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Cross-Cultural Adaptability and Related Factors of Nursing Students

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ABSTRACT

Background: Turkey has a multicultural social structure and nurses provide care for the population of different cultural characteristics. Examining the factors affecting cross-cultural adaptation in nursing education may contribute to increasing the quality of nursing education and raising nurses who provide safer and more effective nursing care. Although the nursing profession's attention directed toward issues of cultural diversity, cultural adaptation in nursing education has not been adequately studied.

Purpose: This research aims to determine the level of cross-cultural adaptability and related factors of nursing students.

Methods: In the study, cultural adaptation inventory (CCAI) developed by Kelley and Meyers was applied to the 261 nursing students from two universities; a state university and a private university in Ankara. Additionally, the study aims at determining the students' adaptation levels to foreign cultures and revealing whether these levels are affected by their foreign language level and demographic variants. The data were analyzed using SPSS 2.5 for Microsoft Windows. While analyzing the inventory, descriptive statistical analysis (mean and standard deviation) was used in addition to the factor analysis.

Results: It was observed that the higher the year of study the nursing students are in, the higher their scores in the Personal Autonomy dimension become (F=3.67; p<0.01). When the students go abroad more frequently, their scores get higher in the openness dimension (F=5.37; p<0.01). The longer the students stay abroad, the more their scores in sentimental flexibility and receptive sensitivity increase. The results showed that the difference was between the students who speak a foreign language in the advanced level (X=43.4) and the others who speak a foreign language in the elementary level (X=40.8). That is, the higher the level of their foreign language reaches, the higher the students' scores in the openness dimension.

Conclusions/Implications for practice: To develop cultural adaptation, health care experts' experiences in various cultural environments are extremely important since these experts, such as nurses, get to serve people from different cultures. For that reason, the number of nursing students who take opportunities like the Erasmus Exchange Program or other international programs should be increased. Measurement of Cross-Cultural adaptation of the nursing personnel is a crucial factor contributing to enhanced care. Also, CCAI can be used to assess the nurses who will give health care services in different cultures.

Key words: Nursing, Student, Cultural adaptation

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INTRODUCTION

Culture is not a genetic heritage and cannot exist by itself; however, it is shared by members of society [1,2]. Culture directly influences many practices of people, such as their perception, thinking, communication, learning, and ways of using technology. Although culture is extremely influential on people's lives, if people do not know other cultures' characteristics then their attitudes can be influenced negatively [3].

Adaptation is a change in an individual's behavior to adapt to the local traditions [4]. The cross-cultural adaptability notion is described as the ability to adapt to live in a different culture or to communicate with a foreign culture's members. This ability is crucial to have in health care as well as many other career fields [5].

Moreover, cross-cultural adaptability is viewed as the ability to adapt to another culture with its requirements, values, and beliefs. It indicates the potential for cross-cultural effectiveness [6]. In the literature, researchers have attempted to identify the important attributes that facilitate

cultural adaptability [7,8]. Although they use different terminology, the previous studies suggest that key elements of adaptability are successful interactions with people from other cultures (e.g. communication, flexibility, and openness) and maintaining a self-stable status (e.g. emotional stability) when facing different customs, values, rules, and assumptions [9].

Transcultural nursing was a result of the necessity of serving individuals from different cultures. Leininger et al. [10] defines transcultural nursing as a sub-branch of nursing which provides cultural universality and cultural authenticity in nursing service, which is based on comparative research and analysis of different cultures, and which analyzes the sub-cultures and differences in cultures by showing respect to health, illnesses, service, beliefs, and values. Nurses have an important role in elevating health care service quality by knowing other cultures well [11,12]. Transcultural nursing models are good guides in evaluating sociocultural structure. At the same time, the goal of transcultural nursing is to offer a sensitive and influential nursing service to meet the cultural needs of individuals, families, and groups and to make nursing knowledge and practices culturally congruent [13,14]. Cultural competence in nursing education is receiving renewed emphasis. Curricular input to incorporate such knowledge, attitudes, and skills (e.g., patience and cultural adaptability) encompass a wide variety of teaching and learning methods [15].

Although theoretical information about such nursing service, which cares for cultural differences and can be included in nursing education is only practiced partially [16-18]. Recently, the numbers of vocational practice nurses who serve people from different cultures, whether in their own countries or abroad, have increased.

Additionally, the number of nursing students who receive education and give service abroad has increased [16,19-21]. Researchers conducting studies in Turkey have reported that nursing students witnessed cultural differences while providing service to individuals [20-22]. In another research, it has been asserted that the students had difficulty, especially while serving individuals whose religious beliefs and lifestyles are different from theirs [23]. In the literature, researchers assert that foreign language education and living abroad help develop cultural adaptation [24-28].

Although the nursing profession's attention directed toward issues of cultural diversity, cultural adaptation in nursing education has not been adequately studied.

Research purpose and question

This research aims to determine the level of cross-cultural adaptability and related factors of nursing students. This knowledge will help build a programmatic evidence base for cross-cultural adaptability enhancement and ongoing curriculum development. Specific research questions in this study were as follows:

✓ What is the average and dispersion of the scores that students who receive their education at nursing schools obtained from four sub-dimensions of the cultural adaptation scale?

✓ Is there a meaningful difference between the score averages of the students who receive their education in nursing schools got from the four sub-dimensions of the cultural adaptation scale according to:

- School type.
- Year of study.
- Frequency of going abroad.
- Foreign language level.
- Duration of being abroad.

METHOD

Design

A descriptive design was used to determine the level of cross-cultural adaptability and related factors of nursing students.

Data collection

In the present study, authors used the Cross-Cultural Adaptability Inventory (CCAI) [29]. Turkish validity and reliability of the test were carried out by Karaeminoğulları et al. [30] and it was accepted as valid and reliable.

CCAI analyzes how having the necessary qualifications and development of understanding influence an increase in transcultural efficiency and focuses on the requirements of merging into another culture. The inventory uses sub-scales to assess four aspects: emotional resilience,

flexibility/openness, perceptual acuity, and personal autonomy. The emotional resilience scale (ER, 18 items, Cronbach's alpha=0.82) measures the degree to which an individual can rebound from negative, unpleasant, and stressful feelings and react positively to new things and experiences. The flexibility/openness scale (FO, 15 items, Cronbach's alpha=0.80) measures the extent to which a person enjoys various ways of thinking and behaving in a cross-cultural situation. The perceptual acuity scale (PAC, 10 items, Cronbach's alpha=0.78) measures the extent to which an individual pays attention to and accurately perceives various aspects of the environment. The personal autonomy scale (PA, 7 items, Cronbach's alpha=0.68) measures the individual differences.

Participants and settings

Sampling was not done, since authors wanted to reach the entire target population. The CCAI was administered to 261 students, demonstrating an 80% response rate among nursing students studying at the targeted universities. Located in Ankara, one state university (n=145) and one private university (n=116) were included to recruit nursing students. These students did not take any courses related to intercultural nursing.

The study was approved by the ethical committee of Turgut Ozal University. Written permission was obtained from the institutions involved. Prior to data collection, informed consent was obtained from all nursing students. Participation in the study was voluntary and informed consent was obtained when a person agreed to participate in the study according to the ethical criteria established in the Helsinki declaration.

RESULTS

Seventeen percent of the participants were male, and 83% were female students. Their average age was 20.34 (min: 18, max: 35). There were 40.6% in the first year, and 12% were second-year students. Ninety-one percent of the participants have never been abroad, while 9% have been abroad at least once. Basic level English is spoken by 35% of the participants while 35.4% speak intermediate and 29.6 % speak advanced level English (Table 1).

When the table is analyzed, it is clear that the students' average score of the four dimensions (Xmean) is between 43.79-19.54, and the dimensions, except for personal autonomy, are fairly heterogeneous. Also, in all four dimensions, dispersion is found to be close to normal. This finding is supported by the graphics, which show the dispersion of data in sub-dimensions, as well (Figure 1).

An independent sample t-test was done to determine whether or not there is a meaningful difference according to sex and school type between the averages of the scores from nursing school students based on the four sub-dimensions of the cultural adaptation scale. The results are summarized in Table 2.

When the table is analyzed, it is seen that there is a meaningful difference in support of private university ($\bar{X}$=44.81) was found between the averages of the scores that the students received only from the mental flexibility sub-dimension of

Table 1: The mean scores on each dimension of CCAI.

Dimension	Mean	Median	Variance	Std. Dev.
ER	43.79	44	45.72	6.76
F/O	42.97	43	50.1	7.08
PAC	22.64	22	36.12	6.01
PA	19.54	20	9.87	3.14

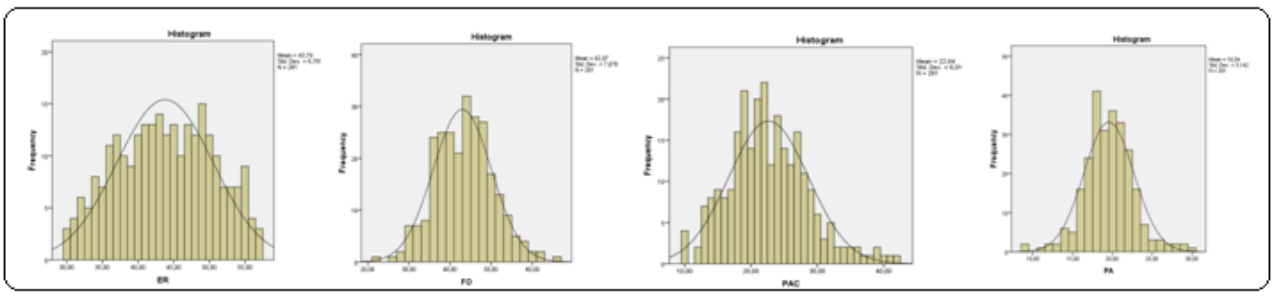

Figure 1: Point dispersion related to the sub-dimensions.

Table 2: T test results related to the students' sex, school type, and status of receiving classes about cultural adaptation.

	Sex	N	$\bar{X}$	SD	t	df	p
ER	male	45	43.6	6.68	-0.2	259	0.84
	female	216	43.82	6.79			
F/O	male	45	43.49	6.99	0.54	259	0.59
	female	216	42.87	7.11			
PAC	male	45	23.67	7.41	1.26	259	0.21
	female	216	22.43	5.67			
PA	male	45	19.49	3.17	-0.13	259	0.9
	female	216	19.56	3.14			
	School type	N	$\bar{X}$	SD	t	df	p
ER	private	116	44.81	6.91	2.21	259	0.03*
	state	145	42.97	6.55			
F/O	private	116	43.26	7.24	0.58	259	0.56
	state	145	42.74	6.96			
PAC	private	116	22.98	6.32	0.82	259	0.42
	state	145	22.37	5.75			
PA	private	116	19.72	3.28	0.83	259	0.41
	state	145	19.4	3.03			
			*p<0.05				

Table 3: ANOVA results according to the students' year of study, frequency of going abroad, and foreign language level.

	Dimensions		Mean Square	F	Sig.	Meaningful difference
Year of study	ER	Between Groups	89.34	1.98	0.12	
		Within Groups	45.21			
	F/O	Between Groups	19.27	0.38	0.77	
		Within Groups	50.46			
	PAC	Between Groups	54.68	1.52	0.21	
		Within Groups	35.91			
	PA	Between Groups	35.14	3.67	0.01*	Between 1st Year (X=18.89) and 2nd Year (X=20.29)
		Within Groups	9.58			
Foreign language level	Dimensions		Mean Square	F	Sig.	Meaningful difference
	ER	Between Groups	10	0.22	0.81	
		Within Groups	45.99			
	F/O	Between Groups	260.38	5.37	0.01*	Between Level 1 (X=40. 8) and Level 3 (X=43.9)
		Within Groups	48.47			
	PAC	Between Groups	6.04	0.17	0.85	
		Within Groups	36.36			
	PA	Between Groups	21.51	2.2	0.11	
		Within Groups	9.78			
Frequency of going abroad	Dimensions		Mean Square	F	Sig.	Meaningful difference
	ER	Between Groups	265.49	6.28	0.00*	Between students who have never been abroad (X=43.2) and who have been abroad at least four times (X=55.0)
		Within Groups	42.28			
	F/O	Between Groups	63.2	1.27	0.28	
		Within Groups	49.89			
	PAC	Between Groups	199.35	5.94	0.00*	Between students who have never been abroad (X=22.3) and who have been abroad at least four times (X=36.0)
		Within Groups	33.57			
	PA	Between Groups	60.13	6.62	0.00*	Between students who have never been abroad (X=12.8) and who have been abroad at least four times (X= 19.8)
		Within Groups	9.09			

the cultural adaptation scale. However, there is not a meaningful difference between the sex and school type scores received from the adaptation scale.

Whether there is a meaningful difference in terms of year of study, frequency of going abroad, and foreign language level between the averages of the scores that the nursing school students received from the four sub-dimensions of cultural adaptation scale was analyzed using One Way ANOVA analysis. The analysis results are summarized in Table 3.

When the results were analyzed, a meaningful difference (F=3.67; p<0.01) according to year of study was found only in the personal autonomy dimension of the scores got from K. A. Inventory

(CCAI). To determine which groups have this difference, the Scheffe test, one of the post hoc tests was run, and it was seen that the difference was between the averages of first-year (X=18.9) and second-year (X=20.3) of study. That is, the higher the year of study is, the higher the students' scores on the personal autonomy dimension are.

A meaningful difference (F=5.37; p<0.01) was found only in the openness dimension of the scores got from the CCAI in terms of students' frequency of going abroad (never, once, twice, three times, and four times). To determine according to which frequency level there is a difference between scores from these dimensions, Scheffe test was run. According to the test results, the difference between the scores in these dimensions is between the students who have never been abroad and the students who have been abroad at least four times. Researcher observed that when the duration of the individuals' stay abroad increases in the emotional resilience, emotional acuity and the personal autonomy dimensions, their scores taken from these dimensions increase, as well. Whether there is a meaningful difference between the scores that the nursing school students received from the four sub-dimensions of the adaptation scale, and the duration of their stay abroad was analyzed using Pearson Correlation. The results are summarized in Table 4.

When the table is analyzed, while ER and PAC dimensions are found to have a meaningful relation at a positively low level with the duration of stay abroad, a negative relation was found between the PA dimension and duration.

Among the students' foreign language level (3 levels), a meaningful difference (p<0.05) was only found in the openness dimension of the scores from CCAI. In other dimensions, a meaningful difference wasn't found (p>0.05). To determine which groups this difference occurs, the Scheffe test was run. The results showed that the difference was between the students who speak a foreign language in advanced level (X=43.4) and the others who speak a foreign language in elementary level (X=40.8). That is, the higher the level of their foreign language reaches, the higher the students' scores in the openness dimension.

DISCUSSION

There was not a meaningful difference between the average scores that the nursing school students received from the four sub-dimensions of the CCAI based on sex and type of school.

In the personal autonomy dimension, the higher the year of study nursing school students are in, the higher their scores are (F=3.67; p<0.05). In DeWald's et al. study [31], where they evaluate Faculty of Dentistry students' cultural adaptation, it was seen that the duration of education was not influential. In that study, the sample was not very broad which is a limitation on generalizability. For that reason, the research should be duplicated with a broader sample. Moreover, cultural adaptation can be influenced more by the syllabus of the students' year of study rather than the duration of their education.

This study revealed that student openness score increases if the students go abroad more frequently, and when they spend more time abroad, their scores in mental flexibility and receptive sensitivity rise. Additionally, observed that when the duration of the individuals' stay abroad increases in the emotional resilience, emotional acuity and personal autonomy dimensions, their scores taken from these dimensions increase, as well. Hence, it can be stated that living abroad and the duration of time spent abroad develops transcultural adaptation. In Chang's study [32], however, researchers found that living abroad does not influence transcultural adaptation. In Anderson's et al. study [4], on the other hand, it was seen that living abroad for a short time has a positive effect on transcultural sensitivity. Cotroneo et al. [33] was among the first to report an evaluation

Table 4: The relation between the scores which the students got from the four sub-dimensions of adaptation scale and the duration of their stay abroad.

Pearson Correlation		Dimensions			
		ER	FO	PAC	PA
Duration of Stay abroad	Correlations	0.20**	0.04	0.27**	-0.23**
	Sig.	0	0.52	0	0
	N	261	261	261	261

of an abroad nursing study program and to link the experience to an increase in the participants' cultural awareness. Even though international experience has been identified as an important factor for adaptability, a fair amount of literature suggests that international experiences help develop a person's intercultural competence [34]. The experience of being abroad has been viewed as an important factor to enhance cross-cultural ability. In the cross-cultural literature, the results of the present study indicate that there is a significant relationship between the frequency of international experiences and cross-cultural adaptability.

Learning a language can be accepted as an important key factor to understand values and attitudes in gaining transcultural sensitivity. Nevertheless, gaining transcultural sensitivity cannot be achieved only by learning a foreign language. A language is a tool for people to develop specific mental models and perceive psychosocial phenomena. At this point, it is clear that the individual needs to have openness and flexibility more than gaining knowledge about the culture. If students know the languages of different cultures, it helps them to know these cultures and have increased cultural sensitivity [35]. Meydanlioglu et al. [36] determined that university students receiving education in the fields of medicine and nursing had good cultural sensitivity levels and those interacting with people from other cultures and speaking a foreign language had significantly higher cultural sensitivity levels ($p<0.05$). In our study, it was determined that in the students' foreign language speaking levels (3 levels), a meaningful difference could not be found ($p>0.05$), only in the openness dimension of CCAI scores was there a difference. In other dimensions, however, a meaningful difference was found ($p<0.05$).

CONCLUSION

It is crucial to be able to see differences between people from different countries, to be able to interpret them, and to be able to analyze importantly. Experiences of health care experts, such as nurses who get to provide service in different cultures, are extremely important. According to these results, it was thought that it would be useful to develop plans aimed at increasing the language proficiency in university curriculums and abroad experience opportunities of students. For that reason, the number of nursing students who can draw on opportunities such as the Erasmus Student Exchange Program or other international training programs should be increased. The nursing profession can respond to today's cultural diversity through theory development, research and the inclusion of cultural content into the nursing curriculum.

The CCAI is an instrument designed to increase self-awareness of a person's potential for cross-cultural effectiveness. Measurement of Cross-Cultural adaptation of the nursing personnel is a crucial factor contributing to enhanced care. Also, CCAI can be used to assess the nurses who will give health care services in different cultures. The findings suggested that an educational format like the cultural diversity forum can promote students' cultural adaptability. Further research needs to continue to focus on the effectiveness of strategies to increase the cultural adaptability of baccalaureate nursing students. We suggest expanding the research by using a larger sample.

LIMITATIONS OF THE STUDY

Finally, the sample of nursing students in the current study was from two regional schools and cannot represent the whole nursing student population in Turkey. A larger sample, geographically and culturally, may yield more meaningful results.

DECLARATION OF CONFLICTING INTERESTS

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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