The Use of the Cultural Competence Assessment Tool (Ccatool) In Community Nurses: The Pilot Study and Test-Retest Reliability

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Abstract

Background: Nurses are responsible and accountable for their nursing practice and there is a need to be culturally and linguistically competent in all of their encounters. To be culturally competent community nurses should have the appropriate transcultural education. It is therefore important to assess the level of cultural competence of the community nurses, within their everyday practice.

Aim: The aim of the article was the cultural adaptation of the cultural competence assessment tool based on Papadopoulos, Tilki and Taylor Model in a sample of Cypriot community nurses.

Methodology: To explore the psychometric properties of the Cultural Competence Assessment Tool that has been distributed in a sample of 28 community nurses. Also, a pre and post-measurement has been applied as to assess the test-retest reliability of the tool.

Results: The analysis has shown that the Cultural Competence Assessment Tool has good psychometric properties and it is easy to understand by the community healthcare professionals. Results showed that 60.7% disagreed that there is the same level of cultural competency with other European countries and 89.3% reported that assessment of their cultural competence is needed. Using the special analysis software for this tool, the pilot study showed that Cypriot community nurses have some degree of cultural awareness.

Conclusion: Culturally competent care is both a legal and a moral requirement for health and social care professionals. Valuing diversity in health and social care enhances the delivery and effectiveness of care for all people, whether they are members of a minority or a majority cultural group. Using an appropriate tool for assessing cultural competence is very important and useful for health professionals to be culturally competence.

Key words: cultural competence, cultural competence models, transcultural nursing, cultural competence tools, community nursing.

Introduction

One of the most significant and revolutionary movements in nursing and health has been the theoretical and research studies for health educators and health professional leaders, to understand culture and then incorporate cultural content into health services. This new body of transcultural nursing and caring knowledge is held to initiate and to improve the quality of care provided to people of different cultures. The incorporation of culture care principles and theoretical framework into healthcare practices, has been emphasized (Leininger, 2006).

The International Council of nursing (ICN) stated that, “nursing respect human rights, including the right to life, to dignity and to be treated with respect” (ICN, 2005:2).

Patients express their needs in terms of what they want, prefer, expect and demand in respect to
nursing care. There is a pressing need to understand patients’ perceptions of their experiences in receiving nursing care, because perceptions of the patients address how care should be provided in order for it to be consistent with their expectations (Zhao, 2011). Several models for cultural competence have been developed as to understand and meet the cultural needs of the patients. This study was based on the Papadopoulos, Tilki and Taylor model (PTT) for cultural competence (Papadopoulos, 1998a).

Transcultural nursing began as a response to the challenges nurses faced when caring for patients from other cultural backgrounds than their own, a necessity that arose because of immigration. Transcultural nursing and cultural competences were regarded as the solutions to meet immigrants’ special needs (Leininger & McFarland, 2002). The changing demographic characteristics of Cyprus affected health care provision and health care services. According to the Cyprus Statistical Office (2011) there has been an increase in the immigrant population from 9.4% in 2001 to 21.4% in 2011.

Immigration and the growth of multicultural societies have highlighted the need for culturally competent care. This has generated demands for knowledge development in the field of transcultural nursing. The demand on nurses to possess knowledge and skills that are necessary to care for all patients who seek help from the health care services, regardless of their cultural background, has increased. Nurses need to be aware of and acknowledge patients’ cultural needs as well as incorporating them in the nursing process (National Board of Health and Welfare, Sweden, 2005). However, it is not only the demands on nurses that have increased; nurse educators also face greater expectations. Due to the need for culturally competent nurses, nurse educators must have the ability to educate nurses to become culturally competent (Torsvik & Hedlund, 2008).

Studies have shown that positive transcultural communication style of community nurses lead to establishment of trust, resulting in an increased satisfaction of care, higher quality interactions and adherence to prescribed regimens (Kaplan et al, 2006; Makoul, 2008; Rao, Anderson, Inui, & Frankel, 2007; Sheppard et al, 2004). This participatory decision-making style has also been shown to result greater satisfaction of care, higher quality interactions, and more appropriate use of health’s care services.

Community nurses have a better understanding of their client’s personal (including cultural) needs. This provides a holistic approach, inviting clients to share their needs and tell their story, and participate in their health care plan. Transcultural communication and assessment based on theory or a model helps the community nurse to provide a culturally appropriate nursing care. It is therefore necessary to assess the extent to which the community nurses are able to properly address the care needs of people of different cultural background (Camphina-Bacote, 2003).

Nurses are responsible and accountable for their nursing practice and there is a need to be culturally and linguistically competent in all of their encounters (Papadopoulos, 2003). Nurses entering the current healthcare arena will face a complex, rapidly changing environment filled with consumers from diverse backgrounds (Sumpter & Carthon, 2011).

Cultural competence refers to the knowledge and skills that a nurse should possess to care for a patient from a cultural background different from his/her own (Emami, 2000; Betancourt, Green & Carrillo, 2002; Campinha-Bacote, 2002; Leininger, 2002; Papadopoulos, 2006).

The concept of cultural competence consists of two components- ‘culture’ and ‘competence’. Papadopoulos (2006: 9-10) defines culture as “the shared way of life of a group of people that includes beliefs, values, ideas, language, communication, norms and visibly expressed forms such as customs, art, music, clothing and etiquette. Culture influences individuals’ lifestyles, personal identity and their relationship with others, both within and outside their culture”. The International Council of Nurses (ICN, 2005) defines competence as ‘a level of performance demonstrating the effective application of knowledge, skills, attitudes and judgment.

In 1998, Papadopoulos, Tilki and Taylor published the PTT model for developing cultural competence (Papadopoulos, 1998a, Figure 1). The model refers to the nurse’s capacity to provide effective health care that takes the patient’s cultural beliefs, behaviours and needs into consideration in the nursing process. The model includes four components of cultural competence: 1) cultural awareness, 2) cultural knowledge, 3) cultural sensitivity and 4) cultural practice (Figure 1). Further the PTT model emphasized the need for nurses to have both culture-generic and culture-specific competence. Culture-specific competence refers to the knowledge and skills that
relate to a particular ethnic group and that would enable to understand the values and cultural prescriptions operating within a particular culture. Culture-generic competence is defined as the acquisition of knowledge and skills that are applicable across ethnic groups (Gerrish & Papadopoulos 1999). Apart from these areas, they also emphasized the need for nurses to promote anti-oppressive and anti-discriminatory practice.

Figure 1: The Papadopoulos, Tilki and Taylor Model for Developing Cultural Competence


According to the PTT model it is important for the nurses to understand their own world views, beliefs and value system as to understand and respect those of their clients (Gerrish & Papadopoulos 1999). This is the initial step for becoming culturally competent. The first stage in the model is cultural awareness which begins with an examination of our personal value base and beliefs. The nature of construction of cultural identity, as well as its influence on people’s health beliefs and practices is viewed as necessary planks of a learning platform. Cultural knowledge (the second stage) can be gained in different ways. Meaningful contact with people from different ethnic groups can enhance knowledge around their health beliefs and behaviours as well as raise understanding around the problems they face. Through sociological study the students can be encouraged to learn about power, such as professional power and control or make links between personal position and structural inequalities (Papadopoulos, 2003). An important element in achieving cultural sensitivity (the third stage), is how professionals view people in their care. Unless clients are considered as true partners, culturally sensitive care is not being achieved; to do otherwise only means that professionals are using their power in an oppressive way. Equal partnerships involve trust, acceptance and respect as well as facilitation and negotiation (Papadopoulos, 2003). The achievement of the fourth stage, cultural competence requires the synthesis and application of previously gained awareness, knowledge and sensitivity. Further focus is given to practical skills such as assessment of needs, clinical diagnosis and other caring skills. The most important variable of this stage of development is the ability to recognise and challenge racism and other forms of discrimination and oppressive
practice. The PTT model combines both, multiculturalist and anti-racist perspectives, and facilitates the development of a broader understanding around inequalities, human and citizenship rights, whilst promoting the development of skills needed to bring about change at the patient/client level (Papadopoulos, 1998b).

Few studies have assessed the cultural competence of community nurses (Deldar et al., 2010; Papadopoulos, 2008; Jackson, 2007) and no similar study has been done in Cyprus. Nurses from Cyprus have clients from different cultural backgrounds. This requires nurses and other health professionals to be overcome by cultural sensitivity and cultural competence and to apply it in their practice. In Cyprus, the interest in transcultural nursing and cultural competence has recently appeared.

The barriers some nurses’ encounter in caring for diverse populations may be due to the lack of training and skills in providing culturally and linguistically competent care. To counteract this challenge, many nurse leaders and educators are seeking to increase the levels of cultural competence among student nurses as a part of organizational strategic goals (Watts, Cuellar, O’Sullivan, 2008; Giger et al., 2007).

**Aim**

The aim of the article was the cultural adaptation and the assessment of psychometric properties of the cultural competence assessment tool based on Papadopoulos, Tilki and Taylor Model in a sample of Cypriot community nurses.

**Sample and Methods**

The sample used in the pilot study was a convenience sample. The inclusion criteria were: (1) being a community nurse according the Cypriot nursing law; (2) willing to participate; (3) ability to speak and read Greek. The sample for the pilot study consisted of twenty eight community nurses (2 men and 26 women) from all the community nursing sectors (health visitors, mental health community nurses, home care nurses). From the twenty eight community nurses, only ten participate in the retest group.

Participants were informed that participation in the study or refusal to participate in the study would not have any impact on the workplace. They were also informed of their right to withdraw from the study at any time. They received a brief explanation of the purpose and the aim of the study. The protocol of the study was approved by the Cyprus Bioethics committee, by the Bioethics committee of Cyprus University of Technology, and from the Ministry of Health of Cyprus.

**Measurement Tool**

An anonymous questionnaire has been used. The questionnaire was administered in the Greek language. The first part of the questionnaire included questions to elicit information on demographic, employment, socio-economic characteristics of the participants, health status and their education level. The second part of the questionnaire was the CCATool. The CCATool based on PPT model for assessing cultural competency (Papadopoulos & Lee, 2002). This tool contains culture-generic and culture-specific statements. The authors posit that the culture generic statements apply to all client groups and practitioners (Papadopoulos, Tilki and Ayling, 2008). The assessment tool consisted of 10 statements in each of the four domains being assessed (cultural awareness, cultural knowledge, cultural sensitivity and cultural practice). Applying the CCATool involved a number of changes. For example in the second domain, the statement no.7: “People select the most relevant aspects of their culture in different situations”, was replaced by “The percentage of people diagnosed with HIV is highest in the local population than immigrants”. As mentioned above, these changes did not affect the coding of the statements which are therefore not considered to be new. Also statements no.8 and no.10 for this domain were changed from the original tool for assessing the field of cultural knowledge. Nothing else has changed since the remaining sections of the tool (Table1). All changes have been done after consultation with the authors of the tool.

The translation of the cultural competence assessment tool was carried out. Cultural adaptation of the questionnaire in Cyprus was performed in consultation with the authors of the tool. The translation has been done by a community nurse and a bilingual person in the Greek language (direct translation). Then back translation has been done by a community nurse and another bilingual person who was not involved in the original translation to investigate the suitability of the translation. The face validity of the questionnaire was explicitly assessed through feedback from a panel of experts (researches, community health professionals, and academics) who reviewed the questionnaire and
confirmed it with minor wording changes. Content validity refers to the degree that the instrument covers the important aspects of what is being measured. Content validity ensures that the questionnaire includes an adequate and representative set of items that tap the concept (Sapountzi-Krepia et al, 2003). The more the questionnaire items represent the domain or universe of the concept being measured, the greater the content validity (Raftopoulos & Theodosopoulou, 2002).

### Table No. 1: Rewording of CCTool – Assessing Cultural Awareness

<table>
<thead>
<tr>
<th>Original statements</th>
<th>New statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>7) People select the most relevant aspects of their culture in different situations</td>
<td>The percentage of people with HIV is highest in the local population than immigrants</td>
</tr>
<tr>
<td>8) People from different ethnic groups may have the same needs but they may be expressed in different ways</td>
<td>Tuberculosis rates are higher among Asian communities in relation to the local population</td>
</tr>
<tr>
<td>10) Ethnic identity is influenced by personal, social and psychological factors</td>
<td>The prevalence of hepatitis B virus (HBV) is higher among immigrants from outside the European Union (EU) in relation to the local population</td>
</tr>
</tbody>
</table>

Further, translation and adaptation of a scale into different languages makes it possible to use the questionnaires in comparative international multicenter studies. This is why authors decided first to translate the questionnaire and then proceed to check the validity and reliability of the tool (Raftopoulos, 2002).

To evaluate the stability of a translated instrument, it is recommended that it be tested in the target culture based on a test-retest design (Paunonen and Ashton, 1998). It is difficult to establish standards for retest reliability since many factors need to be considered, such as the time between pre-test and post-test, learning obtained from the pre-test or between tests, and the type of test (trait or state).

### Statistical Analysis

All items were coded and scored, and the completed questionnaires were included in the data analysis set. Individual unanswered items were excluded from the analysis. Statistical Package for SPSS16.0 computer software was used for the statistical analysis of the data obtained. The Pearson correlation coefficient was used to calculate the linear correlation of two continuous variables. The t-test assessed whether the means of two groups were statistically different from each other.

Some researchers believe that it is sufficient to know that the retest coefficient is statistically significant from zero (Fountoulakis et al, 2001), although Huck & Cormier (2001) have warned against such use. The Spearman Rank Correlation Coefficient (rho) between scores produced at the first and second testing was calculated to assess the test-retest reliability. However, the calculation of correlation coefficients is not a sufficient method to test reliability and reproducibility of a method and its results, because it is an index of correlation and not an index of agreement (Raftopoulos, 2002).

The reliability of the scales used was estimated by using Cronbach’s alpha (Cronbach, 1951). The test-retest reliability was the comparison of the results obtained from the test variables with retest variables given at two separate times. The time interval was long enough to minimise the effects of recalling test answers, and short enough to reflect the true changes in their answers. Pearson correlation coefficients were used to test the reliability of the total scores from two tests.

### Results

The sample of the current study consisted of 28 community nurses who completed the test and among 10 of them completed the retest questionnaires. Their mean age was 35.67±6.96 years. The demographic characteristics of the participants who completed both the test and the retest questionnaires are presented in Table 2. The internal consistency of the tool for the test group proved to be good, as standardized inter-item reliability / Cronbach's alpha for part A about assessing cultural awareness was 0.782, for part B about assessing cultural knowledge was 0.734, for part C about assessing cultural sensitivity was 0.643 and for part D about assessing cultural practice was 0.826.
Further, Table 3 shows the test-retest reliability of the various scales that were included in the questionnaire and their total mean scores. The results indicate that the scales have a good internal consistency and are adequate for group comparisons.

In order to assess the test retest reliability the spearman correlation coefficient, between the total scores of the test and retest (before and after) was calculated.

Table No. 2: Characteristics of the sample

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>26</td>
<td>92.9</td>
</tr>
<tr>
<td>Male</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>2. Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-25</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>26-30</td>
<td>4</td>
<td>14.3</td>
</tr>
<tr>
<td>31-35</td>
<td>7</td>
<td>25.0</td>
</tr>
<tr>
<td>36-40</td>
<td>9</td>
<td>32.1</td>
</tr>
<tr>
<td>41-45</td>
<td>4</td>
<td>14.3</td>
</tr>
<tr>
<td>46-50</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>3. Community Nursing Domains</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Visitor/ School Nurse</td>
<td>14</td>
<td>50.0</td>
</tr>
<tr>
<td>Home Nurse</td>
<td>5</td>
<td>17.9</td>
</tr>
<tr>
<td>Community Mental Health Nurse</td>
<td>6</td>
<td>21.4</td>
</tr>
<tr>
<td>Nurse at urban health care centre</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td>4. Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td>16</td>
<td>57.1</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>11</td>
<td>39.3</td>
</tr>
<tr>
<td>Master degree</td>
<td>1</td>
<td>3.6</td>
</tr>
</tbody>
</table>

The Spearman correlation coefficient for the first factor for cultural awareness was 0.62 (p=0.05), for the second factor for cultural knowledge was 0.65 (p=0.04), for the third factor for cultural sensitivity was 0.83 (p=0.003) and for the forth factor for cultural practice was 0.79 (p=0.007).

The pilot study showed that 60.7% disagree that there is the same Cultural Competence in Cyprus, than the other European countries and 39.3% there is, 35.7% often comes into contact with people of other nationalities, 57.1% frequently and 7.1% rarely and 89.3% believed that requires assessment of their cultural competence and 10.7% that is not needed (Table 4).

Using a special software program based on the CCATool, the pilot study showed that 1:30 Community nurses is culturally incompetence, 23:30 Community nurses are culturally aware and 4:30 Community nurses are culturally safe.

Discussion

The items of the CCATool showed a good internal consistency as assessed with Cronbach’s alpha, and a degree of test-retest reliability similar to that reported by King et al. (2001). The very good Pearson correlation coefficients for the test-retest of CCATool suggest that any repetition of the test would be likely to render the same results.

Culturally competent care is both a legal and a moral requirement for health and social care professionals. Valuing diversity in health and social care enhances the delivery and effectiveness of care for all people, whether they are members of a minority or a majority cultural group (Papadopoulos, 2006).

Table No. 3: Test-re-test reliability scores

<table>
<thead>
<tr>
<th>Scales</th>
<th>Test (N=28)</th>
<th>Retest (N=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Scale Items</td>
<td>Means</td>
</tr>
<tr>
<td>Cultural Awareness</td>
<td>10</td>
<td>2.168</td>
</tr>
<tr>
<td>Cultural Knowledge</td>
<td>10</td>
<td>1.975</td>
</tr>
<tr>
<td>Cultural Sensitivity</td>
<td>10</td>
<td>1.629</td>
</tr>
<tr>
<td>Cultural Practice</td>
<td>10</td>
<td>2.179</td>
</tr>
</tbody>
</table>

Nurses should be informed about the diverse needs of different people in order to understand and contribute to their satisfaction. The culturally competence care is an essential element of the 21st century for those who are responsible for providing health care in transcultural societies.

According to the results most of the community nurses are in the first level of developing culturally competence care.

The pilot study showed some degree of cultural awareness of the Cypriot Community Nurses. However, there is still much work to be done, as to become culturally sensitive, culturally
competent professionals, providing culturally appropriate nursing care in the community. This research work represents a breakthrough in local and international nursing practice in the community. It is important both, on practical and on theoretical bases. The practical dimension is that it will initially reflect the realities of Cyprus to the level of cultural competence.

Such mapping is the trigger for initiation of appropriate actions and interventions to improve the attitudes of health professionals so that adequate cultural care. Moreover, such an investigation is an act of awareness of existing workers in the Community Nursing and trigger engagement with intercultural health care to the best therapeutic results and competence cultural approach.

Table No. 4: Community nurses beliefs

<table>
<thead>
<tr>
<th>Questions</th>
<th>Yes</th>
<th>No</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Do you believe needs assessment of your cultural competence</td>
<td>25</td>
<td>31</td>
<td>89.3</td>
<td>10.7</td>
</tr>
<tr>
<td>2) Do you believed there is the same level of cultural competence in Cyprus, than the other European countries</td>
<td>11</td>
<td>17</td>
<td>39.3</td>
<td>60.7</td>
</tr>
<tr>
<td>3) How often do you come in contact with clients of different cultures</td>
<td>10</td>
<td>16</td>
<td>35.8</td>
<td>57.1</td>
</tr>
</tbody>
</table>

Conclusion
The cultural competence assessment tool appears to have good psychometric properties and it can be applied to studies in the future to assess the cultural competency not only for nurses but other health professionals. It is comprehensible and easy to use. Transcultural nursing and cultural competence is about nurses being able to take the patient’s cultural background, beliefs, values and traditions into serious consideration in providing holistic an individualized nursing care. Cultural competence should not only be employed when caring for immigrants or ethnic minority groups, but also in encounters with all patients. Community nurses should respect the different language, values and traditions of a social group, to incorporate the culture of individuals to care and be open to different ways of incorporating the clients’ treatment and to possess social skills such as patience, lack of selfishness and rejection, respect, desire for change and learning.

The results from this study are the impetus for integration of cultural competence in nursing practice. It gives the opportunity to revise existing policy in health and nursing care practice as well as nursing curricula.

Limitations
There are limitations in this study. The sample was not randomly selected. However, the research team decided to proceed with a convenient sample because it was very difficult to locate and approach certain groups of community nurses. Although the pilot sample may be relatively small, however the sample of the main study is estimated to be 170 participants (all community nurses in Cyprus).

Acknowledgments
The authors deeply thank Professor (I) Rena Papadopoulos, Middlesex University, for her kind provision of her tool and model, as well as her continuous support, advice and guidance for this work.

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Cyprus statistical service. (2011)

