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Cultural Competence Assessment Instrument: Initial Italian validation and proposed refinement

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Abstract. *Background and aim of the work:* Italy has become a target of immigration in the last three decades. Accordingly, the Italian population is progressively changing, becoming increasingly culturally different. Cultural competences are a fundamental requirement for many industries and, especially, for healthcare organizations. The aim of this paper is to propose an initial Italian validation of the Cultural Competence Assessment Instrument (CCAI) and to propose a refinement of this scale in terms of measured constructs. *Methods*: The CCAI was translated into Italian through a team-based iterative approach and then administered to a sample of 289 nurses with symbolic and realistic threat scale and social dominance orientation scale. An on-line cross-sectional survey questionnaire was used. *Results*: Confirmatory factor analysis revealed that the original two dimensions of the CCAI can be divided into two other sub-scales, thus leaving us with the following dimensions: cultural awareness, cultural sensitivity, seeking information and active behavior. These dimensions appeared to be sufficiently reliable and independent one from another. Moreover, they showed specific and different correlations with other measured constructs. *Conclusions:* The Italian version of the CCAI would seem to be a useful instrument for measuring both attitudes and behavioral intention of nurses with respect to intercultural care. Using four dimensions instead of two appears to increase the understanding of professionals' cultural competence and supply a deeper picture of dimensions which compose cultural competence in healthcare settings.

Key words: cultural competences, immigration, scale validation, healthcare organization

Introduction

Cultural diversity is continuously increasing in all European and American countries, and intercultural relations, particularly between majority and ethnic minority groups, have become an important concern for governments as well as healthcare organizations. Several industrialized countries, such as Canada, the USA and Australia, have a long history of immigration, and immigrants have constituted strong and well-known communities which contribute to the cultural diversity of these countries. Other countries, however, have been seeing immigration only in the last few decades. Among these nations, Italy has become a target of immigration in the last three decades. Accordingly, the Italian population is progressively changing, becoming increasingly culturally different (1). Cultural competences are thus a fundamental requirement for many industries and, in particular, for healthcare organizations. The aim of this paper is to propose an initial Italian validation of the Cultural Competence Assessment Instrument (CCAI) and to propose a refinement of this scale in terms of measured constructs.

Cultural diversity and healthcare settings

Cultural diversity is a challenge for healthcare organizations, given that people belonging to different ethnic groups may require different approach to health and have a different understanding of care and illness (2). It has been shown that clinical encounters with patients belonging to different ethnic groups may be difficult and tense, affected by misleading communication, influenced by stereotypes and prejudices and even leading to misdiagnosis (3). Such culturally blinded encounters may contribute to the exclusion of minority groups and favor dominant groups (4).

This situation is problematic for both patients and professionals, given that cultural misunderstanding and conflicting worldviews regarding health and illness may generate stress and conflict in the healthcare processes. Seminal works by Leininger suggest that caring must be culturally congruent, that is to say that care must take into account the people's values and meanings (5, 6). In this sense, caring refers to decisions and behavior which are based on the cultural diversity that professionals discover within patients' values, beliefs and practices. Thus, health care professionals are faced with the need to acquire intercultural competencies in order to recognize their own cultural norms, understand the patient's values and representations, and supply effective and maximized care. Accordingly, intercultural competence among professionals is becoming an important feature that healthcare organizations are trying to improve. Intercultural competence can be defined in health care settings as the ability to deliver "effective, understandable, and respectful care that is provided in a manner compatible with [patients'] cultural health beliefs and practices and preferred language" (7, p. 80865).

Measuring cultural competencies

In order to improve healthcare deliveries, it is fundamental to be able to measure practitioners' cultural competencies. Accordingly, several instruments have been developed to capture this construct. One of those is the Cultural Competence Assessment Instrument (CCAI) (8), a recently developed scale which has several positive features. The theoretical background of CCAI is the cultural competence model proposed by Doorenbos and Schim (9) which has four key elements: cultural diversity, cultural awareness, cultural sensitivity and cultural competence behavior. Cultural diversity refers to the people's recognition that diversity is the rule of the game in the healthcare setting and that it is a complex and dynamic reality. Cultural awareness refers to professionals' knowledge of differences and similarities of cultural expression, not simply in terms of knowledge of language or religion, but rather in terms of awareness that such aspects determine the way in which minority or ethnically different groups approach the reality of care. Cultural sensitivity, however, refers to professionals' attitudes, beliefs and representations about features of others, such as heritage, openness to "otherness" and respect for cultural issues. Finally, cultural competence behavior refers to those observable behaviors that are influenced by diversity experience, cultural awareness and increased sensitivity. According to Doorenbos et al. (8), cultural competence markers are behaviors "focusing cultural assessment, asking about explanatory models and expectations for care, adapting interventions to respect cultural practices or taboos, and seeking additional information and resources" (p. 326).

Based on the cultural competence model, Doorenbos et al. (8) developed the CCAI, an instrument composed of 27 items on a 5-point Likert scale ranging from strongly agree, agree, disagree, strongly disagree, and no opinion. The scale measures two main factors: the Cultural Awareness and Sensitivity dimension (CAS), composed of 11 items, and the Cultural Competence Behaviors (CCB), composed of 16 items. The scale has been developed and tested in several research studies and has been demonstrated to be sufficiently reliable. Moreover, this scale has several qualities. Firstly, it is specifically directed to healthcare professionals and settings. Secondly, CAAI is supported by a broad definition of culture, which makes the instrument applicable to a large set of contexts and suitable across a spectrum of disciplines and different educational levels. Moreover, the scale is relatively short and easy to administer. Thus, the CAAI has many positive features which make the scale a good instrument for assessing cultural competence among health workers.

Critical points and expectations

Despite its positive features, we believe that CCAI can be further developed in order to refine its measurement capacity. We are particularly concerned about the factor structure of the scale, which, as stated above, is restricted in two dimensions. A first criticism regards the merger of awareness and sensitivity to become only one factor. Indeed, as CCM suggests, cultural awareness (i.e. to be aware that many cultural aspects may influence people's behaviors) and cultural sensitivity (i.e. to be sensitive and respectful of cultural differences) are different constructs. In fact, one person may be well aware of cultural differences and, at the same time, be very insensitive to those differences. In the same way, people may be very open to cultural difference but unaware of its effect in a given context. For this reason, we believe that the original dimension of CCA should be analyzed trying to separate the aspects linked to cultural awareness from those linked to cultural sensitivity. More precisely, we hypothesized that items 1, 2 and 8 would pertain to sensitivity rather than to cultural awareness. Regarding these two dimensions, a further specification regarding item 7 is required. This item, "I enjoy working with people who are culturally different from me", expresses liking or disliking and then it actually measures emotional aspect of a prejudicial attitude. In other words, it is not of the same logical level as other items which, instead, ask practitioners to express their cognitive view on cultural difference (e.g. "Spirituality and religious beliefs are important aspects of many cultural groups"). For this reason, we excluded this item from the scale.

A further concern relates to the CCB dimension. In the original version, the dimension of CCB groups many items referring to differing aspects of competent behavior. We propose that CCB would measure at least two different kinds of behavior: one linked to seeking information about cultural difference (i.e. "I seek information on cultural needs when I identify new clients and families in my practice") and the other linked to active action oriented to address intercultural concerns (i.e. "I act to remove obstacles for people of different cultures when I identify such obstacles"). Thus, we expected to be able to discriminate two dimensions of CCB: seeking information and active behavior.

To summarize, our main expectations were a) to find two different dimensions, awareness and sensitivity, in the CAS dimension and b) to find two different dimensions, seeking information and active behavior, in the CCB dimension.

Method

Scale translation and adaptation

In order to translate the items, a team-based iterative approach (10, 11) was used. More precisely, three independent researchers prepared three translated versions of the scale. These translations were then compared in a research-group committee in which disagreements were solved through discussion in order to reach a preliminary version of the scale. The preliminary version was then pre-tested and administered to several professionals in order to assess whether the scale was comprehensible and clear. The committee then analyzed the items again, considering the concerns which were verbally expressed by professionals, until a definitive version of the scale was reached.

Compared with the original scale, the translated version (CCA-Itv) has the following characteristics: 1) the scale of response of CAS was changed from a Likert scale to a Likert-type scale in which only extreme points were labeled and 2) the scale of response was changed from a 5- to a 6-point one (1 = strongly disagree, 6 = strongly agree for CAS dimensions, and 1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = very often, 6 = always for CCB dimensions). This was done because originally the intermediate point was labeled as "no opinion" and assigned a score of 3. However, as many authors have pointed out (e.g. 12), this is not actually an "intermediate" score, but rather expresses a lack of attitude. In order to avoid this problem and to increase the variability of responses, the scale was widened to 6 points, labeling only the extreme values (1 and 6).

The resulting scale was composed of 26 items, 10 items referring to the awareness/sensitivity dimension measured on a 6-point Likert-type scale, and 16 items referring to the competent behavior dimension measured on a 6-poinl Likert scale.

Procedure and participants

The Italian version of the CCAI scale was inserted into a questionnaire aimed at assessing several constructs; an on-line procedure was used. Participants were contacted and invited to enroll in research regarding attitudes toward health care delivery and to complete an online questionnaire. On the first page, participants were informed that participation was voluntary, that data was collected anonymously and used for research purposes only and that submitting the questionnaire would be assumed at the participants' agreement to participate. Finally, it was stated that the questionnaire could be left off at any time.

Measurements

The CCA-Itv was then inserted in a questionnaire in which other measurements were collected. For each measurement, the final score was computed as the mean of intended items. In this way, higher scores indicate higher levels of the measured construct.

Realistic and symbolic threat was measured by 10 items on a 6-point Likert-type scale (1 = strongly disagree, 6 = strongly agree) taken from Stephan et al. (13) and Stephan, Ybarra, & Bachman (14). Four items measure realistic threat (i.e. "I think that immigrants have too much economic power in the Italian society") which revealed a good reliability (a = 0.90), while 6 items measure symbolic threat (i.e. "Immigration is undermining the Italian culture") with a reasonable internal reliability (a = 0.64).

Social Dominance Orientation (SDO) was measured by the short form of the scale proposed by Pratto et al. (15), which is composed of 4 items on a 6-point Likert-type scale (1 = strongly disagree, 6 = strongly agree). This scale measures people's desire to see social groups arranged along a hierarchy of prestige and power (i.e. "Superior groups should dominate inferior groups"). Reliability was not optimal (a = 0.51) but this may be due to the shortness of the scale compared with the complexity of the construct.

Results

Participants

289 professionals returned the questionnaire, 33 of whom were excluded because they were not Italian. The final sample was thus composed of 256 professionals, of whom 50 (20%) were men and 199 (80%) were women (7 participants did not report their gender). 92 participants (36%) were aged between 20 and 30, 61 (24%) between 31 and 40, 72 (28%) between 41 and 50 and 31 (12%) were more than 50 years of age. Average tenure was 13.25 years (SD = 11.07).

Assessing the dimensionality of the scale

According to the theoretical background, several models were tested through confirmatory factor analysis (CFA). More precisely, the following models were compared:

1) one-factor model; 2) two-correlated-factor model (one factor measuring CCA and another factor measuring CCB) which is the original factorial structure of the scale; 3) three-factor model (awareness, sensitivity and CCB) and 4) four-factor model (awareness, sensitivity, seeking information and active behavior).

As suggested by Kline (16), a model can be said to have a satisfactory fit when the χ^2/df ratio is lower than 3, CFI and TLI are higher than 0.90 and RMSEA is 0.08. Table 1 shows the results of CFA analysis. As one can see, in accordance with expectations, the four-factor model had a better fit than the other models. Thus, the results seem to support the idea that the scale has a four-factor structure.

However, given that the fit index was not satisfactory, we used modification indexes to assess whether errors of items measuring the same dimension would be correlated. Correlating some item errors, the goodness-of-fit increased to reach satisfactory values ($\chi^2(281) = 479.45$, $p < .001$, χ^2/df = 1.71, CFI = 0.915, TLI = 0.901, RMSEA = 0.053 90%C.I. = 0.045-0.060, $p = 0.28$, SRMR = 0.068). Moreover, all items were significantly represented by the intended dimension (all ps < 0.001). In sum, CFA analysis confirmed the expected four-factor structure of the scale. Dimensions

Table 1. Fit indexes of different tested models

	χ^2 (df)	CFI	TLI	RMSEA	SMRS	BIC
One factor	1502.204 (299)	.482	.437	.125	.117	21629.756
Two factors $\Delta\chi^2$ (1) = 87.33, p < .001	1277.296 (298)	.578	.540	.113	.102	21361.298
Three factors $\Delta\chi^2$ (2) = 35.16, p < .001	1237.968 (296)	.594	. 555	.111	.099	21324.673
Four factors $\Delta\chi^2$ (3) = 482.41, p < .001	928.797 (293)	.726	. 696	.092	.080	20960.588

Note: Chi-sqared differences are computed on Satorra-Bentler scaled Chi-squared

scores were computed by averaging raw scores of the intended items. Table 2 shows items and dimension of CCAI.

Table 3 shows descriptive statistics of dimensions and zero-sum correlations and reports reliability coefficients (Cronbach's alpha) on the diagonal. As shown, all constructs but Sensitivity had satisfactory reliability. The fact that Sensitivity had a low value of reliability can be imputed to the fact that this dimension is composed of only three items and that the construct of cultural sensitivity is complex and wide. Moreover, as one can see, Seeking Information and Active behavior were significantly and positively correlated, although the magnitude of this correlation was lower than 0.70, thus supporting the idea that the two dimensions can be separated and can measure different, albeit related, constructs. Surprisingly, Awareness and Sensitivity were not correlated, underlining the fact that to be aware of cultural difference and to be sensitive to what this cultural difference implies are different aspects of cultural competence. Moreover, according to expectations, both seeking information and active behavior were positively correlated to Awareness, while only active behaviour was negatively correlated to Sensitivity.

Concurrent and divergent validity

Table 4 shows correlation coefficients (Pearsons' r) among CCA dimensions and other measured variables. As one can see, correlation coefficients confirmed that the four dimensions of CCAI have different meanings. Indeed, only Active behaviour and Sensitivity are significantly and negatively correlated to real and symbolic threat and SDO, while seeking information and awareness are not correlated. This seems to indicate that, as expected, people who perceive a real and symbolic threat from immigration are social dominant oriented, less sensitive to cultural difference and less likely to behave actively to address intercultural issues in a healthcare setting, independently of their awareness of intercultural difference and their seeking of information. Thus, the correlations supported the idea that seeking information and active behavior as well as cultural awareness and cultural sensitivity are distinct aspects of cultural competence which have different meanings in terms of intercultural openness.

Conclusion

The work presented in this paper aims to supply a first Italian validation of the CCAI. At the same time, we propose a refinement of this scale in terms of measured constructs. The results appear to support our expectations about the factor structure of the CCAI: differently from the original version, which is composed of two dimensions (i.e. Cultural Competence Behaviors and Awareness and Sensitivity), our data seem to be better fitted by four factors. More precisely, Awareness and Sensitivity appear to be two distinct, and unrelated dimensions. In fact, correlation between dimensions is close to zero, indicating that nurses can be aware of cultural difference and not sensitive to this difference and vice versa. Moreover, awareness and sensitivity showed specific and different correlations with other measurements linked to intergroup

Table 2. Items and their standardized coefficients on the CCAI dimensions

	Cultural Awareness	Cultural Sensitivity	Seeking information	Active behavior
Many aspects of culture influence health and healthcare.	.487**			
Aspects of cultural diversity need to be assessed for each individual, group, and organization.	.652**			
If I know about a person's culture, I do not need to assess their personal preferences for health services	.482**			
Spirituality and religious beliefs are important aspects of many cultural groups.	.798**			
I understand that people from different cultures may define the concept of "healthcare" in different ways.	.532**			
I think that knowing about different cultural groups helps direct my work with individuals, families, groups and organizations.	.617**			
Individuals may identify with more than one cultural group.	.590**			
Race is the most important factor in determining a person's culture.^		.586**		
People with a common cultural background think and act alike.^		.517**		
Language barriers are the only difficulties for recent immigrants to the United States.^		.468**		
I include cultural assessment when I do client or family evaluations.			.657**	
I seek information on cultural needs when I identify new clients and families in my practice.			.853**	
I have resource books and other materials available to help me learn about clients and families from different cultures.			.730**	
I use a variety of sources to learn about the cultural heritage of other people.			.705**	
I ask clients and families to tell me about their own explanations of health and illness.			.708**	
I ask clients and families to tell me about their expectations for care.			.639**	
I document cultural assessments.			.567**	
I document the adaptations I make with clients and families.			.514**	
I avoid using generalizations to stereotype groups of people.				.615**
I recognize potential barriers to services that might be encountered by different people.				.467**
I act to remove obstacles for people of different cultures when I identify such obstacles.				.710**
I act to remove obstacles for people of different cultures when clients and families identify such obstacles to me.				.777**
I welcome feedback from clients about how I relate to others with different cultures.				.681**
I welcome feedback from co-workers about how I relate to others with different cultures.				.531**
I find ways to adapt my services to client and family cultural preferences.				.718**
I learn from my co-workers about people with different cultural heritages.				.653**

^ reversed scored items; ** $p < .001$

prejudice, discrimination and dominance. More precisely, it was only Sensitivity to be negatively linked with realistic and symbolic threat perception and with social dominance orientation. Awareness, instead, was not correlated with that construct. This is not surprising, given that to be aware of cultural difference may drive people to perceive a threat or not depending on the way in which this difference is interpreted (i.e. as a

Table 3. Descriptive statistics, reliability and correlation of CCAI dimensions

	M	*SD*	CCB.SI	CCB.AB	CAS.AW	CAS.SE
CCB Seeking for information	3.18	1.08	0.88	.50**	.25**	-.09
CCB Active Behaviour	4.37	0.92		0.86	.35**	.14*
CAS Awareness	4.78	0.83			0.78	.08
CAS Sensitivity	4.56	1.01				0.53

*p< .05, **p < .001; Cronbach's alpha on the diagonal

Table 4. Zero-order correlations among dimensions of CCAI and other variables

	Real threat	Symbolic threat	SDO
Seeking for information	-.05	-.19**	-.04
Active behaviour	-.23**	-.32**	-.25**
Awareness	-.09	-.06	-.05
Sensitivity	-.45**	-.34**	-.19**

** p < .01

threat or as a richness). These findings appear to support the idea that it is not completely justified to mix cultural awareness and sensitivity in one single factor. On the contrary, these two dimensions appear to supply different information about the cultural competence of healthcare operators. In other words, our data suggest that cultural awareness is a necessary but not a sufficient prerequisite for culturally competent care delivery.

Moreover, the data also supported our idea that measured cultural behaviors are actually divided into two dimensions: seeking information and active behavior. Differently from awareness and sensitivity, these two kinds of behavior appeared to be correlated, although the strength of correlation indicates that these two dimensions do not overlap with each other. Also in this case, it is only the active behavior dimension, that is, the dimension capturing behaviors which require more effort and attention, that is correlated to discrimination-linked constructs. Also in this case, the distinction as to two different kinds of behavior appears to be justified and to supply more information about professionals' cultural competence.

In sum, these results seem to supply a wider look at the cultural competence of health care professionals. Moreover, CCAI is confirmed as a good instrument to measure both attitude and behavior of professionals and it could be used in both the assessment of professionals' cultural competence and the evaluation of educational training oriented to improve cultural competence.

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