti University of Medical Sciences?

Table 19: Summary of regression results about the relationship between the knowledge application and employee empowerment

Multiple correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Standard error of approximation
0.815	0.665	0.663	8.037

The results of table indicate that the multiple correlation coefficient is equal to 0.81 and the coefficient of determination equal to 0.66 and the adjusted coefficient of determination equal to 0.66 (p=0.05 and F=426.023). Therefore, the coefficient of determination indicates that the knowledge application explains a total of about 66% of variance in staff employees' empowerment.

Table 20: ANOVA

	Sum of squares	Degree of freedom	Mean square	F	Significance level
Regression	27519.381	1	27519.381	426.023	0.000
Residual	13888.149	215	64.596		
Total	41407.530	216			

According to the f-value of 426.023, the significance level presented in the table is less than 0.05 which confirms the regression model; and the independent variable is able to predict the variance in the dependent variable.

Table 21: Coefficients of variables associated with the regression equation

Independent variable	Non-standardized coefficients		Standardized coefficients	t	Significance level
	B	Standard error	Beta		
Constant value	4.378	2.250		1.946	0.053
Knowledge application	2.948	0.143	0.815	20.640	0.000

As shown in Table, the multiple-correlation between the knowledge application and empowerment indicates that the knowledge application with beta value of 0.81 has the power of explaining the dependent variable; in other words, with one unit standard deviation in the knowledge application, 0.81 of standard deviation is created in empowerment.

Empowerment = 4.378+ (2.948) knowledge application

Seventh Sub-Question: What kind of relationship is there between the performance pressure and staff employees' empowerment at Shahid Beheshti University of Medical Sciences?

Table 22: Summary of regression results about the relationship between the performance pressure and employee empowerment

Multiple correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Standard error of approximation
0.719	0.517	0.514	9.649

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The results of table indicate that the multiple correlation coefficient is equal to 0.71 and the coefficient of determination equal to 0.51 and the adjusted coefficient of determination equal to 0.51 (p=0.05 and F=229.762). Therefore, the coefficient of determination indicates that the performance pressure explains a total of about 51% of variance in staff employees' empowerment.

Table 23: ANOVA

	Sum of squares	Degree of freedom	Mean square	F	Significance level
Regression	21390.957	1	21390.657	229.762	0.000
Residual	20016.573	215	93.100		
Total	41407.530	216			

According to the f-value of 229.762, the significance level presented in the table is less than 0.05 which confirms the regression model; and the independent variable is able to predict the variance in the dependent variable.

Table 24: Coefficients of variables associated with the regression equation

Independent variable	Non-standardized coefficients		Standardized coefficients	t	Significance level
	B	Standard error	Beta		
Constant value	4.609	3.029		1.521	0.130
Performance pressure	2.456	0.162	0.719	15.158	0.000

As shown in Table, the multiple-correlation between the performance pressure and empowerment indicates that the performance pressure with beta value of 0.71 has the power of explaining the dependent variable; in other words, with one unit standard deviation in the performance pressure, 0.71 of standard deviation is created in empowerment.

$$\text{Empowerment} = 4.609 + (2.456) \text{ performance pressure}$$

Discussion

According to the findings of this study, there is a correlation between the organizational intelligence and staff employees' empowerment at Shahid Beheshti University of Medical Sciences. Due to the multiple regression and analysis of variance, there is a significant correlation between the components of organizational intelligence (strategic outlook, common fate, tendency to change, mood, unity and performing, knowledge application, and performance pressure) with empowerment. With regard to the main question, what kind of correlation is there between the organizational intelligence and staff employees' empowerment at Shahid Beheshti University of Medical Sciences? The multiple-correlation coefficient of organizational intelligence explains about 68% of variance in the employees' empowerment at Shahid Beheshti University of Medical Sciences. Therefore, these results are consistent with the results by Niknami and Zare (2013) in a study entitled "The organizational intelligence and its role in promoting the employees' empowerment. They have concluded that there is a significant correlation between each of the components of organizational intelligence and the employees' empowerment.

With regard to the first sub-question, what kind of correlation is there between the strategic outlook and staff employees' empowerment at Shahid Beheshti University of Medical Sciences? The results of regression results indicate that the strategic outlook explains about 64% of variance in the employees' empowerment as the dependent variable. In other words, the independent variable is able to predict the variance in dependent variable at significant level of p<0.05 with confidence of 95%.

With regard to the second sub-question, what kind of correlation is there between the common fate and staff employees' empowerment at Shahid Beheshti University of Medical Sciences? The obtained results indicate that the common fate explains about 65% of variance in the employees' empowerment as the

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dependent variable. These results are consistent with the results of research by Karl (2003) who conducted a research entitled "The study of organizational intelligence" in September 2003 among the Australian managers. Finally, Albrecht has concluded that the Australian managers can achieve better understanding of their organizations by understanding of organizational intelligence, and this is partially consistent with this research.

With regard to the third sub-question, what kind of correlation is there between the tendency to change and staff employees' empowerment at Shahid Beheshti University of Medical Sciences? The obtained results indicate that the tendency to change explains about 62% of variance in the employees' empowerment. The results indicate that the tendency to change variable has explained about 62% of variance in staff employees' empowerment; in other words, according to the significant level ($p=0.05$ and $F=351.873$), the independent variable is able to predict the variance in dependent variable and this is consistent with the research by Khodadai *et al.*, (2009) indicating that there is a significant positive correlation between the knowledge management sub-system and all components of organizational intelligence and the total organizational intelligence. The results of regression analysis indicate that among the components of organizational intelligence, the tendency to change, common fate, knowledge application, and unity and performing are able to significantly predict the knowledge management sub-system in learning organization and this is consistent with the tendency to change component of study.

According to the fourth sub-question, what kind of correlation is there between the mood and staff employees' empowerment at Shahid Beheshti University of Medical Sciences? The obtained results indicate that the mood explains about 55% of variance in the employees' empowerment. According to the F-value equal to 263.278, the significance level less than 5 confirms the regression model and the independent variable is able to predict the variance in dependent variable. This is consistent with the research, entitled "The study of factors affecting the organizational intelligence in employees at department of education in Isfahan Province" by Negin and Ghasemali in 2010. This research explains the issues associated with the organizational intelligence as well as investigating and measuring the factors affecting the employees' organizational intelligence. The target indices of this research include the strategic outlook, belief in common fate, organizational tendency to change, effect of employee mood, knowledge application, and the effect of manager's behavior on employees. The research results indicate that except for the belief in common fate, other indices affect the employees' organizational intelligence; this is consistent with the components of this research.

According to the fifth sub-question, what kind of correlation is there between the unity and performing and staff employees' empowerment at Shahid Beheshti University of Medical Sciences? The obtained results indicate that the unity and performing component explains about 61% of variance in the employees' empowerment. According to the F-value equal to 345.729, the significance level is less than 0.05 and confirms the regression model and thus the independent variable is able to predict the variance in dependent variable. According to the sixth sub-question, what kind of correlation is there between the knowledge application and staff employees' empowerment at Shahid Beheshti University of Medical Sciences? The results of regression indicate that the multiple-correlation coefficient is equal to 0.81 and the coefficient of determination equal to 66% and the adjusted coefficient of determination equal to 0.66 ($F=426.023$ and $p=0.05$). Therefore, the observed coefficient of determination indicates that the knowledge application generally explains about 66% of variance in empowerment as the dependent variable. In other words, according to ANOVA table, the significance level is less than 5% and indicates the regression model and thus the independent variable is able to predict the variance in dependent variable.

According to the last sub-question, what kind of correlation is there between the performance pressure and staff employees' empowerment at Shahid Beheshti University of Medical Sciences? The results of regression indicate that the multiple-correlation coefficient is equal to 0.71 and the coefficient of determination equal to 51% and the adjusted coefficient of determination equal to 0.51 ($F=229.762$ and $p=0.05$). Therefore, the observed coefficient of determination indicates that the performance pressure generally explains about 51% of variance in empowerment as the dependent variable. In other words, the

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multiple-correlation between the performance pressure and empowerment indicates that the performance pressure with beta of 0.71 is able to explain the dependent variable. Therefore, a one unit increase in standard deviation of performance pressure will leads to the increase of 0.71 in standard deviation of empowerment. This is consistent with Pouraminzad's research (2010) entitled "The organizational intelligence and organizational learning as the powerful tools in management of knowledge-based companies and organizations". He has concluded that the mood component has the maximum effect and the performance pressure has the minimum effect on organizational learning, and this finding is partially consistent with this research.

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