Original Article

The relationship between cultural intelligence and social compatibility in Isfahan University of Medical Sciences dormitories resident students

Mahmoud Keyvanara, Mohammad Hossein Yarmohammadian¹, Batoul Soltani²

Social Determinants of Health Research Center, ¹Health Management and Economics Research Center, ²Department of Health Services Management, School of Management and Medical Informatics, Isfahan University of Medical Sciences, Isfahan, Iran

ABSTRACT

Introduction: Cultural intelligence and social compatibility are two acquired processes that their education and reinforcement between dormitory's students who have inter cultural interactions with each other can conclude with results that tension diminution, inter cultural contrast and conflict, social divisions and consequently healthy and peaceful relationships and governance and finally mental peace, and health are of its most important. Hence, the research has been occurring in order to the determination of cultural intelligence relationship with the social compatibility of Isfahan University of Medical Sciences dormitories resident students in 2012. Materials and Methods: The research method is descriptive-correlation, and its population is composed of all Isfahan University of Medical Sciences dormitories resident students in 2012 that were totally 2500 persons. The two steps sampling method have been used, group sampling and random sampling has been occurring at first and second steps and totally 447 persons were selected. Research data were collected via Earley and Ang cultural intelligence questionnaire with 0.76 Cronbach's alpha Coefficient and California social compatibility standard questionnaire with higher than 0.70 Cronbach's alpha factor. Questionnaire data have been analyzed with the SPSS software and results have been presented in the shape of descriptions and statistics. **Findings:** Results showed that there is a direct significant relationship (P < 0.001) between cultural intelligence and the social adjustment in students living in Isfahan University of Medical Sciences dormitories and also there is a direct significant relationship in the level of (P < 0.05) between cognitive and motivational dimensions of cultural intelligence; however, there is no significant relationship between cognitive and behavioral dimensions of cultural intelligence and social adjustment (P > 0.05). **Conclusion:** Cultural intelligence and cognitive and motivational addition in dimensions of students living in Isfahan University of Medical Sciences dormitories increase their social integration, therefore, cultural intelligence and social adjustment of students can be increased through planning and we can try for their mental

Address for correspondence: Dr. Mahmoud Keyvanara, Social Determinants of Health Research Center, Isfahan University of Medical Sciences, Isfahan, Iran. E-mail: keyvanara@mng.mui.ac.ir

	Access this article online		
	Quick Response Code:		
-		Website: www.jehp.net	
		DOI: 10.4103/2277-9531.139682	

health by this way.

Key words: Cultural intelligence, social adjustment, Students

INTRODUCTION

Human is a social being that will be forced to live in a group to meet his needs. However, the satisfaction of his needs is associated with a variety of obstacles.^[1] This problem becomes more acute when a person who lives in his native culture has been compiled to other cultures and inevitably forced into assimilation and acceptance of values, beliefs,

Copyright: © 2014 Keyvanara M. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

This article may be cited as: Keyvanara M, Yarmohammadian MH, Soltani B. The relationship between cultural intelligence and social compatibility in Isfahan University of Medical Sciences dormitories resident students. J Edu Health Promot 2014;3:100.

norms, and customs of a new culture. More difficult is when he is forced to interact with a group of diverse cultures. In this case, depending on the circumstances, he is forced to change. His values and norms are unstable and distinction between insiders and outsiders in a foreign observer's view about him is very difficult.^[2] Furthermore, the transition from family life to student life and settle in a new home or dormitory, means away from the family emotional environment, is usually sad and sometimes this environment's change is coupled with a change of language and dialect and this can increase the odds of living in exile and caused physical and psychological pressures.^[11] Yet what comes to his aid is cultural intelligence and the quality of his adaptation to the new environment.

Intelligence and culture are used together because of their significant relationship with each other.[3] Intelligence by Nobel is the capable of thinking, planning, creating, learning, problem solving ability, reaction, decision-making or the ability to adapt to new situations.^[4] Culture is also total full features of the spiritual, material, intellectual, and emotional features and it is not only composed of life-styles, but also including, human rights, value systems, traditions and beliefs.^[5] Accordingly, we can say that there is no uncultured humanely and according to the appropriateness and necessity of human's biodiversity and nature, there is a diversity among the nations.^[6] Some individuals and groups are more capable of achieving various purposes in such a multicultural environment, however, the intercultural interactive space for some individuals and social groups is associated with an increasing strife and conflict and negative competitions instead of collaboration and constructive cooperation. Hence, despite the cultural diversity, the ability to adapt continuously with people from different cultures and the ability to cross-cultural communicate is a skill that seems to be needed.^[7] Earley and Ang introduced cultural intelligence as an ability of an individual in order to successfully adapt to new cultural environments.^[8] Brislin et al., believed that cultural intelligence are attributes or skills that individuals possess it, in minimum time and with the least stress on cultural interaction are consistent with the outsider culture.^[3] As a result, training and development of cultural intelligence are necessary. Peterson based on the results of his research said that cultural intelligence is not innate, but has the ability to teach.^[9] Hence, cultural intelligence is an expanding category that education, training and experience can be added to its quantity and quality.^[10] By Earley and Ang vision, cultural intelligence is composed of metacognition dimension, means cultural awareness of cross-cultural interactions, cognitive dimension, means the knowledge about the norms, practices, and conventions of different cultures, motivation dimension, means the ability to learn in the cross-cultural environment, and behavior dimension, means the ability to use verbal and nonverbal actions when interacting with people from other cultures.^[11] Some researchers like Munn are called adaptation to adjust or adapt to their environment^[12] and others like Sadok and Sadok refers it to all strategies to manage stressful life situations, including threats, real or unreal applies.^[13] Some people know it as a varied and complex structure that is a social $\mathsf{product}^{[14]}$ that factors such as family, school environment, peers, social relations, social skills, and anti-social relations have been used for its measurement.^[15] By Rayan and Shim (2005) view, social adjustment after learning of social behaviors in accordance with social and personal needs can be achieved through social processes and by social interactions.^[16] Including social compatibility is compatible with the campus. Social, personal, and educational adjustments with the university environment means educational success, social satisfaction, and peace of mind.^[17] Furthermore the social adaptation has been known as a relative and intercultural concept that is influenced by many factors.^[18] Thus, Black (1988) and Black et al. (1991) believed on cross-cultural adaptation and believe that cross-cultural adjustment is the process of adaptation to living and working in a foreign culture. In other words, the cross-cultural compatibility is a degree of psychological comfort of a person in the host culture.^[19] Berry (1980) and Berry (1997) have known the main results of compatibility beyond just relax and considered levels of citizen knowledge of the host culture, cell culture and continuous interaction with the host nationals.^[20]

In the field of cultural intelligence and social adjustment, researches have been occurring within and outside the country that some of them are noted. Amiri has been doing a research about the relationship between cultural intelligence, social adjustment, and social development in the students that its results have been shown that there is a significant relationship between cultural intelligence and cultural adjustment.^[21] Zaki has been carried out a research in students' adjustment to the university and its relationship with social support that its results have been shown the coping with the school to a middle level, personal adjustment (emotional) to a high-level, adjustment to a middle level, and social support to relatively high-levels.^[14]

Kumar *et al.*, were studying the process interaction and culturally homogeneous and heterogeneous groups. Initially, homogeneous groups got higher scores in both the process effectiveness and performance than heterogeneous group, but after education, heterogeneous group got a higher score in process effectiveness and performance.^[22] Pals also were conducted a research entitled in relative importance of cross-cultural adaptation on the American marketing managers and his results showed that there is a significant relationship between oriented education, autarky (self-efficacy), family and cross-cultural aspects of adjustment (including, adjustment of action, interaction, and generalizations).^[19]

Earley and Masakowski conducted a research on the impact of teaching and learning in cultural intelligence of directors. Results show that although a small proportion of cultural intelligence can be seen as an inherent and intrinsic, but undoubtedly the major share of cultural intelligence in each one is due to teaching and learning.^[23] Furthermore, Van Dayn surveyed the relationship between individual's personality and the four factors of cultural intelligence and showed that there is a positive relationship between cultural intelligence and the ability of individuals to function effectively in a series of culturally diverse.^[24] I may also have been investigated the effects of cultural intelligence on the effectiveness of cross-cultural negotiation that introduced cultural intelligence as a key factor in the effectiveness of cross-cultural negotiation.^[25]

Ang *et al.*, investigated the relationship between cultural intelligence and students' personality. Part of the findings of this research have shown that compatibility and emotional stability are associated with a behavior dimension of cultural intelligence.^[26] Ang *et al.*, measured cultural intelligence and its effect on compatibility, decision making, cultural adaptation, and task performance in other research. The results have shown that dimensions of cultural intelligence have a significant relationship with each of these variables.^[27]

Templer *et al.*, surveyed the relationship between cultural intelligence and dimensions of all aspects of soci-cultural adjustment. They concluded that there is a significant relationship between the motivational dimension of cultural intelligence and socio-cultural dimension of sustainability.^[28]

Gregory et al., conducted a qualitative study on the role of cultural intelligence and cultural discussions of individual projects. In their research, the effect of cross-cultural interaction shows in the activation of adaptive behavior.^[29] DaniJelas also has done a study titled "How teachers understand the cultural intelligence?" the findings have shown a high-level of cultural intelligence and significant predictors of high cultural intelligence in the teachers. Enjoying cultural communications, cross-cultural class experience as a challenge, openness of cultural learning and communicate with people from other cultures were about the consequences of educating teachers in non-homogeneous classes.^[30] Ward et al., conducted a study titled in evaluating the predictive validity of cultural intelligence over time in students. In this study, dimensions of cultural intelligence were studied as a predictor of problems in cross-cultural adjustment. According to this matter that the emphasis in this study was in motivation dimension, the results have been shown that there was a negative correlation between the motivational dimension of cultural intelligence and psychological symptoms and social adjustment problems.^[31] With respect to research and its record, this research has been carried out with the aim of determination of the relationship between cultural intelligence and social compatibility in Isfahan University of Medical Sciences dormitories resident students in 2012 in order to improve the students' skills and thus be used to increase mental health. One of cross-cultural spaces is students' dormitories. Some of the students, according to their training and development or their experiences in past crises quickly adapt to new conditions and consist with existing situations, but some others are not able to adapt and cope effectively and efficiently with these conditions and this matter can undermine their mental-health and concluded to their incompetence and their performance drop in their academic status.^[32]

MATERIALS AND METHODS

The research method applied a descriptive and correlation- approach and its population was composed of Isfahan University of Medical Sciences dormitory residents' students who were 2500 persons in 8 dormitories. The sample size was determined of 447 persons. The two steps sampling method have been used, group sampling and random sampling has been occurring at first and second steps and totally 447 persons were selected. Research data were collected through a questionnaire. Early and a localized cultural intelligence questionnaire has been used to measure cultural intelligence that measured individual's cultural intelligence in terms of four dimensions of metacognitive, cognitive, motivational, and behavioral measures to assess social adjustment, California standardized social adjustment was used which was measured family relations, school relations, peer relations, social skills, social interaction, and anti-social relations. The validity of the questionnaires was confirmed by several faculty members, and the Cronbach alpha coefficient of the questionnaire was above 0.70 and also their reliability was confirmed and after data collection, SPSS software was used and data analysis was performed with descriptive statistics and statistical test.

FINDINGS

Findings showed that frequency percentage of female students were 252 persons (56.4%) and frequency percentage of male students was 195 persons (43.6%). Students frequencies in below 20 year frequency was 94 persons (21%), in 21-25 years age group was 278 persons (62.2%) and 26-30 years age group was 52 persons (11.6%) and age group with more than 30 years was 23 persons (5.1%). Students frequency in bachelor degree was 211 persons (47.2%), in Master of science were 41 persons (9.2%), in PhD degree were 181 persons (40.5%), and in specialty degree was 14 persons (3.1%). Students frequency in Nursing field was 67 persons (14.9%), in pharmacy was 52 persons (11.8%), in dentistry were 32 persons (7.1%), in health with 57 persons (12.7%), in medicine were 125 persons (17.9%), in management was 55 persons (12.4%), in speech therapy was 34 persons (7.6%) and in nutrition was 25 persons (5.6%).

As presented in Table 1, research findings showed that according to measured means, which their score is about 100, cultural intelligence mean is 48.5 in students and is evaluated in medium and cultural intelligence dimensions mean are 60.5 in meta-cognitive, 42.8 in cognitive, 57.6 in motivational and 32.7 in behavioral. The social compatibility mean is also 67.7.

As observed in Table 2, there is a direct meaningful relationship between cultural intelligence and social compatibility (r = 0.242, P = 0.000) in students (P < 0.001). Furthermore, there is a direct meaningful relationship between cultural intelligence metacognitive dimension and social compatibility (r = 0.364, P = 0.000) and cultural intelligence motivation dimension and social compatibility (r = 0.043, P = 0.367) in students (P < 0.001). However, there is not

Table 1: Cultural intelligence mean, cultural intelligen dimensions, and social compatibility (from 100)					
Variations	Mean	Standard deviation			
Cultural intelligence	48.5	11.6			
Metacognitive dimension	60.5	15.8			
Cognitive dimension	42.8	15.5			
Motivational dimension	57.6	16.9			
Behavioral dimension	32.	20			
Social compatibility	67.7	11.7			

 Table 2: Pearson correlation factor between cultural intelligence and social compatibility in students

Variable	Pearson correlation factor	Meaningful level
Cultural intelligence and social compatibility	0.242	0.000
Cultural intelligence metacognitive dimension and social compatibility	0.364	0.000
Cultural intelligence cognitive dimension and social compatibility	0.043	0.367
Cultural intelligence motivation dimension and social compatibility	0.386	0.000
Cultural intelligence behavior dimension and social compatibility	-0.081	0.089

any significant relationship between cultural intelligence cognitive dimension and social compatibility (r = -0.081, P = 0.089) in students (P > 0.05).

DISCUSSION

The results of the research showed that female answerers (56.4%) were more than males (43.6%) that its reason was rooted in the number of female students in the university. The most frequency was allotted to 21-25 years age group (62.2%) and the lowest was related to higher than 30 years age group (5.1%) that including students in complementary education. Furthermore, the most frequency was related to Bachelor of Science (47.2%) and the lowest frequency was related to PhD (3.1%). In his research, many disciplines have been participated that its most frequency was related to medicine (27.9%) and its lowest was related to nutrition (5.65%).

In cultural intelligence mean and its dimensions and social compatibility survey, data analysis states that cultural intelligence mean in the students citizen in Isfahan University of Medical Sciences dormitories in percent was neared to medium level (48.5%) and their social compatibility was higher than medium level (67.7%), also meta cognitive dimension mean in students with 57.6 percent was higher than medium level. However, cultural intelligence cognitive dimension mean in students (42.8) and behavioral dimension mean in students (32) were lower than medium. This result presents the necessity of attending to the cultural intelligence

behavioral and cognitive dimension and their strengthening these two dimensions in students.

In the relationship between cultural intelligence and social compatibility survey in Isfahan University of Medical Sciences dormitory resident students, Pearson correlation factor presents this fact that there is a meaningful direct relationship (P < 0.001) between students' cultural intelligence and social compatibility (r = 0.242, P = 0.000). Hence, students with higher cultural intelligence enjoy higher social compatibility and with their cultural intelligence strengthening, their social compatibility will be increased. This result is along with a varied and his colleagues,^[31] Ang *et al.*,^[27] Templer *et al.*,^[28] and Earley and Ang,^[8] who was supposed cultural intelligence as a person's compatibility predictor. Furthermore, it is along with Earley and Peterson's research^[33] that reasoned that cultural intelligence directly influenced from cross-cultural compatibility.

In an analysis of the relationship between cultural intelligence metacognitive and social compatibility in Isfahan University of Medical Sciences dormitory resident students, a Pearson correlation factor showed that there is a direct significant relationship between cultural intelligence metacognitive relationship and social compatibility (R = 0.364, P = 0.000) (P < 0.001). Hence, dormitory resident students that achieved higher scores in cultural intelligence metacognitive dimension have higher in social compatibility. This result along with Templer *et al.*,^[28] research that were surveyed the relationship between cultural intelligence dimension and social compatibility and proved positive significant relationship between them. So along cultural intelligence metacognitive dimension increasing with students, their compatibility can be increased.

In the relationship between cultural intelligence cognitive dimension and social compatibility survey at Isfahan University of Medical Sciences dormitories resident students, a Pearson correlation factor showed that there is not any significant relationship between cultural intelligence cognitive dimension and social compatibility (r = 0.043, P = 0.367) (P > 0.05). The absence of any significant relationship between cultural intelligence cognitive dimension and social compatibility dimension and social compatibility in this hypothesis showed that other factors except cognitive dimension would be effected on social compatibility and having just cognition on the other culture's concepts could not be created social compatibility with students.

In cultural intelligence behavior dimension and social compatibility relationship survey of students, a Pearson correlation factor hasn't shown a significant relationship (r = -0.081, P = 0.089) (P > 0.05), which said that other factors except cultural intelligence behavior dimension would be effective on social compatibility and behavior dimension could not be an increasing factor of social compatibility in dormitory students.

In the analysis of cultural intelligence motivation dimension and social compatibility in Isfahan University of Medical Sciences dormitories resident students, a Pearson correlation factor showed that there is a direct significant relationship between cultural intelligence motivation dimension and social compatibility (r = -0.386, P = 0.000) and (P < 0.001). Hence, in students who are resident in dormitories and have higher scores in cultural intelligence motivation dimension, their compatibility would be increased by cultural intelligence motivation dimension, addition and this result is along with Chirkow et al., results' findings. They showed that motivation self-efficacy caused to social, psychological, and practical compatibility and in the other words caused by increasing their educational performance and being good though in immigrant students.^[31] However, along with Ang et al.,^[27] and Templer et al., [28] their studies showed that motivation dimension predicts the interaction and compatibility and totally ceased to compatibility. Ward et al., [31] showed in a research that motivation dimension has a reverse significant relationship with depression and social problems during the cross-cultural period. However, it is an important factor in cross-cultural compatibility which is along this research result because depression and social compatibility can be caused to non-compatibility.

According to this research, it is proposed:

- 1. With attending to cultural variety in Iran, familiarity to various cultures and healthy behavior methods in cross-cultural relationships should be presented to the students
- 2. The most effective cultural intelligence education methods and social compatibility in dormitory students should be researched
- 3. New students should be examined by cultural intelligence and social compatibility and persons who achieved higher scores in cultural intelligence and social compatibility divided in physical area of dormitories purposely in order to prevent tensions and breakings, also seclusion that caused by compatibility and cultural problems between students who lived in dormitories. However, in this evaluation students with a low cultural intelligence and social compatibility should be educated
- 4. Cultural managers and experts in various levels in the university especially dormitories' responsible educated in the cultural intelligence.

REFERENCES

- 1. Akbar A. Compatibility, education and job guiding. Tehran: Savalan; 2010. p. 67.
- Farhangi A. Human communications. Vol. 2. Tehran: Rasa Cultural Services; 2009. p. 323.
- Brislin R, Worthley R, MacNab B. Cultural intelligence: Understanding behaviors that serve peoples goals. Group Organizations Management (GOM) 2006;1:31.
- 4. Noble KD. Spiritual intelligence: A new frame of mind. Adv Dev J 2000;9:1-28.
- UNESCO. Cultural and linguistic diversity in the intelligence common. Organization of Documents and National Library of Iran, National Library and Archives of Iran Press 2005. p. 21.

- 6. Ahmadi Z. Attending to cultural variety and the role of Radio in Iran. J Cult Commun 2010;3:5-34.
- Ghasemi V, Vahida F, Yazdekhasi G. Cultural intelligence and its strengthening schemes analysis. J Soc Sci Shooshtar Azad Univ 2010;9:33-50.
- 8. Earley PC, Ang S. Cultural Intelligence: Individual Interactions Across Cultures. Stanford, CA: Stanfors Business Books; 2003.
- 9. Peterson B. Cultural Intelligence: A Guide to Working with People from Other Cultures. Yarmouth: M.E. Intercultural Press; 2004.
- Thomas DC, Inkson K. Cultural Intelligence: People Skills for Global Business. San Francisco, CA: Berrett-Koehler; 2003. p. 2.
- Ang S, Dyne L. Conceptualization of cultural intelligence. In: Ang S, Van Dynee editors. Handbook of Cultural Intelligence: Theory, Measurement Application. New York: M.E. Sharpe Inc.; 2008. p. 7-9.
- 12. Eslaminasab A. Compatibility psychology. Tehran: Bonyad Publications; 1993. p. 2.
- Sadock BJ, Sadock VA. Synopsis of psychiatry. Philadelphia: Lippincott Williares and Wilkins; 2003.
- 14. Zaki M. Compatibility with university and its relationship with social protection. Youth Cult Soc Res 2010;4:112.
- Shaffer JW, Duszynski KR, Thomas CB. A comparison of three methods for scoring figure drawings. J Pers Assess 1984;48:245-54.
- Rahmati B, Adib Rad N, Tahmasian K, Sadghpour B. The effectiveness of life skill training on social adjustment in children. Proc Soc Behav Sci 2010;5:870-4.
- Rattle C, Larose S, Guay F, Senecal C. Perceptions of parental involvement and support as predictors of college students persistence in a science curriculum. J Fam Psychol 2005;2:286-93.
- Mazaheri M, Afshar H. Epileptic children and teenagers (12-18) social compatibility survey in Isfahan. J Psy Stu of Alzahra Uni. 2008;3:1-9.
- Palthe G. The relative importance of antecedents to cross-cultural adjustment: Implications for managing a global workforce. Int J Intercult Relat 2004;28:37-59.
- Meartz CP, Hassan A, Magnusson P. When learning is not enough a process model of expatriate adjustment as cultural cognitive dissonance reduction. Organ Behav Hum Decis Process 2009;108:66-78.
- Amiri R. The relationship between cultural intelligence, social compatibility and social growing in high school female teenagers in Isfahan [Thesis]. Sociology, Dehaghan Azad University, 2008.
- Kumar K, Michaelsen LK, Watson WE. Cultural diversity's impact on interaction process and performance: Comparing homogenous and diverse task groups. Acad Manage J 1993;36:590-602.
- Earley PC, Mosakowski E. Cultural intelligence. Harvard Business Review; 2004. p. 139-46. Available from: http://www.home. sandiego.edu/pavett/docs/msgl. 503/Cultural Intelligence-HBR. puff. [Last accessed on 2009 Dec 2].
- Van Dyne L, Ang S. Cultural intelligence: An essential capability for individuals in contemporary organizations. Global Edge. Msu. Edu.; 2005.
- Imai R, Gelfand MJ. The culturally intelligence negotiator: The impact of CQ on intercultural negotiation effectiveness. MSc Dissertation in Thesis. University of Maryland; 2007.
- Ang S, Dyne L, Koh CH. Personality correlates of the four-factor model of cultural intelligence. Group Organ Manag 2006;31:100-23.
- Ang S, Van Dyne L, Koh CH, Ng KY, Templer KJ, Tay CH, Chandrasekar NA Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation and task performance. Manag Organ Rev 2007;3:335-71.
- Templer KJ, Tay C, Chandrasekar NA. Motivational cultural intelligence, realistic job Preview, realistic living conditions Preview, and cross-cultural adjustment. Group Organ Manag 2006;31:154-73.
- Gregory R, Prifling M, Beck R. The role of cultural intelligence for the emergence of negotiated culture in IT offshore outsourcing projects. Inf Technol People 2009;3:223-41.
- Danijelas P. How do teachers perceive their cultural intelligenc? Proc Soc Behav Sci 2011;11:276-80.
- Ward C, Wilson J, Fischer R. Personality and individual difference; assessing the predictive validity of cultural intelligence over time. Personality and Individual Differences. Vol. 57. New Zealand:

Keyvanara, et al.: Cultural intelligence and social compatibility

Centre For Applied Cross-Cultural Research Victoria University of Wellington; 2011. p. 138-42.

32. Geyman JP. Education problems in high school. USA: Butterworth-Heinemann; 2006.

33. Earley PC, Peterson SR. The elusive cultural chameleon: Cultural

intelligence as a new approach to intercultural training for the global manager. Acad Manag Learn Educ 2004;1:100

Source of Support: Nil, Conflict of Interest: None declared