Intercultural competence of medical students in Hungary

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DECLARATION OF ETHICAL APPROVAL

This work was carried out in accordance with the Declaration of Helsinki, including, but not limited to the anonymity of participants being guaranteed and the informed consent of participants being obtained. The questionnaire was reviewed for content, readability and comprehensiveness by clinicians and health educators of the Department of Operational Medicine, Medical School, University of Pecs. All protocols were approved by the Regional Research Ethics Comittee of the Medical Center (reference number: PTE KK RIKEB 4838/2013).

Abstract

Providing interculturally competent care for patients with diverse ethnic or cultural background has received increasing attention in recent years, as a result of the accelerating inward migration in Europe. Monitoring healthcare systems and training of health professionals are crucial to achieve this purpose. This study aimed to establish medical students' level of clinical intercultural competence (ICC): knowledge, attitudes, skills, and comfort-level in intercultural situations. In order to assess the training needs of healthcare professionals a self-completed anonymous questionnaire survey was conducted between September 2016 and April 2017 among 466 Hungarian medical students (both freshmen and upper-year students with clinical practice) at Medical School, University of Pécs, Hungary. Data were analysed using SPSS 21.0. The results confirmed that better language competencies correlate proportionally with higher ICC scores. Previous training on diversity resulted in a better 'Knowledge' level but was not related to higher 'Skills', 'Attitudes', or 'Comfort-level in intercultural situations' scores. The students identified the challenges in integrating ICC into medical curricula and made recommendations for educational interventions for healthcare professionals. Assessing the baseline level and deficiencies in medical students' intercultural competence may serve as strong evidence for the development of future specific and targeted ICC education.

Keywords: medical education, questionnaire, curriculum development, diversity, health disparities, clinical intercultural competence

1. Introduction

International migration is a current and growing phenomenon that has become more critical an issue in Europe since 2013 and this has posed new challenges to the European Union (EU) healthcare systems. Due to the crisis situation in 2015 a „High-level Meeting on Refugee and Migrant Health" was organized by the World Health Organization (WHO) and the Outcome Document of this meeting drew the attention of the Member States of the WHO European Region to the importance of providing migrant-sensitive health care as well as to undertake periodic assessments of the adequacy and preparedness of the health system's capacity (points 2.3. and 2.4.) (World Health Organization, 2015). This document also emphasized (2.9) the urgent need for healthcare systems to 'adapt and respond to the needs of a changing population and take account of cultural, religious, linguistic and gender diversity. Training of health professionals and relevant non-health actors is a key element to achieve this purpose' (World Health Organization, 2015). In relation to the accelerating inward migration of recent years, the scientific community recognised the importance of providing interculturally competent (ICC) health care for migrants and other minority populations with diverse ethnic, religious or cultural background. It is widely recognized that members of ethnic or other minority groups experience a disproportionately higher incidence of chronic diseases, such as diabetes, asthma, cardiovascular disease, and malignancy (Betancourt et al., 2003; Rechel et al., 2013; Like, 2011).

The causes of health disparities are multifactorial and the largest contributors are those related to the social determinants of health, e.g. low educational and employment levels, lack of insurance, and insufficient access to healthcare services. The other causes for the disparities include the patients' perspectives, beliefs, values and behaviours regarding their health and wellbeing, their recognition of symptoms, the threshold for seeking care, the ability to understand treatment plans, expectations and preferences for care and treatment. These factors

may influence the doctor-patient communication and interactions, including the decision-making process. Furthermore, evidence suggest that doctor-patient communication is directly linked to patient satisfaction, compliance, and adherence to preventive measures and medications, and to subsequent health outcomes and disparities (Kleinman et al., 1978; Smedley et al., 2003; Betancourt et al., 2003).

To reduce disparities in health and healthcare by improving the 'cultural competence' of healthcare systems that take account these cultural and sociocultural factors has become an overall strategy. The classical definition of 'cultural competence' is provided by Cross et al. (1989) who define it as "*a set of congruent behaviours, attitudes, and policies that come together in a system or agency or among professionals and enables the system, agency, or professionals to work effectively in cross-cultural situations*". This definition has been adopted in many Western healthcare systems and translated into strategies to improve services so as to make them more effective for migrants and ethnic minority populations. The strategies include the adapting of service delivery to ethnic minorities' characteristics and needs and the development of education and training programs to better equip healthcare staff with cultural knowledge specific to various groups (Chiarenza, 2012). In the last few decades, several papers have demonstrated that cultural competence training improves the knowledge, attitudes, and skills of doctors and other healthcare professionals, as well as patients' ratings of care (Kagawa-Singer & Kassim-Lakha, 2003; Beach et al., 2005). However, there is no definitive evidence that links improved intercultural competence of providers directly to patients' improved health outcomes (Beach et al., 2005; Betancourt & Green, 2010). Lessons learned from these studies as well as the recommendations from WHO highlight the need and importance of integrating cultural competency training into medical and other healthcare professionals' curricula as this may reduce health disparities (Smedley et al., 2003; Betancourt et al., 2003; Seeleman et al., 2009; Like, 2011). At the University of Pécs Medical

School (UP MS) in Hungary, clinical intercultural competence (the provision of intercultural care for migrant and ethnic minority populations) is not fully integrated into the undergraduate curriculum. Some optional courses which aim to sensitize and enhance tolerance of students towards minority populations in general ('Intercultural communication in Medicine') have been offered, and since 2016 another optional course, 'Intercultural Competence in Doctor-Patient Communication' have commenced, to improve students' intercultural communication skills.

Although much research has focussed on the role of cultural competence in healthcare and some have explored the actual level, or changes in health professionals' knowledge and skills as a result of training (Ladson et al., 2006; Okoro et al., 2012), comparatively few publications have described the situation in Europe (Seeleman et al., 2014; Krajic et al., 2005). Seeleman et al. (2014) found significant gaps in knowledge and culturally-competent behaviours among medical students and physicians in the Netherlands and recommended improvements in the diversity content of the medical curricula (knowledge and diversity sensitive consultation behaviour). Krajic et al., (2005) reported on the experiences of the European 'Migrant-friendly Hospitals' (MFH) project, which included intercultural competence (ICC) training for staff, with pre- and post questionnaire surveys in 8 European hospitals between 2002-2005. Their findings also confirmed the positive impact of training on staff perceptions of their knowledge, skills, and comfort-levels in transcultural situations. To the best of our knowledge, there has been no research published on medical students' or healthcare professionals' level of clinical intercultural competence in Hungary, or the Central and Eastern European region (CEE). Careful investigation is necessary to assess the knowledge, skills, and attitudes of Hungarian medical students when providing care to diverse populations.

This study, in line with the WHO recommendations on monitoring healthcare systems' preparedness, focusses on assessing the actual and self-assessed ICC level of medical students and to identify areas for improvement. The sociodemographic predictors of medical students' self-perceived ICC level were also part of the data collected. The study also examined the differences between students at the beginning of their medical studies (freshman) and upper-level students with clinical experience to examine whether ICC improves during undergraduate studies, without participation at specific, targeted courses. Data on the students' perception of the difficulties of integrating ICC training into the medical curricula were also collected which led to recommendations to how to promote this process.

2. Methods

2.1. Study participants

Purposive sampling was used to include 466 students to participate in an anonymous questionnaire survey: this is equivalent to the total number of the first (207), fourth (162) and fifth (97) year general medicine students at Medical School, University of Pécs, Hungary, Hungarian training program in 2016-2017 study year.

As a first step, the director of the Department of Public Health was contacted to provide information about the study and to seek approval. Participants were verbally informed of the aims and the non-compulsory nature of the study and anonymity was assured; participation was on a voluntary basis and without remuneration. The only criterion for inclusion was the expectation that students were undertaking the medical degree in the Hungarian language. The questionnaires were distributed and completed in the classroom during the students' regular 'Public health' and 'Family Medicine' classes and immediately collected in sealed envelopes. 71 students were not present at the time of the study or did not want to participate. 395 students completed the questionnaire, and 4 were excluded from the

analysis because of incompleteness in completing the questionnaire. The response rate for this cross-sectional study was 83.9%, and 391 questionnaires were analyzed.

2.2. Data collection method

Participants were surveyed using a modified version of the Clinical Cultural Competency Questionnaire (CCCQ) questionnaire. The CCCQ was created by Professor Robert C. Like to assess the impact of training on physicians' level of cultural competency, and has been translated and used internationally as an assessment tool for ICC training healthcare professionals (Like, 2001; Ladson et al., 2006; Okoro et al., 2012). With the written consent of the author, the questionnaire was modified to suit the target population, the medical students and the Hungarian context. (A copy of the modified questionnaire is available upon request from the corresponding author). The questionnaire measures demographic characteristics and different aspects of cultural competency, including knowledge, skills, comfort level in dealing with cross-cultural situations, and attitudes, as well as previous education in ICC, and the importance of this education. The modified questionnaire consisted of 94 items grouped into 6 main domains/sections (Table 1). Response choices for 4 domains (B-E) are based on a 5-point Likert Scale, on which 1= not at all, 2= a little, 3= somewhat, 4= quite a bit, and 5= very. For each section, the mean score was obtained by averaging scores from the respondents. The midpoint of each section represented the score that would be obtained if the respondent would choose option 3 ('somewhat').

Table 1. Summary of the Modified Questionnaire on Clinical Cultural Competency

Section	Area of focus	Nr. of items
A	DEMOGRAPHIC characteristics	9
B	KNOWLEDGE of health disparities and other sociocultural health determinants	21
C	SKILLS in dealing with sociocultural issues during patient care	15
D	COMFORT LEVEL in dealing with cross-cultural situations	16
E	ATTITUDES	
	I. Attitudes towards factors contributing to health disparities	12
	II. Importance of sociocultural issues in future interactions	5
	III. Self-awareness:	
	a. racial, ethnic, or cultural identity	1
	b. racial, ethnic, or cultural stereotypes	1
	c. biases and prejudices	1
F	TRAINING AND EDUCATION	
	I. Previous training in cultural diversity	8
	II. Importance of cultural competency training	1
	III. Interest and willingness to attend an ICC training course	2
	IV. Challenges of incorporating ICC training into medical curricula	2

Section A consisted of demographic information; age, gender, languages spoken (other than Hungarian), time spent abroad, and previous engagement in cultural competence education. **Section B** consisted of 21 items that assessed knowledge of health risks, disparities, and sociocultural issues of diverse ethnic groups (eg. awareness of different healing traditions, or ethnopharmacology). 5 items were added to this section to assess awareness of migration-health issues (eg. barriers of access to care, specific health risks, etc.). The scores were summed into a single score for which the possible range was 21 and 105. In **Section C**, 15 items assessed skills in dealing with sociocultural issues during patient care. This included performing culturally-sensitive physical examination or providing patient education. The highest possible score for this section was 75 and the lowest was 15. Sixteen questions were posed to assess participants' comfort-level in dealing with cross-cultural situations (**Section D**), such as caring for a patient who insists on using folk-healers, interpreting different

cultural expressions of pain, or dealing with derogatory remarks to their (or others') ethnic background during care. The summed single score for this section ranged from 16 to 80. **Section E**, 'Attitudes' had 3 subsections: 12 questions related to attitudes towards factors contributing to health disparities; 5 on the perceived importance of sociocultural issues in future interactions, and 3 related to participants' awareness of their own ethnic identity and stereotypes. These scores were summed into a single score (ranged from 20 to 100), and the higher score reflected more positive attitudes. The final **Section F** addressed the importance of training in cultural competency for healthcare professionals (scale 1 to 5), previous ICC training, and students' perceived interest and willingness to participate in optional courses that aimed to improve cultural competence. These questions were in addition to the original CCCQ instrument and the answer options were 'yes', 'maybe' or 'no'. Challenges and students' recommendations to integrate such a course into the medical curricula was also assessed by using open-ended questions.

2.3. Data analysis

The data were analyzed using the Statistical Package for the Social Sciences (SPSS) for Windows, Version 21.0. Basic descriptive statistics and frequency calculations were performed on all variables. Bivariate relationships between nominal variables were assessed using Pearson's χ^2 test. Mann-Whitney tests were used for comparing ordinal variables between groups and Pearson's correlation was used to analyze the relationship between participants' age, language competency, or period of living abroad and the responses. The level of statistical significance was set at 0.05 throughout the analysis.

3. Results

3.1. Demographic characteristics of the study population

In order to undertake a meaningful analysis of the data, responses of the students were grouped into two main groups: the first was the 1st year students, the freshmen (192 questionnaires); and the second was the 'upper' year students', formed of the responses of both the 4th and the 5th year students (199 questionnaires), as these students had some clinical practical experiences during their medical studies.

Nearly two-thirds (62%) of participants were female and the gender distribution between the two groups (ie. the freshmen and upper level (4-5-year) students) were similar (Table 2). Age distribution was significantly different, among the upper-year students there were significantly older students, however, the oldest participant (aged 29) was a freshman. Approximately two-thirds of the students (65.8%) were fluent in at least 2 foreign languages. 71% of participants had not lived in a foreign country for at least 1 month prior to the survey, and only 10% had lived in one or more countries for at least 6 months. 12% of participants were aware of the concept of diversity from their previous studies at school, while 36% had obtained ICC-related information from informal sources outside the educational system (eg. media, internet, journals, etc.). More than half of the students (56%) were not aware of the concept of diversity.

Table 2.   Characteristics of the study population

	TOTAL (N'=466)		1. YEAR STUDENTS (N'=207)		4-5. YEAR STUDENTS (N'=259)		Statistics p-value
	N	**%**	**N**	**%**	**N**	**%**	
Nr. of participants/ response rate	**391**	83.9	**192**	92.8	**199**	76.8	
Gender							
Male	149	38.1	77	40.1	72	36.2	.425
Female	242	61.9	115	59.9	127	63.8	
Age							
Below 20 years	100	25.6	100	52.1	0	0.0	
Between 21 and 26	274	70.1	88	45.8	186	93.5	**.000**
Above 27 years	17	4.3	4	2.1	13	6.5	
Minimum	19		19		22		
Maximum	29		29		28		
Mean (SD)	22.37 (2.05)		20.75 (1.44)		23.92 (1.15)		
Language competency							
Does not speak any foreign languages	6	1.5	3	1.6	3	1.5	
Speaks 1 foreign language	127	32.5	67	34.9	60	30.2	.760
Speaks 2 foreign languages	220	56.3	100	52.1	120	60.3	
Speaks 3 or more foreign languages	37	9.5	22	11.5	15	7.5	
Living abroad							
Never lived abroad	276	70.6	140	72.9	136	68.3	
Lived abroad for 1-6 months	77	19.7	25	13.0	52	26.1	
Lived abroad for more than 6 months in 1 foreign country	24	6.1	17	8.9	7	3.5	.730
Lived abroad for more than 6 months in more than 1 foreign countries	14	3.6	10	5.2	4	2.0	
Previous engagement in cultural competence (ICC) education							
During previous studies at school	47	12.0	28	14.6	19	9.5	
Individually from informal sources (ie. net, media, etc.)	140	35.8	71	37.0	69	34.7	.125
Never learnt of ICC issues	221	56.5	101	52.6	120	60.3	

N'= number of invited students, N= number of participants
If p < 0.05: the statistical probability that the given finding may have occurred by chance is less than 5% (in bold).

3.2. Scores on knowledge, skills, comfort level, and attitudes by demographic variables

Table 3 demonstrates the mean values and standard deviation of the sum of scores related to each of the 4 main domains: the self-assessed knowledge of health disparities and other intercultural topics (1), skills in dealing with sociocultural issues in patient care (2); the perceived or real comfort-level in intercultural situations (3), and attitudes towards factors leading to health disadvantages, as well as self-assessed stereotypes, and biases (4).

Comparing results by gender, it was noted that female participants rated 'Skill' significantly higher than males. In terms of age, the older age-group, and students in the upper years had significantly higher self-assessed 'Knowledge' scores. The freshmen estimated their 'Skills' significantly higher but this was not correlated with older age. Better language competencies correlated proportionally with higher total scores in all four domains: the more languages spoken, the higher scores (p<0.05; except for 'Attitudes' domain). Living in more foreign countries for longer periods results in significantly higher scores in the 'Comfort level in intercultural situations' and higher 'Skills'; but not in higher 'Knowledge' or 'Attitudes' scores. Conversely, knowledge of diversity prior to the survey, either from their studies at school or by self-study resulted only in higher 'Knowledge' scores, but not related to better 'Skills' and 'Attitudes', and had no impact on participants' 'Comfort level in intercultural situations'.

Table 3.   Knowledge, skills, comfort-level and attitudes by demographic variables

	'KNOWLEDGE' DOMAIN		'SKILLS' DOMAIN		'COMFORT LEVEL' DOMAIN		'ATTITUDES' DOMAIN	
	Scale range: 21-105 Midpoint: 63		Scale range: 15-75 Midpoint: 45		Scale range: 16-80 Midpoint: 48		Scale range: 20-100 Midpoint: 60	
	mean	±SD	mean	±SD	mean	±SD	Mean	±SD
TOTAL (n=391)	57.52	12.63	53.00	9.10	47.55	7.67	75.19	8.21
Gender								
Male (n=149)	57.13	12.02	51.70	9.33	48.07	7.94	74.72	8.41
Female (n=242)	57.76	12.22	53.76	8.85	47.24	7.49	75.48	8.09
Statistics, p-value	.502		**.047**		.224		.271	
Age								
Below 20 years (n=100)	54.23	12.58	54.32	8.16	47.01	6.92	75.02	7.26
Between 21 and 26 (n=274)	58.75	11.48	52.39	9.07	47.57	7.75	75.04	8.52
Above 27 years (n=17)	57.06	16.30	54.59	13.13	50.47	10.06	78.65	8.13
Statistics, p-value	**.008**		.238		.174		.359	
Study year								
Freshmen, 1st year (n=192)	55.74	11.95	54.13	8.82	47.94	7.35	74.52	8.54
4-5. study year student (n= 199)	59.24	12.09	51.87	9.21	47.19	7.97	75.98	7.85
Statistics, p-value	**.003**		**.015**		.313		.191	
Language competency								
Does not speak any foreign language (n=6)	58.67	7.84	50.83	7.49	44.17	5.38	69.83	5.00
Speaks 1 foreign language (n=127)	55.55	11.73	50.95	8.52	47.10	7.33	74.61	7.99
Speaks 2 foreign languages (n=220)	57.85	11.47	53.46	8.87	47.34	7.39	75.34	8.02
Speaks 3 or more foreign languages (n=37)	61.73	16.28	57.43	10.79	51.22	9.62	76.54	9.53
Statistics, p-value	**.012**		**.000**		**.015**		.074	
Living abroad								
Never lived abroad (n=276)	57.12	12.11	52.16	8.71	46.43	7.36	75.1	8.20
Lived abroad for 1-6 months (n=77)	58.13	12.01	54.18	10.11	48.81	7.07	75.82	7.40
Lived abroad for more than 6 months in 1 foreign country (n=24)	60.08	14.09	55.88	8.22	52.92	8.55	75.25	9.60
Lived abroad for more than 6 months in more than 1 foreign countries (n=14)	57.79	10.05	57.43	9.69	53.57	8.24	76.86	10.25
Statistics, p-value	.317		**.003**		**.000**		.984	
Previous engagement in cultural competence (ICC) education								
During previous studies at school (n=47)	59.74	13.16	53.17	9.00	47.53	7.22	76.89	9.08
Individually from informal sources (ie. net, media, etc.) (n=140)	60.93	12.05	54.46	9.02	48.90	8.17	75.20	8.55
Never learnt of ICC issues (n=221)	55.66	11.63	52.05	9.06	46.78	7.33	74.89	8.16
Statistics, p-value	**.000**		.145		.079		.227	

n= number of respondents within a certain category

If p < 0.05: the statistical probability that the given finding may have occurred by chance is less than 5% (in bold).

3.3. Importance of ICC training for healthcare workers

When students had to assess the importance of receiving ICC training for healthcare workers (HCWs) on a 1 to 5 scale, the mean score was 3.92, and female participants rated this significantly higher (4.07 vs. 3.67, p<0.001) than males. The freshmen and those who had received more ICC information also found it more important (p<0.005) to provide ICC training for HCWs than those who were not aware of ICC or had sought information on this topic. Students assessed their interest and willingness to participate in optional courses that aimed to improve their ICC level, and the overall level of interest was high, with fewer than 20% of students reporting as being uninterested. Females expressed significantly more interest and willingness to participate (60.3% and 55.4% vs. males 49.0% and 41.0%, respectively, p<0.05). No relationship was observed between stronger interest and willingness towards attending such a course with age, study level, language competency, living abroad and knowledge of ICC.

Table 4. Importance of ICC training for healthcare workers

	Consider ICC training of HCWs important (1-5)		Would be interested in ICC training (ie. course)			Would participate at an ICC training course		
	mean	SD	Yes (N=219) %	Maybe (N=97) %	No (N=75) %	Yes (N=196) %	Maybe (N=112) %	No (N=83) %
TOTAL (n=391)	3.92	0.99	56.01	24.8	19.2	50.1	28.6	21.2
Gender								
Male (n=149)	3.67	1.11	49.0	26.2	24.8	41.6	30.9	27.5
Female (n=242)	4.07	0.87	60.3	24.0	15.7	55.4	27.3	17.4
Statistics, p-value	**.001**		**.014**			**.004**		
Age								
Below 20 years (n=100)	4.04	0.95	53.0	33.0	14.0	48.0	34.0	18.0
Between 21 and 26 (n=274)	3.85	1.01	55.8	22.6	21.5	49.3	27.7	23.0
Above 27 years (n=17)	4.24	0.75	76.5	11.8	11.8	76.5	11.8	11.8
Statistics, p and r-values	.487 (r=-0.35)		.744 (r=-0.017)			.530 (r=-0.032)		
Study year								
Freshmen, 1st year (n=192)	4.05	0.99	56.8	27.6	15.6	49.5	31.8	18.8
4-5. study year student (n= 199)	3.97	0.97	55.3	22.1	22.6	50.8	25.6	23.6
Statistics, p-value	**.004**		.414			.791		
Language competency								
Does not speak any foreign language (n=6)	3.67	1.21	50.0	16.7	33.3	50.0	0.0	50.0
Speaks 1 foreign language (n=127)	3.88	1.05	59.1	24.4	16.5	55.9	27.6	16.5
Speaks 2 foreign languages (n=220)	3.92	0.93	53.6	25.9	20.5	45.6	31.4	22.7
Speaks 3 or more foreign languages (n=37)	4.08	1.09	59.5	21.6	18.9	54.1	21.6	24.3
Statistics, p and r-values	.277 (r=0.55)		.719 (r=0.018)			.337 (r=0.049)		
Living abroad								
Never lived abroad (n=276)	3.93	0.99	56.2	24.6	19.2	50.4	28.6	21.0
Lived abroad for 1-6 months (n=77)	3.84	0.90	54.6	24.7	20.8	46.8	28.6	24.7
Lived abroad for more than 6 months in 1 foreign country (n=24)	4.13	0.99	62.5	29.2	8.3	54.2	33.3	12.5
Lived abroad for more than 6 months in more than 1 foreign countries (n=14)	3.69	1.32	50.0	21.4	28.6	57.1	21.4	21.4
Statistics, p and r-values	.902 (r=-0.006)		.337 (r=0.049)			.630 (r=-0.024)		
Previous engagement in cultural competence (ICC) education								
During previous studies at school (n=47)	4.11	0.97	48.9	31.9	19.1	44.7	36.2	19.1
Individually from informal sources (ie. net, media, etc.) (n=140)	4.07	0.98	64.3	18.6	17.1	57.9	23.6	18.6
Never learned of ICC issues (n=221)	3.80	0.99	52.0	26.7	21.3	46.6	29.4	24.0
Statistics, p-value	**.003**		.072			.078		

n= number of respondents within a certain category
If $p < 0.05$: the statistical probability that the given finding may have occurred by chance is less than 5% (in bold).

3.4. Challenges of integrating diversity into medical education

The final two open questions of the questionnaire were related to students' views on the challenges of integrating intercultural issues into medical education and possible solutions. The students' answers regarding 'challenges' and 'recommendations' were grouped thematically into main focus areas (Table 5). The most significant challenges were the 'lack of time' and 'students' overload' with work from the medical curriculum. The participants recommended that any course related to ICC should be interactive, informal, free and easy with minimal requirements and assessments. Further important challenges include students' existing stereotypes and lack of motivation as well as the teacher's competencies, ie. not to strengthen stereotypes, or to hurt anyone's feelings, being objective, and able to prioritize, etc.

Table 5.   *Challenges of and recommendations to integrate intercultural competence into medical education*

	CHALLENGES/ DIFFICULTIES		RECOMMENDATIONS
	Main areas of focus		**Main areas of focus**
1.	**LACK OF TIME, CURRENT OVERLOAD OF STUDENTS**	1.	**ORGANISATIONAL/METHODOLOGICAL** (INTERACTIVITY, PRACTICE, SMALL, MULTICULTURAL GROUPS, MODERATE REQUIREMENTS, AND ASSESSMENT)
2.	**STUDENTS' EXISTING STEREOTYPES** (NEGATIVE ATTITUDES, DISCRIMINATION, CONTROVERSIAL OPINIONS, TOO SENSITIVE TOPIC)	2.	**THEMATICAL IDEAS** (WHAT TO INCLUDE, ie. BODY LANGUAGE, TOLERANCE SENSITISATION, ROMA ETHNIC MINORITY + MEANINGFUL PRIORITISATION OF TOPICS)
3.	**LACK OF LECTURER'S COMPETENCIES** (ie. STYLE, PREPAREDNESS, OWN STEREOTYPES, LACK OF OBJECTIVITY, CANNOT MANAGE CONFLICTS)	3.	**LECTURER'S COMPETENCIES** (EXEMPLARY, OBJECTIVE, OPEN-MINDED, + GUEST LECTURERS FROM OTHER CULTURES)
4.	**LACK OF STUDENTS' MOTIVATION AND INTEREST, UNDERSTANDING IMPORTANCE OF THE TOPIC**	4.	**OTHER IDEAS** (ie. PILOT TESTING, OFFERING FOR OTHER HEALTHCARE STAFF TOO, ORGANIZING INTERCULTURAL PROGRAMS, ETC.)
5.	**EXTERNAL BARRIERS** (LACK OF INFORMATION, FINANCIAL, POLITICAL, BUREAUCRATIC OR COLLEGIAL BARRIERS)		

4. Discussion

The results presented in this study offer a first insight into Hungarian medical students' level of clinical intercultural competence at the beginning of their studies and students' with clinical practice experiences, an area of research that has not been previously studied. This study explored students' perceived knowledge, attitudes, comfort-level and skills in dealing with intercultural situations during patient care, and also examined its relationship with sociodemographic factors in providing interculturally competent care. The study also identified the value of training in improving ICC, and some areas for improvement.

The only demographic variable which was significantly different between the two groups (first-year vs. upper-year students) in this study was age (Table 2). The findings demonstrate that older students, as well as students in the higher study years reported being significantly more knowledgeable about health disparities and other factors in relation to providing care for diverse populations. This may be attributed to their increased maturity and being better-informed. It may be the case that the higher rates in the upper-year students may have been due to their studies at the medical school but this will need to be examined in a further study.

Regarding gender differences, and similar to the findings of Ladson et al. (2006), female medical students assessed their skills better in dealing with sociocultural differences during patient care, and this may be because of the more empathic and sensitive characteristics of females in general (Christov-Moore et al., 2014). In contrast to a previous US study where students with some clinical practice showed higher 'skill' scores in comparison to freshmen (Ladson et al., 2006), in this survey it was the freshmen-group who thought they could deal with sociocultural issues more effectively. One explanation for this could be that the upper-year students, having had some clinical experiences and having faced real intercultural encounters, may be more realistic or critical of their ability.

An important finding of this research is that better language competencies correlate with significantly higher scores on almost all domains of ICC, including knowledge, skills, and comfort-level in intercultural situations. This result corresponds with the findings of a US study which used the same questionnaire with 3rd-year pharmacy students who reported better skills and comfort-level in correlation to speaking a language other than English (Okoro et al., 2012). Additionally, these results confirm the findings of a Swiss study involving 6434 participants which also correlated language skills with intercultural skills (Grin & Faniko, 2012). Interestingly, living abroad for a longer period of time did not correlate with better knowledge about health disparities of migrants or minority populations with more positive attitudes. But it was associated with better self-assessed skills and comfort-level in intercultural situations. It could be speculated that living abroad for a longer time, and immersing in another culture may impact on communication and other intercultural skills, and enhance comfort-levels in dealing with diverse populations, but not necessarily linked to increased knowledge of the given population (ie. health disparities, healing traditions, ethnopharmacology, etc.).

When designing future educational programs for medical students to improve their ICC, it is important to learn the lessons from another finding of this study too, namely that although students' participation in diversity or ICC training (both formal or individual) may result in better knowledge level, but did not impact on better skills or improve participants' attitudes or comfort-level in intercultural situations. A qualitative study of US medical students' views on cultural competence demonstrated that although a specific curriculum increased students' awareness, it was not effective in teaching specific skills (Shapiro et al. 2006). Therefore, future educational programs should pay special emphasis on these aspects too, by using various methods of skill-development, and also by taking into account students' concerns, needs and recommendations when designing new training programs.

Examining the results not as sums of scores within a section (ie. knowledge or skills), but as each factor individually, highlights some interesting points. For example, factors that scored the lowest scores within each section can be targetted as areas for improvement. Specifically, in the case of 'Knowledge' section, 'ethnopharmacology', 'different healing traditions' and 'migrants' access to health services' received the lowest scores, while in the 'Skills' section, the lowest scores were in 'providing culturally sensitive end-life-care'. Situations like 'facing derogatory remarks' to participants' or others' (colleagues, patients) ethnic background during care, either from colleagues or from patients were the least comfortable situations for study participants, and these 3 received the lowest 'Comfort-level' scores (the mean values for each of these 3 questions was below 2.08 - the mean score for this section is 2.97). Therefore, it is essential to pay attention to these issues and to incorporate these into medical curricula, ie. how to improve students' strategies in coping with derogatory or discriminatory remarks during care, or how to provide culturally-sensitive end-of-life care. It is worth noting that providing culturally-sensitive end-of-life care can be complex as providing end-of-life care in instances where the carer and the patient are of the same cultural/ ethnic background is already a difficult area.

A large body of scientific literature emphasize the need for incorporating ICC into medical curricula (Betancourt et al., 2003; Rechel et al., 2013; Like, 2011) and other literature have investigated effects of clinical cultural competence interventions on participants' knowledge, skill, and attitudes (Krajic et al., 2005; Ladson, et al. 2006; Okoro et al., 2012; Seeleman et al., 2014). However, despite the suggestion from some well-acknowledged authors and research groups, it has not been firmly established if improving competencies of healthcare providers may have a positive effect on patient outcomes (Beach et al., 2005; Betancourt & Green, 2010). Therefore, the main goal of clinical cultural competency training is to equip healthcare providers with knowledge, tools, and skills to better understand and

manage socioculturally-based variations in health beliefs, values and behaviours in the care of ethnically diverse populations.

There are two major approaches that can be adopted in cultural competence education. The traditional approach is the 'categorical' one where relevant attitudes, beliefs, and behaviours of certain cultural groups are taught. The newer, 'cross-cultural' approach focuses more on the process of communication and trains students to be aware of cross-cultural and social issues that are present in all cultures (Betancourt et al., 2003). Betancourt et al. (2003) recommend a balance in teaching cross-cultural knowledge along with communication skills as a 'best approach' in cultural competence training. They also emphasize the impact of patients' sociocultural factors in clinical situations and their effect on medical decisions and patient outcomes. Koehn and Swick (2006) have developed a new approach, the 'transnational competence', which widens the concept and content of teaching intercultural competence for medical professionals, and they direct attention to health policy and social factors, as well on individual considerations (ie. migration background and experiences, such as persecution, or discrimination, etc.) to reduce disparities in healthcare. Authors from Germany and Netherlands (Knipper et al., 2010) propose four key topics that must be included in cultural competency training for medical students and these are 'Epidemiology: knowledge of ethnic variations in disease epidemiology and reactions to therapy'; 'Culture, ethnicity and identity'; 'Social, economic and legal context', and 'Communication'; topics that are in line with the previously discussed balanced 'best approach' (Betancourt et al., 2003). This present study also revealed some thematic, organizational or, methodological recommendations, as expressed by the participating students which include a meaningful explanation of 'body language' in different cultures, lectures from representatives from other cultures, and organizing interactive training in relatively small, and possibly multicultural groups. There is some literature that describes the

experience of the implementation of these new approaches in ICC education for medical students (Evans, 2006; Kahr-Gottlieb & Papst, 2013). For example, a US study reported on an elective course offered for 3rd-year pharmacy students, which found that, similar to the findings of this study which found that students preferred to have no exams as course assessment in these courses. The study found that students were engaged in activities such as reading assignments, case studies, simulations, and guided discussions, and due to the small group size, participants were more open in their discussions and guest lecturers with community practice experiences were invited. Participants' comments regarding the course were overwhelmingly positive, and their suggestions to improve the course included having more detail on specific cultures and having more speakers throughout the course (Evans, 2006).

Incorporating clinical ICC into the medical curriculum may face some challenges, too. A recent project provided ICC staff-training at 8 European hospitals (Migrant-friendly Hospitals' project), and although they reported positive effects of training on staff perceptions of their knowledge, skills and comfort levels in transcultural situations, they also identified some barriers when implementing cultural competence training. These included support by management; motivation of staff, particularly medical doctors to participate; skills-oriented training and competent trainers (Krajic et al., 2005). Participants of this study also identified similar challenges: their current overload and lack of time, existing stereotypes or lack of students' motivation; lecturers' competencies, and external barriers, such as lack of financial managerial, or collegial support. To overcome these barriers at an institutional level and designing and offering a successful new elective course on clinical intercultural competence, extensive research and thorough preparatory work are required along with the consideration of students' needs and recommendations. It is encouraging that participants of this study considered ICC training of healthcare workers as being important, and a great majority

expressed their interest and willingness to participate in a course aimed to improve their clinical intercultural competence.

This study has some limitations and these include that no data was collected and analyzed regarding the participants' places and reasons for living abroad for a longer time period. It would be interesting to observe whether these factors (living in a similar or completely different culture; or living abroad for private reasons or for working at medical or non-medical sectors, etc.) have any effect on their knowledge level about health disparities and other intercultural issues, as well as on their attitudes.

5. Conclusions

Despite these limitations, this present study revealed the level of ICC of medical students for the first time in a country in the Central and Eastern-European region. Our sample size of 391 medical students including, which included males and females has exceeded that reported in previous studies (Ladson et al., 2006; Okoro et al., 2012). In addition, the study presents the findings by study level (freshmen vs. upper-year students with clinical practice exposure), and data regarding students' perception of the challenges of integrating ICC education into the medical curricula, as well as their recommendations to promote this process was also collected and analyzed.

Although Hungary is more of transit than a target country for international migration, the crisis situation in 2015 demonstrated the need for better-prepared health care systems and interculturally competent healthcare professionals. This study provides a valuable first insight into the baseline level of clinical ICC of medical students and this should serve as strong evidence for the development of specific and targeted ICC education to address deficiencies in providing interculturally competent care to migrants and culturally-diverse groups.

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