

## Original Article

# COVID-19-related burnout and socio-demographic predictors of booster vaccination intention in the general population: Evidence from Greece

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## Abstract

**Introduction:** Migration has led to an increasingly global tensions and is resulting in multicultural and multilingual societies. This trend is expected to continue to pose significant challenges to health care systems and societies alike.

**Aim:** The purpose of this research was to investigate the cultural capacity of health workers of a Northern Greek hospital.

**Methods:** The study sample consisted of 154 individuals (107 females and 47 males) healthcare professionals from a hospital in Northern Greece. The Clinical Cultural Competency Questionnaire (C.C.C.Q) was employed for this study's needs following its validation in Greek. Statistical analysis was performed using SPSS 25.

**Results:** Multiple Linear Regression analysis, using the Forward method, indicated that among the factors under study, social interactions with people of different cultural backgrounds ( $p= 0.001$ ), attendance of intercultural health seminars ( $p= 0.005$ ), and gender ( $p= 0.009$ ) could predict, statistically significantly, the score of the "knowledge" subscale.

**Discussion:** The investigation of cultural competency in healthcare professionals working in a hospital in Northern Greece showed that most of the participants have adequate knowledge in terms of cultural ability. Yet, the training of cultural competences should be mandatory for all health care professionals.

**Conclusions:** The education of healthcare professionals, their awareness of issues related to multiculturalism and diversity, as well as the acquisition of basic skills such as cultural competency, constitute a necessary prerequisite for the effective performance of their professional duties and the qualitative enhancement of the healthcare system.

**Keywords:** Cultural competency, cultural knowledge, cultural proficiency.

## Introduction

Global migration has led to an increasingly multicultural and multilingual society and this trend is expected to continue (Marvakis,

2001; Paralikas, 2024). The phenomenon of migratory flows in our country is particularly acute nowadays. Another factor that reinforces this phenomenon is the geographical position of the country, and in

particular its proximity to countries in the Balkans (Marvakis, 2001; Kavounidis, 2002).

This phenomenon, which creates many needs to upgrade the structures of the social fabric and has changed the data so far known. In terms of Greek society, it has also become more and more cultural, especially in recent decades, with the influx of various different cultural groups. Greece is a typical case of a South European country that has gradually evolved from sending country to receiving country of immigrants (Maniatis, 2009). As the number of immigrants is increasing in Greece, there is an increased need to improve the cultural capacity of health professionals in practice to be able to interact and cooperate with heterogeneous groups. In the literature there are many terms and definitions regarding the concept of cultural competence (Fantini, 2009).

Cultural competence is defined as a set of related behaviors and policies that occur in a system or organization or among professionals and allow this system, service or professionals to function effectively with people from different backgrounds. In this sense, cultural capacity is the ability of the health system and health professionals to provide quality care by integrating culture into their service provision (NHMRC, 2005).

Moreover, Cultural competence is defined by Winston Sieck (2021), as "the ability to work effectively with people from different cultural backgrounds. Cultural competence is comprised of four components or aspects:

- a diplomatic mindset,
- agile cultural learning,
- reasoning about other cultures, and
- a disciplined approach to intercultural interactions".

More specifically, cultural competence is a combination of skills and knowledge that can help people to learn, solve problems, and interact comfortably with people from different cultures. Cultural competence can be improved through training, education, and experience. In our increasingly connected world, it's not surprising that we are encountering people from all manner of

backgrounds in our workplaces. Whether you are leading a diverse team to develop a new product, treating patients from different walks of life, promoting stability in a conflict zone, or teaching in a multicultural classroom, cultural competence is critical to your success in the professional realm.

To do that, include cultural competence in your policies, mission or vision statements, project plans, and other resources or documents that define your expectations for your people. Be sure to get buy-in from key stakeholders and influencers within your team or organization. They are the ones who will take your vision from paper and to practice. Finally, you have to recognize and reward instances of cultural competence. Even if it's just with positive attention (Winston Sieck (2021).

Cultural capacity has also been defined as the complex integration of knowledge, attitudes and skills that enhance intercultural communication and effective interaction with others (Andrews & Boyle, 2002). Cultural competency is an important skill in offering quality nursing care across culturally diverse groups. Health disparity refers to health differences that are based on economic, environmental, and social disadvantages that influence several human groups who experiencing greater obstacles to deliver health care.

A patient's culture is influenced by, race, ethnicity, gender, age, class, education, religion, sexual orientation and identification, and physical abilities. Health equity seeks to reduce and eventually eliminate health disparities by allocating resources based on need (Brennan, & Cotter, 2008). Student perceptions of cultural competence content in the curriculum. *Journal of Professional Nursing*, 24(3), 155–160. doi:10.1016/j.profnurs.2008.01.003

The most important asset of health professionals is the acquisition of knowledge and skills that lead to cultural competency, so that they can respond to the cultural differences that their patients have and can provide them with effective and culturally appropriate care, with a key focus on safeguarding their rights (Theodorou, 2011).

In intercultural theory and research, cultural competence is considered to support the ability to "survive and prosper" in a new cultural environment. In advisory/clinical and organizational contexts, cultural competence is defined according to the specific objectives of each framework.

Therefore, cultural competence can be interpreted as the ability to work effectively in therapeutic environments with clients from different cultural backgrounds and to work skillfully in multicultural groups to achieve key organizational objectives (Wilson et al., 2013). It can be argued that culturally competent nursing care is something more than the recognition and the acceptance of cultural differences, between people, as includes the cultural differences into patient care and interactions with others.

According to the Centers for Disease Control and Prevention (CDC), "Cultural and linguistic competence is a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals that enables effective work in cross-cultural situations."

The CDC goes on to note that organizations must assess their own level of cultural competence, understand the value of diversity, manage cultural differences and adapt to cultural contexts present within the patient populations they serve.

In Greece, research on the cultural capacity of health professionals is limited compared to the international literature. In a study that has looked at the necessity of educating students about intercultural care of patients, it has been found that their education was almost inadequate, so that the treatment of patients of different cultural backgrounds depends solely on their own personal beliefs and their own hiring, rather than on the knowledge and information provided by their education (Boutsiuka et al., 2017). In another study, it was found that intercultural care should be included in the basic educational curriculum of health professionals (Prodromou et al., 2019). In a study to explore the cultural capacity of Greek nursing students, gender differences arose with male students showing higher scores than women, and the

educational level was statistically related to knowledge and skills (Kotrotsiou et al., 2020). Another study found that military nurses/female students who had received training in intercultural care after graduation had significantly more knowledge about cultural factors than participants who did not receive such training. The knowledge-scale score was significantly higher

(a) in nurses who were in contact with patients of different cultural backgrounds from several times a year to every day,

(b) in nurses who had no problems with the management of these patients and

(c) in nurses who considered moderate until very important to solve problems that arise when treating patients with different cultural backgrounds (Malliarou et al., 2017).

In view of all the above, the primary aim of this study was the investigation of the cultural capacity in health professionals working in a hospital in northern Greece.

## **Materials and Methods**

**Design and sample selection:** The purpose of this study is to investigate the cultural capacity of health professional workers in a hospital in Northern Greece.

The questionnaire was distributed to health care professionals working at the hospital. Participants were informed about completing the questionnaire and ensuring anonymity. Their participation was voluntary and anonymous. The 'convenience' sampling was considered the most appropriate method for collecting the data in this study.

**Ethical Issues:** The study received ethical approval from the Ethics Committee of the University of Thessaly of the Master's Program "Mental Health". In addition, the relevant license was received "Authorization to conduct research work of the 3rd Thessaloniki Health Region".

**Survey questionnaires:** The questionnaire used is the Clinical Cultural Competency Questionnaire (C.C.C.Q), which deals with cultural capacity. It is weighted and culturally adapted to the Greek population and consists of 6 thematic units with 62 questions (Apostolara et al., 2016). In order to better understand the assessment, the overall score is converted to a scale of percentage calibration (0-100%) by calculating and

extrapolating the initial values. Values approaching a hundred “100” correspond, proportionally, to a more positive scaling of the studied variable, whereas those approaching zero “0” to a more negative scaling.

**Statistical analysis:** For the descriptive statistical analysis, the continuous variables were expressed in the form of ‘mean’, ‘standard deviation’ and ‘median’, while the discrete variables were ‘frequency’ and ‘relative frequency (%)’. The internal coherence factor was studied to measure the reliability of scales. This is a factor that evaluates the degree to which the questions that form a scale measure the same meaning. It is calculated by means of the Cronbach’s Alpha factor ( $\alpha$ ), which evaluates the degree of correlation between the tool's questions. To investigate the factors that can predict a continuous variable, use was made of Multilinear Regression. In the analysis of regression, the Forward method was applied to the selection of independent variables, which is used in exploratory studies, with no prior knowledge as to which variables affect the response variable. For statistical data processing, the SPSS 25 software was used. The minimum value of the statistical significance level, p-value, is set to 5%. The dot is used as the decimal point.

## Results

The study sample consists of 154 subjects (107 females and 47 males) of mean age 44.3 years.

The results of the study showed that most of the participants were women (69.5%). More than half (76.6%) had a higher education

degree. One-fifth of them had a master's degree and nearly 2% had a PhD.

In addition, a small percentage had obtained his basic degree outside Greece. A large part of the participants had lived outside Greece and had gained different experiences from the contact with the different culture of many people. Only one out of six had attended at least one intercultural health seminar, and most of the respondents said they had social connections with people of different cultural backgrounds.

Table 1 records the demographic characteristics of the sample. Table 2 shows the key statistics of the scores for the ‘C.C.C.Q’ questionnaire sub-scales. For the sub-scale ‘knowledge’, the statistical indicators in the sample indicate a moderate-low level, with a negative trend (36.8%). Table 3 records the internal consistency of the conceptual construction of the C.C.C.Q. subscales as the value of the Cronbach alpha. The results show that all sub-scales are considered acceptable with regard to their reliability.

Multilinear regression analysis, using the Forward method, showed that of the factors under study, social interactions with people of different cultural origins ( $p=0.001$ ), the intercultural health seminar attendance ( $p=0.005$ ), and gender ( $p=0.009$ ) can predict, statistically significantly, the score of the “knowledge” subscale.

This regression model is able to explain 16.1% of the total dispersion of the values of the “knowledge” subscale. The statistical data are compiled in Table 4.

**Table 1. Descriptive characteristics of the sample**

		Mean	SD	Median	N	N %
Age		44.3	8.8	46.0		
Years employed under the current qualification		17.2	9.9	17.5		
What is your occupation in the hospital?	Nurse				110	71.4
	Doctor				44	28.6
Gender	Female				107	69.5

	<b>Male</b>				<b>47</b>	<b>30.5</b>
<b>Level of education</b>	<b>Secondary</b>				<b>36</b>	<b>23.4</b>
	<b>Tertiary</b>				<b>118</b>	<b>76.6</b>
<b>Postgraduate education</b>	<b>No</b>				<b>122</b>	<b>79.2</b>
	<b>Yes</b>				<b>32</b>	<b>20.8</b>
<b>PhD</b>	<b>No</b>				<b>151</b>	<b>98.1</b>
	<b>Yes</b>				<b>3</b>	<b>1.9</b>
<b>Did you study in Greece for your basic degree?</b>	<b>No</b>				<b>8</b>	<b>5.2</b>
	<b>Yes</b>				<b>146</b>	<b>94.8</b>
<b>Have you studied at postgraduate level abroad?</b>	<b>No</b>				<b>147</b>	<b>95.5</b>
	<b>Yes</b>				<b>7</b>	<b>4.5</b>
<b>You have lived outside of Greece</b>	<b>No</b>				<b>109</b>	<b>70.8</b>
	<b>Yes</b>				<b>45</b>	<b>29.2</b>
<b>Have you ever attended Intercultural Health seminars?</b>	<b>No</b>				<b>131</b>	<b>85.1</b>
	<b>Yes</b>				<b>23</b>	<b>14.9</b>
<b>Do you have social interactions with people of different cultural origins?</b>	<b>No</b>				<b>49</b>	<b>31.8</b>
	<b>Yes</b>				<b>105</b>	<b>68.2</b>

**Table 2. Statistical indicators of the scores of the C.C.C.Q subscales.**

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Median</b>	<b>Max</b>
<b>Knowledge</b>	<b>36.8</b>	<b>20.8</b>	<b>.0</b>	<b>35.0</b>	<b>82.5</b>
<b>Skills</b>	<b>44.5</b>	<b>24.1</b>	<b>.0</b>	<b>45.0</b>	<b>100.0</b>
<b>Management of intercultural situations</b>	<b>53.4</b>	<b>21.9</b>	<b>.0</b>	<b>53.1</b>	<b>100.0</b>
<b>Cultural awareness</b>	<b>60.5</b>	<b>19.5</b>	<b>8.3</b>	<b>61.1</b>	<b>100.0</b>
<b>Education and training</b>	<b>54.4</b>	<b>17.6</b>	<b>.0</b>	<b>53.1</b>	<b>100.0</b>

**Table 3. Analysis of the internal consistency of the C.C.C.Q survey subscales.**

	<b>Reliability Statistics</b>	
	<b>Cronbach's Alpha</b>	<b>N of Items</b>
<b>Knowledge</b>	<b>.902</b>	<b>10</b>
<b>Skills</b>	<b>.956</b>	<b>15</b>
<b>Management of intercultural situations</b>	<b>.946</b>	<b>16</b>
<b>Cultural awareness</b>	<b>.858</b>	<b>9</b>
<b>Education and training</b>	<b>.655</b>	<b>8</b>

**Table 4. Statistical data related to the KNOWLEDGE sub-scale**

Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	24.544	2.811		8.730	.000
Do you have social interactions with people of different cultural origins?	11.192	3.413	.251	3.279	.001
Have you ever attended Intercultural Health seminars?	12.506	4.374	.215	2.859	.005
Gender	9.041	3.434	.201	2.633	.009
a. Dependent Variable: Knowledge					

## Discussion

The various studies did not point just one theory or teaching strategy that proved clearly superior to another, and all reported some level of (Campinha-Bacote & Padgett, 1995; Leininger, 1978; Thackrah & Thompson, 2013).

In comparing the levels of students' engagement with people from different cultures from their own. However, preparing nursing students to have meaningful cultural interactions in their nursing practice. To some extent age and experience are serving as facilitators that improve cultural competency.

Campinha-Bacote & Padgett, (1995), argue that the potential effect of age and life experience are important in applying culturally competent nursing care (Campinha-Bacote & Padgett, 1995). Thus, it perhaps should not be surprising that results are often modest.

Long's (2012) recent survey of programs found that although most studies demonstrate at least a modest positive outcome, none were able to declare the students as culturally competent. A paper and pencil self-report tool is probably not the best method for evaluating such a value-laden multidimensional concept like cultural competency. A few sources expressed some hope for assistance from technology:

Technology will soon allow us to evaluate cultural competency in a more meaningful way, including filmed standardized patient encounters, the writing of cultural material into human patient simulation scenarios, the

development of standardized patients from different cultural backgrounds, and objective structured clinical examinations.

Before commenting on the results of this study and linking them to the results of such studies, we consider it important to note: (a) what this study does not answer to, and (b) what are its limitations.

The results of this study concern this sample, which is however representative for the health professionals of the hospital concerned. It is to be investigated whether the results are representative also for health professionals working in other clinical settings.

With regard to the results of this study and their interpretation, we must also express some reservations about the possible cross-causation of the type of causation between certain variables. We cannot therefore be led to make a linear statement of reasons.

The purpose of this research was to investigate the cultural capacity of health workers of the Hospital of Northern Greece.

The results of the study showed that most of the participants were women (69.5%), which is supported by another study of nurses and nursing students (Larson et al., 2006).

To better assess the significance of the impact of each questionnaire parameter, a number of factors were maintained consistently and the effect of this differentiated factor alone was studied.

In this context it was found that health professionals who have social connections with people of different cultural origins, given



that the other factors remain stable, record an average overall score of 11.2 percentage points on the “knowledge” sub-scale more than the corresponding individuals who do not have social connections with people of different cultural origins, which seemed to have a corresponding influence on their level of knowledge.

The above finding allows us to argue that our contact with other cultures and awareness of current events is often the key to knowledge of views of different cultural groups.

Working with people of different cultural backgrounds from those of the dominant society can be useful in educating health professionals in the practices, values and beliefs of their culture.

For example, learning the languages spoken in their communities, parenting practices, or religious traditions can help understand and interact among health professionals and individuals of different cultural backgrounds.

As regards the sub-scale ‘knowledge’, the statistical indicators in the sample indicate a moderate-low level, with a negative trend (36.8%).

It follows from the above that even if the proportion of health professionals does not possess the necessary knowledge for cross-cultural health care to a large extent, there are a large number of people who are culturally aware and sensitive to issues of people of different cultures, religion and cultures in general.

This is in line with a study which has shown on the one hand that education on cross-cultural care of patients is insufficient and on the other hand that the health care of patients with different cultures depends solely on the personal beliefs and recruits of nurses, rather than on their knowledge and information (Wilson et al., 2013).

The above result is consistent with the results of a study in medical students, which measured many areas of cultural competencies:

- a) Health inequalities, b) stereotypes,
- c) cultural exploration, d) health and disease perceptions, and e) communication/ language.

It was found that for nearly half of students the average knowledge score was 55%, while no student scored more than 80% (Bussey-Jones et al., 2005).

It follows from the above that adequate knowledge of health professionals in terms of cultural ability is particularly important in the health care of individuals with different cultures as confirmed by researchers, who studied whether teaching appropriate intercultural nursing courses can improve the intercultural ability of nurses when engaging with patients of different cultural backgrounds (Poirier et al., 2009).

Most importantly, the training of cultural competences should be mandatory for all health care professionals. This view is supported by researchers who report the importance of including cultural skills training for health care professionals and students to provide quality care for patients with culturally different beliefs (Kotrotsiou & Paralikas, 2022).

**Conclusions:** In conclusion, the training of health professionals, their awareness of issues related to multiculturalism and diversity, as well as the acquisition of basic skills such as Cultural Competence is a necessary condition for the more effective exercise of their professional duties, the quality upgrading of the health system. and, more broadly, the orientation to a humanistic model of education.

Education in Intercultural Health Care at both undergraduate and postgraduate level and continuing lifelong education programs contribute to the acquisition of cultural competence, capacity and sensitivity of both students and health professionals.

At the same time, they have the opportunity not only to get to know other cultures, but also to be able to interpret specific health behaviors in a cultural context.

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