

ORIGINAL ARTICLE

Relationship between Cultural Intelligence and Mental Health in Students of the Medical University of Mazandaran in 2017

Forouzan Elyasi^{1,2,3},
Maryam Ahmadi⁴, Najibeh
Mohseni Moalemkolae^{5,6},
Seyyed Negin Jafari⁶, Seyyed
Mostafa Hosseini⁷, Seyyed
Habibe Hosseini⁸

¹Department of Psychiatry,
School of Medicine,
Mazandaran University of
Medical Sciences, Sari, Iran

²Comprehensive cancer
center, School of Medicine,
Mazandaran University of
Medical Sciences, Sari, Iran

³Psychiatry and Behavioral
Sciences Research Center,
Addiction Institute, School
of Medicine, Mazandaran
University of Medical
Sciences, Sari, Iran

⁴Department of Health
Information Management,
School of Health
Management and
Information Sciences, Iran
University of Medical
Sciences, Tehran, Iran.

⁵Health Information
Management, Mazandaran
University of Medical
Sciences, Sari, Iran.

⁶Operation room section,
Mazandaran Universities of
Medical Sciences, Sari, Iran

⁷Research student
Committee, Nasibeh
Nursing and Midwifery
Faculty, Mazandaran
University of Medical
Science, Sari, Iran
⁸Heart Surgery Department,
Mazandaran University of
Medical Sciences, Sari, Iran

^{*}Health Information
Management
Taravat St,
Neka Road,
Sari, 4843185774,
Mazandaran,
IRAN

Tel/Fax: +981133285659
Mobile: +989113561364
E-mail:
n.mohseni92@gmail.com

Introduction: Cultural intelligence is a modern domain of intelligence that addresses the possibility of mediation in diverse and variable work spaces. Cultural intelligence and mental health have a significant influence on interactions and mutual compatibilities in academic settings that are diverse in terms of cultural, ethnic, and religious backgrounds; and it leads to increased productivity and health service reinforcement, especially in medical science universities. This study aimed at investigating cultural intelligence and its relationship to mental health in the university student population.

Methods: The present cross-sectional study was carried out on 385 university students via random sampling method with the proportional allocation of the desired fields of study. The tools for data collection were Ang's Cultural Intelligence Questionnaire and the 28-item Mental Health Questionnaire. Data analysis was performed using ANOVA, independent t-test, Chi-square, and Pearson correlation coefficient in SPSS v.18.

Results: The mean and standard deviation of cultural intelligence were 95.2 ± 12.8 . The lowest score (18.55 ± 2.9) and the highest score (29 ± 3.46) belonged to the meta-motivation and cognitive subscales, respectively. The mean and standard deviation of total mental health equaled 23.37 ± 7.34 , where the mean and standard deviation of social performance subscale (6.08 ± 3.5) were higher than those of the other domains. There was a significant positive correlation between the students' cultural intelligence and mental health ($P < 0.05$). In the same way, cultural intelligence and mental health held a significant relationship with some demographic characteristics ($P < 0.05$).

Conclusion: Considering the significant positive correlation between cultural intelligence and mental health, the provision of specific education for the improvement of the both variables can be effective in increasing the vitality and social interactions on the one hand, and can lead to an increase in clinical productivity and to the improvement of the status of health care services on the other hand.

Keywords: Cultural Intelligence, Mental Health, Students

هوش فرهنگی و ارتباط آن با سلامت روان در جمعیت دانشجویان دانشگاه علوم پزشکی مازندران در سال ۲۰۱۷

مقدمه: هوش فرهنگی، حوزه مدرنی از هوشمندی است که امکان میانجی گری در فضاهای کاری متنوع و متغییر را مطرح می کند. هوش فرهنگی و سلامت روان در محیط های دانشگاهی که از لحاظ تنوع فرهنگی، قومی و مذهبی تفاوت های بسیاری دارند، تاثیر بسزایی در ایجاد تعاملات و سازگاری های متقابل داشته و بخصوص در دانشگاه های علوم پزشکی منجر به افزایش بهره وری و تقویت امر خدمات بهداشتی و درمانی می شود. این مطالعه با هدف بررسی هوش فرهنگی و ارتباط آن با سلامت روان در جمعیت دانشجویان انجام شد.

روش ها: مطالعه مقطعی حاضر بر روی ۳۸۵ نفر از دانشجویان شاغل به تحصیل به روش نمونه گیری تصادفی با تخصیص متناسب از رشته های تحصیلی مورد نظر انجام شد. ابزار گردآوری داده ها شامل پرسشنامه هوش فرهنگی آنگ و نیز سلامت روان ۲۸ سوالی بود. تجزیه و تحلیل داده ها با استفاده از آزمون های آنالیز واریانس، تی مستقل، کای دو و ضریب همبستگی پیرسون بوسیله نرم افزار SPSS.18 صورت گرفت.

یافته ها: میانگین و انحراف معیار هوش فرهنگی $95/2 \pm 12/8$ بود. پایین ترین و بالاترین نمره ($18/55 \pm 2/9$) و ($29 \pm 3/46$) متعلق به زیرمجموعه های متافانگ و شناختی بود. میانگین و انحراف معیار کل سلامت روان $23/37 \pm 7/34$ بود که خرده مقیاس عملکرد اجتماعی ($6/08 \pm 3/5$) از سایر حیطه ها بیشتر بود. بین هوش فرهنگی و سلامت روان دانشجویان همبستگی مثبت و معناداری وجود داشت ($P < 0/05$). همچنین بین هوش فرهنگی و سلامت روان با برخی از مشخصات جمعیتی شناختی ارتباط معنادار مشاهده شد ($P < 0/05$).

استنتاج: با توجه به همبستگی مثبت و معنادار بین هوش فرهنگی و سلامت روان، ارائه آموزش خاص در جهت ارتقا هر دو این موارد می تواند در جهت افزایش نشاط و تعاملات اجتماعی از یکسو و افزایش بهره وری بالینی و بهبود وضعیت خدماتی درمانی از سوی دیگر، مفید باشد.

کلید واژه ها: هوش فرهنگی، سلامت روان، دانشجویان

الذكاء الثقافي وعلاقته بالصحة النفسية بين طلاب العلوم الطبية في جامعة مازندران في عام ٢٠١٧

المقدمة: الذكاء الثقافي هو مجال حديث من الذكاء، يتناول إمكانية الوساطة في مساحات عمل متنوعة ومتغيرة. يختلف الذكاء الثقافي والصحة النفسية في الجامعات التي يوجد فيها تنوع مذهبي وثقافي وقومي اختلافاً كبيراً. ولهذا يوجد تأثيراً متقابلاً وبالخصوص في الجامعات الطبية حيث يؤدي إلى تقوية الخدمات الصحية والعلاجية. هذه الدراسة تهدف إلى تقييم الذكاء الثقافي لدى الطلبة وارتباطه مع الصحة النفسية.

الطريقة: أجريت هذه الدراسة بصورة مقطعية وبمشاركة ٣٨٥ طالب وتم اختيار الطلاب بالطريقة العشوائية مع رعاية العنصر للفروع المختلفة. تم جمع المقاييس بالاعتماد على ورقة أسئلة الذكاء الثقافي والصحة النفسية ل (آنگ) التي تتضمن ٢٨ سؤال. وتم تكليكم وتحليل المقاييس من خلال إختبارات تحليل وارتينس، t مستقل، كاي دو، وربط بيرسون وتم الاعتماد على برنامج spss18 في ذلك.

النتائج: كان معدل وانحراف معيار الذكاء الثقافي 95.2 ± 12.8 وكان أدنى معدل 18.55 ± 2.9 وأعلى معدل 29 ± 3.46 ويعد إلى المقاييس الإدراكي. معدل وانحراف المعيار في الصحة النفسية 23.37 ± 7.34 وكان معدل مقاييس العمل الاجتماعي 6.08 ± 3.5 وكان أعلى من سائر المقاييس. كان بين الذكاء الثقافي والصحة النفسية للطلاب إرتباط إيجابي وذو معنى ($P < 0.05$) وكان أيضاً بين الذكاء الثقافي والصحة النفسية علاقة ذات معنى مع بعض صفات المجتمع ($P < 0.05$).

النتيجة: نظراً للعلاقة المترابطة و ذات المعنى بين الذكاء الثقافي والصحة النفسية فإن تقديم تعليم خاص من أجل ارتقاء هذين الأمرين يساعد على زيادة النشاط والتبادل الاجتماعي من جهة و يساعد على تحسين الوضع الضمري والعلاجي السريري من جهة أخرى.

الكلمات المفتاحية: الذكاء الثقافي، الصحة النفسية، الطلاب الجامعيين.

ثقافتی مہارت اور نفسیاتی صحت مندی سے اس کا تعلق، یہ تحقیق مازندران میں دوبار سترہ میں انجام دی گئی

ایک گروانڈ: ثقافتی مہارت سائنس کا ایک جدید شعبہ ہے جس کے سہارے آپ مختلف شعبوں میں مختلف کام انجام دے سکتے ہیں۔ یونیورسٹیوں میں کلچرل مہارت اور نفسیاتی صحت مندی کی کافی اہمیت ہوتی ہے کیونکہ یونیورسٹیوں میں آپ کو مختلف کلچر، مختلف قوموں، اور مذہب کے افراد سے کام پڑتا ہے۔ اسی وجہ سے ماہرین کا کہنا ہے کہ ان افراد کے درمیان تعاون و سازگاری پیدا کرنے کے لئے کلچرل مہارت کا ہونا ضروری ہے۔ اس سے طلباء کی ذہانت کو بڑھانے اور میڈیکل سروس فراہم کرنے میں مدد ملتی ہے۔

روش: اس تحقیق میں تین سو پچاسی طلباء شامل تھے۔ اس میں مختلف شعبوں سے طلباء کا انتخاب کیا گیا۔ اس تحقیق کے لئے آنگ کلچرل انٹیلیجنس نیز نفسیاتی صحت مندی کے سلسلے میں انتہائیں سوالات کئے گئے تھے۔ ڈیٹا کا تجزیہ ویرینس اینالائسس اور ٹی ٹسٹ، نیز پیرسن ٹسٹ سے کیا گیا۔ اس غرض سے ایس پی ایس ایس اٹھارہ بھی استعمال کیا گیا۔

نتیجے: اس تحقیق سے پتہ چلتا ہے کہ طلباء کے کلچرل انٹیلیجنس اور نفسیاتی صحت مندی میں مثبت اور معنی دار تعلق پایا گیا ہے، اسی طرح سے ڈیموگرافک لحاظ سے بھی بعض طلباء کی کلچرل انٹیلیجنس اور نفسیاتی صحت مندی میں خاصہ رابطہ پایا گیا۔

سفارشات: طلباء کے کلچرل انٹیلیجنس اور ان کی نفسیاتی صحت میں معنی دار رابطہ کے پیش نظر ان دونوں موضوعات میں مہارت حاصل کرنے کے لئے طلباء کو سہولتیں دی جائیں تاکہ وہ سماجی سطح پر ایک دوسرے کے ساتھ تعاون کرنے کے ساتھ ساتھ اپنی پیشہ ورانہ زندگی میں بھی بہتر میڈیکل خدمات دینے کی کوشش کریں۔

کلیدی الفاظ: کلچرل انٹیلیجنس، نفسیاتی صحت، معیار۔

INTRODUCTION

Culture is an attractive but complex concept. Among the numerous factors that can play a vital role in multicultural environments in terms of understanding and toleration of other cultures, cultural intelligence is one of the most important ones (1). Individuals must be aware of cultural diversity and be able to communicate with other people in order to reduce the uncertainty arisen from cultural differences. In other words, the individuals who adapt themselves to better conditions accept the differences more easily (2). This kind of intelligence can serve as an indicator of the ability to be adapted to the new cultural structure (3). Cultural intelligence, as a new domain of intelligence, is closely related to the living environments, especially academic diversity, and allows people to recognize how others think and respond to behavioral patterns (4). Therefore, it can be argued that cultural intelligence is the inner and apparent perception of the people in terms of intellectual and practical aspects. In addition, cultural intelligence provides individuals with a kind of framework and language by which they can understand the differences and invest in them rather than tolerate, or ignore them. As a result, the communication barriers between cultural differences will be reduced, and individuals will be able to acquire management skills and cultural diversity (5). If individuals enjoy a high degree of cultural intelligence, they will be able to successfully learn in a new cultural environment and will enjoy new cultures; otherwise, they will have serious problems in interactive behaviors, learning, and psychological state (6). The Cultural Intelligence Center is a four-dimensional model for the measurement of cultural intelligence, which includes: cognitive cultural intelligence, motivation cultural intelligence, meta-motivation cultural intelligence, and behavioral cultural intelligence. Cognitive cultural intelligence represents one's understanding of cultural similarities and differences. Motivation cultural intelligence reflects the attentional ability and the ability to spend direct energy to learn and work in different cultural settings. Meta-motivation cultural intelligence is placed at a higher level of cognitive processes and promotes active thinking about different individuals and cultural situations. Finally, behavioral cultural intelligence reflects the individual's ability to provide verbal and non-verbal behaviors in interaction with people from different cultures (7). In their study, Deng & Gibson (8) state that university students will show some emotional reactions due to a lack of adaptability to the university environment, the campus and dormitory environment, and their inclusion in the new network of relations. If they do not enjoy mental health and suffer from mental and emotional disorders such as depression due to the aforementioned problems, not only will they themselves undergo some problems but the community will also be harmed ultimately. In this regard, researchers have referred to beliefs, values, norms, and cultural experiences as guides to the way people interact with each other (9-11). The results of the studies recently carried out on the culture and human adaptation to different cultural foundations show that some people take advantage of some

capabilities that help them adapt themselves to their own culture and other cultures more effectively and also accept cultural diversities and benefit from a restrained psyche in this respect compared to others (12, 13). The following include the most important factors that may affect students' mental health: personal factors, factors pertaining to the university, and social factors (14). The unfamiliarity of many students with the environment and the people who come into contact with them at the beginning, a distance from the family, the lack of interest in the field of study, etc. can exacerbate these disorders (15). These disorders are of greater importance in medical science students (16) because the students will be present in hospitals and health centers in the form of internships and will also be in interaction with patients during the years of study. Therefore, the students' inability to be in cultural interaction with other students and patients with different cultures and beliefs can cause permanent anxiety and distrust, and may lead to the loss of their confidence in the fulfillment of the entrusted tasks. In addition, they may also undergo prolonged psychiatric disorders, such as depression, which, in turn, affect the vicious cycle of occupational stress and efficiency (17). The continuation of this cycle may gradually lead to the erosion of mental and physical abilities and may eventually lead to permanent neuropsychiatric disorders (18). In fact, these two factors of cultural adaptation, i.e. cultural intelligence and mental health, are multidimensional and complex concepts, and entail both objective and subjective factors in students, especially students of health systems. Therefore, it is of high importance for the health team to realize how cultural intelligence influences the behavioral state and, consequently, mental health. Through the achievement of comprehensive information on the quality of these two important and effective factors in clinical services, the authorities can provide the grounds for accurate planning to increase the level of cultural interactions and mental health to accelerate the adaptation process and to reduce the complications in each of these important factors. In this regard, the concepts of cultural intelligence and mental health and their related factors have been assessed among Iranian medical students to a lesser extent and, consequently, these students have been less studied through psychological interventions by researchers. Accordingly, the present study has examined the relationship between the cultural intelligence and mental health among these students so that the results of this study can lead to interventional initiatives in this regard while supporting the university students.

METHODS

The present study was a cross-sectional one conducted at the Medical University of Mazandaran in 2017. The required sample size has been estimated 385 subjects with $[n = \frac{Z_{1-\alpha/2}^2 P(1-p)}{d^2}, Z_{1-\alpha/2} = 3.84; P = 0.88; d^2 = 0.001]$ and similar research results for comparing Cultural Intelligence (6, 18). The research population included all students in the Medical University of Mazandaran, who had the criteria for inclusion in the study, such as no use of

anti-anxiety and anti-depressant drugs, as well as complete satisfaction to participate in the study. The sampling method used here is a random method with proportional allocation. To this end, each educational department was first considered as a stratum and, then, a sample was randomly selected from each of them. In order to fit the size of the selected samples from each of the strata (disciplines) with the number of the students in that discipline, the total sample size was divided among the disciplines. The data collection tool was a questionnaire containing three sections: demographic characteristics, cultural intelligence, and mental health. The demographic profile questionnaire contained questions about age, gender, marital status, educational level, native/non-native status, place of residence, religion, etc. The Cultural Intelligence Questionnaire, developed by Ang et al. (19) in 2004, encompasses four subscales, i.e. meta-motivation cultural intelligence (4 questions), cognitive cultural intelligence (6 questions), motivation cultural intelligence (5 questions), and behavioral cultural intelligence (5 questions). The questionnaire items were answered through a 7-point Likert scale (6, 20, 21) from strongly agree (score 7) to strongly disagree (score 1). The validity and reliability of this questionnaire have already been studied and approved in various studies (22). Similarly, the study approved the mentioned questionnaire with the Cronbach's alpha coefficient of 0.85 (23). The Mental Health Questionnaire also consists of 28 questions in four domains of physical symptoms, anxiety, social dysfunction, and depression. Each of the domains has 7 questions. The questions numbered 1 to 7 are related to physical symptoms, the questions

numbered 8 to 14 ask about anxiety, the questions numbered 15 to 21 are on social dysfunction, and the questions numbered 22 to 28 measure depression. The items are scored based on a 4-point Likert scale from 0 to 3 and the score range of each domain varies from 0 to 21 and the total score is between 0 and 84. In fact, as the score increases, the quality of mental health decreases. This is a standardized questionnaire whose validity and reliability in its Persian version have been confirmed in various studies (24, 25). Molavi et al. confirmed the validity of this questionnaire ($r = 0.91$) and reported its reliability as 0.9 by using Cronbach's alpha (26). The questionnaires were collected, then were coded and analyzed by the Pearson correlation coefficient, independent t-test, and chi-square test using SPSS version 18 at the significance level of 0.05.

RESULTS

The results of this study showed that 183 (47.5%) students were male and 202 (52.5%) students were female. The mean age of the students participating in the study was 23.7 ± 2.9 years old. The frequency distribution of the demographic characteristics of the sample units has been shown in Table 1. The cultural intelligence was 95.2 ± 12.8 . The lowest score (18.55 ± 2.9) and the highest score (29 ± 3.46) in the students' cultural intelligence were related to the meta-motivation and cognitive subscales, respectively (Table 2). Studying the relationship between cultural intelligence and demographic characteristics of the students, the independent t-test showed that the meta-motivation subscale had a significant correlation with the male gender ($P = 0.003$). According to this test, there was a significant

Table 1. Demographic Variables

Demographic Variable	Frequency	Percent	
Native Status	Native	89	23.1%
	Non -Native	296	76.9%
Marital Status	Single	314	81.6%
	Married	71	18.4%
Education	Undergraduate student	218	56.6%
	General medical student	90	23.5%
	Masters student	64	16.6%
	Medical Assistant	13	3.3%
Place of Residence	Urban	283	73.5%
	Rural	102	26.5%
Partner Educations	Under the Diploma	166	43.1%
	Above the Diploma	160	41.6%
	Bachelor And Above	59	15.3%
Ethnicities	Persians	249	64.7%
	Turkic	45	11.7%
	Turkmen	47	12.2%
	Kurds	27	7%
	Lures	17	4.4%

Table 2. Cultural intelligence General health Questionnaire Scores

	Subscale	Mean	Standard Edition
Cultural intelligence	CQ-Strategy	18.55	2/9
	CQ-Knowledge	29	3.46
	CQ-Drive	23/7	4.58
	CQ-Action	23/9	4/2
General Health	somatic symptoms	5.33	2.24
	anxiety	6/03	2/9
	social dysfunction	6/08	3/5
	depression	5.92	3

Table 3. Relationship between Cultural intelligence score with General health Subscale according to Chi-Square test

Mental Health Dimensions	P-Value
somatic symptoms	0/6
anxiety	0/02
social dysfunction	0.003
depression	0.045
Total Score	0.001

correlation between the total score of cultural intelligence and non-native status ($P = 0.001$). Moreover, the Pearson correlation test showed that there was a significant relationship between educational level ($r = +0.4, P = 0.01$) and total cultural intelligence score. Regarding the mental health status of the students, the mean \pm SD of total mental health in the four subscales equaled 23.37 ± 7.43 , where the social dysfunction subscale with the mean \pm SD of 6.86 ± 3.5 took up higher values in this regard than the other domains (Table 2). Similarly, there was a significant positive correlation between the total score of cultural intelligence and mental health ($r = +0.6, P = 0.001$). In addition, the results of the Chi-square test indicated that all the subscales of mental health except the subscale of physical symptoms had a statistically significant correlation with the total score of cultural intelligence (Table 3). In terms of the relationship between mental health and demographic characteristics, there was a significant correlation between the total mental health score and native/non-native status ($P = 0.03$) and the educational level ($r = +0.4, P = 0.015$). There was a significant correlation between the students' scores on the depression subscale and gender, based on the independent t-test results ($P = 0.003$), in such a way that the prevalence of these disorders in girls (45.4%) was higher than that in boys (29.9%).

DISCUSSION

Social and psychological behaviors determine that culture often influences the organizational processes and outcomes and can direct them. Differences in cultural values and beliefs have been shown to affect work perceptions and can also be

effective in the increase or reduction of productivity (9). The results of this study showed that there was a significant positive correlation between the total score of cultural intelligence and mental health. This finding was consistent with the results of the studies carried out by Heidari et al. (20), and Van Dyne et al. (27). In order to explain this finding, cultural intelligence can be expressed as a set of social behaviors, which interacts with other individuals and is very effective in the acceptance of conditions, attitudes, and behaviors of others, as well as the individual's stability in different situations (8). This type of intelligence is very important for medical students who attend university with the priority of healthcare education and are directly involved with the clinical situation and patients. Here, the relationship and interaction with patients is one of the most important factors of success and progress for students (22). On the other hand, mental health that was also shown in a positive correlation with cultural intelligence in this study is an important criterion in the student's achievements. Therefore, adaptation in the field of cultural intelligence can be considered to be in direct interaction with the individual's mental state. In this case, the two variables, i.e. cultural intelligence and mental health, can affect each other in such a way that the inability in the acceptance and cultural adaptation to different individuals in such environments such as university and clinical settings can lead to a decline in one's mental state and brings about isolation and other consequences, such as anxiety, depression, and other mental disorders (28). As it was shown in the results, cultural intelligence has a significant relationship with the mental health subscales, including social interactions, depression, and anxiety, which is consistent with the above finding. The results of studying the relationship between cultural intelligence and demographic characteristics showed that there was a significant relationship between the meta-motivation subscale of cultural intelligence and male gender. This finding was consistent with the results of the studies conducted by Hasani et al. (2) and Ghaffari et al. (29). The meta-motivation subscale of emotional intelligence reflects the individual's perception of cultural similarities and differences and shows the individual's general knowledge and cognitive maps of the other cultures. Upon arrival to a foreign culture, one needs to gain the necessary information

about the ways of penetrating into the inner layers of that culture (30), particularly because the most important point in communication is to find the available commonalities with the other party and to emphasize on them. Hence, meta-motivation cultural intelligence allows the individual to understand cultural relationships and take advantage of them in making communications with other cultures. This case is generally greater and is executed more easily in males because of higher self-esteem and higher curiosity (31). On the other hand, it generally takes females a longer time to be integrated with this matter and, thereby, they communicate harder due to their resistance in trusting others and the establishment of deep relations, which is considered natural (32). The results also showed that there was a significant correlation between the total score of cultural intelligence and the students' non-native status. This finding was consistent with the results of the studies by Heidari et al. (20) and Furnhum et al. (31). Therefore, this finding can be interpreted by the argument that non-native students become familiar with different cultures due to their distance from family and residence in dormitory settings, and this leads to their adaptation to different cultures, and increases their cultural intelligence. The results also showed that there was a statistically significant relationship between cultural intelligence and education level in such a way that the level of cultural intelligence increased as the level of education increased from bachelor or general PhD programs to masters and technical PhD programs. This finding was consistent with the results of the study done by Ahanchian et al. (22). This finding can be attributed to the presence of students at different educational programs and encounter with different cultures and, consequently, different cultural environments that make them more adapted to the conditions. Ramis (33) believes that the students who attend only one program at the university and study over the years at the same university may still have lower emotional intelligence and interactive and adaptive power than those who have attended different universities at higher programs and even in different cities. This can be attributed to the sense of maturity, the management ability, and the sense of impact on the environment in students at higher academic programs. Although students in one academic program may be involved with different cultures and may gain a high degree of adaptation, the sense of advancement that is followed by the change of the educational situation can stabilize the status and make a great contribution to the cultural and the mutual productivity of the individual. Regarding the mental health status of the students, the results showed that they were generally at the optimal level, which was consistent with the results of the studies carried out by Slavin et al (14) and Hosseini et al. (18). In terms of the relationship between mental health and demographic characteristics, the results indicated that mental health had a significant relationship with native/non-native status and educational program in such a way that this situation was more favorable in native students and students at higher programs. This factor, as expressed for cultural intelligence, is greater in the higher

programs due to the better adaptability of the individual with different cultures and easier acceptance, and the closer and faster communication with people in the initial days of the school year. Therefore, they are more relaxed and enjoy their relaxed feelings. On the other hand, non-native students may have more problems due to the distance from family. Stress and anxiety in cultural and educational settings, especially in the first years of the study can exacerbate the situation. In the present study, there was a significant difference between male and female students in terms of the depression subscale of mental health in such a way that girls suffered a higher level of depression than boys. This finding was consistent with the results of the study done by Hosseini et al. (18). Therefore, this finding reveals that boys can communicate easily and quickly with others in the community and the university; it also indicates their high cultural intelligence (as the results of this study also showed) as well as the ability to cope with problems and difficulties, and the ability to earn money. In contrast, females have an overly emotional attachment to the family and the lack of social security in society.

Finally, it can be concluded that cultural intelligence and mental health in the sample students were in a positive and significant correlation with each other. Therefore, the provision of specific educational program for the promotion of the both variables can be effective in the increase of vitality and social interactions on the one hand, and can lead to an increase in clinical productivity and to the improvement of the status of health care services in the students who will be involved in the clinical cycle in a short time and communicate directly with patients, on the other hand. This requires the understanding and recognition of the diversity of different cultural levels of the students as well as their mental health status, and the assignment of attention to the improvement of their quality of life through more serious and extensive educational programs at dormitories and educational settings. In this regard, it is suggested that the professors of various educational departments as well as the cultural authorities of universities pay attention to the training of other dimensions of communication and health (even if this attention is short-term) in addition to the therapeutic and physiological aspects so that they can provide better and more effective mental health support in the mental and the subsistence adjustment of students via the provision of appropriate training. Among the limitations of this study, one can refer to the constraint in the selection of the students from different educational departments, and the random sampling with a limited sample size, which may influence on the generalizability of the findings. Therefore, it is suggested that the cultural sections of universities conduct a similar study in a broader scope among all students.

ACKNOWLEDGEMENT

The researchers hereby express their thankful regards to the authorities of Mazandaran University of Medical Sciences and the respected students who sincerely collaborated on this research.

REFERENCES

1. Crowne KA. Cultural exposure, emotional intelligence, and cultural intelligence: An exploratory study. *Int J Cross Cult Manag* 2013; 13(1): 5-22.
2. Hassani F. Effect of cultural intelligence on self-directed learning of nursing students. *Educ Strat Med Sci* 2015; 8(2): 115-22.
3. Vedadi A, Kheiri B, Abbasalizadeh M. The relationship between cultural intelligence and achievement: a case study in an Iranian company. *Iranian journal of management studies* 2011; 3(3): 25-38. [In Persian].
4. Khodadady E, Shima Ghahari D. Validation of the Persian cultural intelligence scale and exploring its relationship with gender, education, travelling abroad and place of living. *Glob J Human-Soc Sci Res* 2011; 11(7): 65-76.
5. Stokes DM. Exploring the relationship between cultural intelligence, transformational leadership, and burnout in doctorate of education students. *Liberty University*; 2013.
6. Toolabi Z, Kheyri A, Samadi S. The relationship between cultural intelligence and social interactions. *Journal of psychology* 2015; 19(3): 286-96. [In Persian].
7. Kaushal R, Kwantes CT. The role of culture and personality in choice of conflict management strategy. *Int J Intercult Relat* 2006; 30(5): 579-603.
8. Deng L, Gibson P. A qualitative evaluation on the role of cultural intelligence in cross-cultural leadership effectiveness. *Int J Leadersh Stud* 2008; 3(2): 181-97.
9. Ang S, Van Dyne L, Tan ML. *Cultural intelligence*. Cambridge: Cambridge University; 2008.
10. Erez M, Lisak A, Harush R, Glikson E, Nouri R, Shokef E. Going global: Developing management students' cultural intelligence and global identity in culturally diverse virtual teams. *Acad Manag Learn Educ* 2013; 12(3): 330-55.
11. McNab BR. An experiential approach to cultural intelligence education. *J Manag Educ* 2012; 36(1): 66-94.
12. Livermore DA. Cultural intelligence (youth, family, and culture): Improving your CQ to engage our multicultural world. *Baker Academic*; 2009.
13. Morley MJ, Cerdin J-L, Moon T. Emotional intelligence correlates of the four-factor model of cultural intelligence. *J Manag Psychol* 2010; 25(8): 876-98.
14. Slavin SJ, Schindler DL, Chibnall JT. Medical student mental health 3.0: improving student wellness through curricular changes. *Acad Med* 2014; 89(4): 573.
15. Brooks K, Karp L, Battle H, Chiu M, Montross C. A student collaboration to address mental health wellness in medical school. *Rhode Island Med J* 2015; 98(7): 26.
16. Jones G. Mental health student nurse's satisfaction with problem based learning. A qualitative study. *J Ment Health Train Educ Pract* 2016; 12(2): 77-89.
17. Ferrari M, Ferrari M, Whillier S, Whillier S. Mental health knowledge and common misconceptions in a master of chiropractic final year cohort. *J Ment Health Train Educ Pract* 2017; 12(3): 150-60.
18. Hosseini H, Sadeghi A, Rajabzadeh R, Reza ZJ, Nabavi S, Ranaei M, et al. Mental health and related factor in students of North Khorasan University of Medical Sciences. *Journal of North Khorasan University of Medical Sciences* 2011; 3: 23-8.
19. Ang S, Van Dyne L, Koh C, Ng KY, Templer KJ, Tay C, et al. Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation and task performance. *Manag Organ Rev* 2007; 3(3): 335-71.
20. Heidari S, Maktabi G. The comparison of cultural intelligence, angeles loneliness, academic burnout and mental health in master of art ahwaz female native and non-native students. *Woman Culture* 2011; 3(9): 45-57.
21. Vedadi A, Kheiri B, Abbasalizadeh M. The relationship between cultural intelligence and achievement: a case study in an Iranian company. *Iranian journal of management studies* 2010; 3(3): 25-40. [In Persian].
22. Ahanchian M, Amiri R, Bakhshi M. Correlation between cultural intelligence and social interaction of nurses. *Journal of health promotion management* 2012; 1(2): 44-53. [In Persian].
23. Ghadampour E, Mehrdad H, Jafari HA. The study of the relationship between personality characteristics and cultural quotient among the personnel of Cultural Heritage, Handicrafts and Tourism Organization of Lorestan Province. *Journal of educational psychology* 2011; 2(1): 81-101. [In Persian].
24. Fathi-Ashtiani A, Dastani M. *Psychological tests: Personality and mental health*. Tehran: Besat; 2009: 46. [In Persian].
25. Saatchi M, Kamkari K, Askarian M. *Psychological tests*. Tehran: Virayesh; 2010: 255-77.
26. Molavi H. Validation, factor structure, and reliability of the Farsi version of General Health Questionnaire-28 on Irani students. *Pakistan J Psychol Res* 2002; 17(3): 87.
27. Van Dyne L, Ang S, Ng KY, Rockstuhl T, Tan ML, Koh C. Sub-dimensions of the four factor model of cultural intelligence: Expanding the conceptualization and measurement of cultural intelligence. *Soc Pers Psychol Compass* 2012; 6(4): 295-313.
28. Dunn LB, Iglewicz A, Moutier C. A conceptual model of medical student well-being: promoting resilience and preventing burnout. *Acad Psychiatry* 2008; 32(1): 44-53.
29. Ghaffari M, Khani L. The relationship between social capital and cultural intelligence with medical students' academic performance. *Iranian journal of medical education* 2013; 13(8): 642-51.
30. Blanch DC, Hall JA, Roter DL, Frankel RM. Medical student gender and issues of confidence. *Patient Educ Couns* 2008; 72(3): 374-81.
31. Furnham A. Self-estimates of intelligence: Culture and gender difference in self and other estimates of both general (g) and multiple intelligences. *Pers Individ Diff* 2001; 31(8): 1381-405.
32. Crowne KA. The relationships among social intelligence, emotional intelligence and cultural intelligence. *Organ Manag J* 2009; 6(3): 148-63.
33. Ramis M, Krastina L. Cultural intelligence in the school. *J Psychodidactics* 2010; 15(2): 239-52.