

## ORIGINAL RESEARCH

# A cross-cultural study of the concept of caring through behaviours: patients' and nurses' perspectives in six different EU countries

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## Abstract

**Aim.** This paper is a report of an international study of patients' and nurses' perceptions of nurse caring behaviours.

**Background.** Current economic constraints on healthcare systems, demand to increase the quality of care and the incorporation of the consumers' perspective into care, have created a need to develop a clear understanding of nursing behaviours which convey caring. Patients in different areas of the world report different expectations of nurses' caring actions when compared to nurses' views.

**Method.** A descriptive comparative survey design was used to analyse a sample of surgical patients ( $n = 1659$ ) and their nurses ( $n = 1195$ ) in 88 wards of 34 hospitals in Cyprus, the Czech Republic, Finland, Greece, Hungary and Italy. Data were collected in autumn 2009 using the Caring Behaviours Inventory-24. Nurses' and patients' responses were compared using both inferential and descriptive statistics.

**Results.** Independent samples *t*-tests showed important differences between nurses' and patients' views. Although both groups perceived knowledge and skill as being the most important sub-scale, the nurses' responses were higher compared to patients ( $P < 0.05$ ) with important differences in the 'assurance of human presence' ( $P < 0.001$ ) and the 'respectful deference to others' ( $P < 0.001$ ) sub-scales. Cross-country comparisons showed important differences between the nurses' ( $F = 24.199$ ,  $P < 0.001$ ) and patients' views on caring ( $F = 26.945$ ,  $P < 0.001$ ).

**Conclusions.** Important differences were observed between patient–nurse perceptions in the participating countries. The results form a foundation for future research into the development of a common international perspective about caring behaviours between patients and their nurses.

**Keywords:** caring behaviours, Caring Behaviours Inventory cross-cultural comparison, international, nurses, patients, perceptions

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## Introduction

Caring is inherent to nursing practice and although it is not unique to nursing, the phenomenon is commonly discussed and intensively studied as a fundamental concept in the profession (Watson 2008). The sensation patients perceive as feeling cared for is derived from nurses' caring behaviours. These have been defined as acts, conduct and mannerisms enacted by professional nurses that convey concern, safety and attention to patients (Greenhalgh *et al.* 1998). Nurses spend considerable time in the act of caring, so congruency of perspectives about caring between patients and their nurses could give strong scientific and economic bases for influencing policy decisions that have an impact on the nursing workforce and the quality of nursing care (Aiken 2008). Furthermore, the ability of professionals to translocate across Europe suggests that the scope of activities reserved to and carried out by nursing professionals, including professional caring (*Directive 2005/36/EC*), is directly linked to consumer protection and safety. Therefore, it is important to identify patients' perceptions of caring and the extent to which nurses and patients share the same meaning across Europe so that nurses can develop cross-cultural competence to deliver culturally sensitive care. Although caring behaviours have been examined in several individual locations (Wolf *et al.*

1994, von Essen & Sjoden 1995, Larsson *et al.* 1998, Widmark-Petersson *et al.* 1998, Ekstrom 1999, Cossette *et al.* 2005, McCance *et al.* 2009, Tucket *et al.* 2009, Mlinar 2010, Zamanzadeh *et al.* 2010), there are few international studies which compare the perceptions of caring behaviours of patients and nurses at the same time (Watson *et al.* 2003). In this study, caring is examined in six different European countries characterized by diverse languages, cultures and political and economic histories.

## Background

There is a growing realization that caring is a complex phenomenon that lies at the heart of nursing. The conceptual theoretical basis for this study was derived from caring literature in general and Watson's (1985) theory in particular, supporting human caring as an existential human relational experience in nursing practice. The conceptual definition reported nurse caring as an 'interactive process that occurs during moments of shared vulnerability between nurse and patient' (Wolf *et al.* 1994, Beck 1999). Beyond the moral, philosophical, existential and spiritual intent, Watson supports that by examining caring behaviours and 'assessing caring empirically, nursing may uncover more of a caring science view about its basic relational-ethical-ontological assumptions. In addition to the development of a more formal researching of caring, the conceptual-theoretical caring values and philosophies may more clearly emerge, thereby more distinctively informing, if not transforming, the biophysical-technological model of care' (Watson 2008, p.5). Two important meta-syntheses of qualitative analyses of caring (Sherwood 1997, Finfgeld-Connett 2008) support that the concept of caring has not been clearly conceptualized and in fact is not always seen favourably (Paley 2002). The earliest empirical studies on caring were published in the 1980s and focused on the nature of caring through nurse caring behaviours. Later studies were moved towards a consideration of the relationship between caring and caring outcomes (Larrabee *et al.* 2004, Green & Davis 2005, Cheung *et al.* 2008).

Comparative studies exploring patients' and nurses' perceptions of caring behaviours have been conducted in a variety of settings including, hospitals, long-term care and rehabilitation centres (Wolf *et al.* 1994, von Essen & Sjoden 1995, Larsson *et al.* 1998, Widmark-Petersson *et al.* 1998, Ekstrom 1999, Cossette *et al.* 2005, McCance *et al.* 2009, Tucket *et al.* 2009, Mlinar 2010, Zamanzadeh *et al.* 2010) and the most extensively used data collection methodology was the Care-Q (Larson 1987, von Essen & Sjoden 1991, 1993, Widmark-Petersson *et al.* 1998, Chang *et al.* 2005, Tucket *et al.* 2009). However, the results from these studies

are contradictory, with the majority of studies showing an important variation in the differences between patients' and nurses' perceptions of caring and caring behaviours. Examples of the results of these studies demonstrate that nurses assign a significantly higher importance to the 'Comfort' and 'Trusting Relationships' sub-scales and consistently rank the 'Comfort' sub-scale as their first priority (Larson 1987, Mayer 1987, von Essen & Sjoden 1991, 1993, Larsson *et al.* 1998, Tucket *et al.* 2009). Differences were also found when patients chose sub-scales that included more instrumental behaviours like 'Knows how to give shots, IVs and Manage Equipment' and considered the 'Monitors and Follows Through' sub-scale to be of higher importance than more expressive behaviours (Larson 1987, Mayer 1987, Keane *et al.* 1988, von Essen & Sjoden 1991, von Essen *et al.* 1994, Widmark-Petersson *et al.* 1998, Tucket *et al.* 2009). At the same time, nurses chose mostly expressive behaviours like the item 'Listens to the Patient' to describe important caring actions (Larson 1987, Mayer 1987, von Essen & Sjoden 1991, Gooding *et al.* 1993, Scharf & Caley 1993, O'Connell & Landers 2008). For people with cancer, the assumption that patients and nurses would establish a long-term care relationship and develop more consistent perceptions about the importance of caring behaviours is supported in some studies in the 'Monitors and Follows Through' category, where there is congruence between patients and nurses (Widmark-Petersson *et al.* 1998). This contrasts with studies in which nurses gave a lower ranking to this specific sub-scale (von Essen & Sjoden 1991, von Essen *et al.* 1994).

Although there are studies concerned with the benefits of certain interventions like individualized care (Suhonen *et al.* 2007) and facilitating self-care (Paradis *et al.* 2010), there is a scarcity of research that relates nursing behaviours to patient outcomes. Some of these rare studies explore caring behaviours, and have focused on outcomes in terms of patient satisfaction (Wolf *et al.* 1998, 2003, Larrabee *et al.* 2004, Green & Davis 2005, Wu *et al.* 2006) in which interesting correlations were found between caring behaviours and patient satisfaction.

The above studies repeatedly reported considerable differences between nurses' and patients' ranking of the importance of nurse caring behaviours. Patients appear to value the instrumental, technical caring skills more than nurses do perceiving behaviours that demonstrate competency in the performance of nursing intervention activities ('knowing how') as more important. Nurses perceive their psychological skills and expressive or affective caring behaviour as more important than patients do leading to an idea that nurses may misperceive the importance of emotional aspects of caring in relation to patient judgments. This means that nurses may not

assess patient perceptions of caring accurately and the care delivered may not be congruent to their patients' expectations or needs. In addition, there is a need to understand and to compare the perceptions between nurses and patients across different European countries so that in the future the research could be used to harmonize the meaning of caring across Europe in line with the European Directives and the movement towards a common framework of nurse education. It is also anticipated that the findings will create a rational basis for the relationship between caring and patient outcomes facilitating consistent research in this area.

## The study

### Aim

The aim of this study was to compare patients' and nurses' perceptions of nurse caring behaviours across six European countries.

### Design

This study employed a descriptive, comparative study design. Data were collected from patients admitted to surgical wards and their nurses in six countries: Cyprus, the Czech Republic, Finland, Greece, Hungary and Italy during autumn 2009.

### Participants

Data were collected using participant-completed questionnaires from a convenience sample of surgical inpatients and their nurses in each of the six countries: Cyprus (six hospitals, 15 wards), the Czech Republic (five hospitals, 18 wards), Finland (seven hospitals, 14 wards), Greece (four hospitals, 15 wards), Hungary (four hospitals, nine wards) and Italy (eight hospitals, 17 wards).

Power analysis was used to determine the sample size, with the NQuery Advisor statistical software. It required at least 150 completed questionnaires from nurses and 223 from patients from each country for a 90% power level to be achieved ( $\alpha = 0.01$ ). The validity of the study was increased through the uniformity of the inclusion criteria and the collection of data from all countries during the same time period ensuring systematic data collection. Overall, the whole study data were collected from 1659 patients (Questionnaires distributed = 1971, response rate 84.17%. For analysis only 1537 questionnaires were used after removing those questionnaires with missing data.) and 1195 nurses (Questionnaires distributed = 1567, response rate 76.26%. For analysis only 1148 questionnaires were used after removing those

questionnaires with missing data) from 88 general surgical inpatient wards in 34 hospitals.

In the study, surgical wards were defined as those inpatient facilities where surgical procedures are employed. The hospitals included in the study were chosen based on the specific characteristics and policies of each research partner's health system, the access, proximity and convenience of use.

To be eligible for the study, patients had to be hospitalized in a surgical unit for surgical treatment for at least 2 days, cognitively aware enough to give informed consent to join the study as judged by the head nurse, able to communicate in the native language of the participating country and willing to participate. Nurses had to be Registered Nurses, working in the same surgical inpatient wards as the patients and willing to participate in the study. Researchers in each country recruited participants to the required level.

### Data collection

The questionnaire for the collection of data included the demographics and the Caring Behaviours Inventory (CBI). The CBI constructed by Wolf (1986) and Wolf *et al.* (1994) was one of the earliest care measurement instruments to be developed linked to a conceptual-theoretical base which considers the caring process as an intimate exchange between the nurse and the patient enhancing the growth of both parties. The version used in the study was the CBI-24, a derivative of the original instrument which was reduced to 42 (Wolf *et al.* 1994, Beck 1999) and more recently to 24 (Wu *et al.* 2006). The CBI-24 is therefore considered to be a third-generation instrument for the measurement of caring.

The CBI has been used by over 132 investigators from several countries and is the only instrument in which caring is conceptualized as an interpersonal intervention (Watson 2008). In addition, the CBI is one of the few instruments where the same version can be used with nurses and patients without changes, facilitating the comparisons (Watson 2008, Papastavrou & Efstathiou 2010) required in this study. Other attributes include simplicity and ease of administration. Each item in the CBI-24 is linked to a 6-point Likert-type scale (1 = Never to 6 = Always). The higher the mean of responses, the more frequently caring is perceived. Tests using patients' responses revealed a factor structure of four sub-scales: F1 = Assurance of Human Presence, F2 = Knowledge and Skill, F3 = Respectful Deference to Others, and F4 = Positive Connectedness.

#### *The data collection process*

The CBI-24 was translated into the languages of the participating countries by standard forward and back translation

procedures following a MAPI Research Institute (MAPI Research Institute 2009) modification approach to translation and adaptation. An international group discussion consisting of the research partners was used to ensure agreement about the content, concept, criterion and semantic equivalence of the scales. This group also compared the translated versions to the originals. The meaning of each question was discussed until there was agreement that each question had the same meaning as the original in every study language. Further consultation took place with the developer of the instrument about the instructions to participants. After a pilot study to practice and coordinate the whole research process no modifications to the instrument or the procedure were required.

The questionnaires were distributed by contact persons appointed in each setting by the researcher. The completed questionnaires were collected from patients later on in the same day of distribution to facilitate an increased response rate. Nurses were asked to place the completed questionnaires in a box situated in the nurse manager's office for this purpose. Verbal reminders were given to the nurses 1 and 2 weeks after the distribution of the questionnaires to facilitate an increased response rate.

### Ethical considerations

The study was conducted according to general ethical standards (Beauchamp & Childress 2001) and national study protocols. The Ministry of Health of Cyprus (permission act: 5.14.02.4(2)) and the Cyprus National Bioethics Committee (permission act: EEBK/ΕΠ/2008/1) approved the overall research protocol, as Cyprus was the coordinating partner. Eligible nurses and patients were given an information letter explaining the aims of the study assuring them of anonymity of the collected data. They were also advised that they could refuse participation or withdraw from the study at any time. Furthermore, it was made clear in the information letter that completion and return of a questionnaire was considered as informed consent for participation in the study.

The participating partners followed their national guidelines about Research Ethics Committee approval and access to the research settings chosen and used their own policies about data protection. Completed questionnaires were sent to the coordinating country using confidentially safe methods and the data were protected by restricted access.

### Data analysis

Data were analysed using spss version 16.0 for Windows (SPSS Inc. Chicago, IL, USA) performed by the coordinating

country. The reliability of the instrument was established using Cronbach's alpha coefficients. The background variables, items and scales were analysed using descriptive statistics, means, standard deviations, frequencies and percentages. Comparisons were made using inferential statistics. Nurses' and patients' perceptions of caring behaviours were compared using independent samples *t*-test (*t*-statistics, *P*-value). Patients' and nurses' background variables were compared using a one-way analysis of variance (ANOVA, *F*-statistics, degrees of freedom and *P*-value) for the numerical variables and chi-square tests (chi-square with degrees of freedom and *P*-value) for categorical variables. As the background variables differed significantly, showing no homogeneity in the national samples, comparison was carried out using an analysis of covariance (ANCOVA) (Munro 1997).

### Reliability tests

An internal consistency reliability test was performed on the CBI-24 using Cronbach's alpha values on the data pooled from the six countries into one sample for nurses (alpha = 0.94) and into one sample for patients (alpha = 0.96). The corresponding Cronbach's alpha values of the CBI-24 for patients and nurses in the participating countries ranged from 0.87 to 0.97 for patients and 0.94 to 0.97 for nurses.

## Results

### Patient profile

There were slightly more female patients (51%) than male patients (49%). The mean age of the patients was 54.4 years (SD = 16.7) and ranged from 17 to 94 years. The lowest mean age was observed in Cyprus (47.1, SD = 18.2) and the highest in Finland (59.1, SD = 14.4). The majority of patients reported their highest education to be at secondary level (41%) with the exceptions of Italy where most of the respondents reported a college education (41%) and Finland which had the largest group reporting a primary education level (47%). The mean duration of hospitalization was 9.7 days (SD = 11.9), and 76% had previous experience of hospitalization. For the question 'how would you evaluate your health condition' 44% answered 'good' and 36% 'fair'. For the patients, ANOVA comparisons showed that there were important between-country differences both in age and in days of hospitalization ( $P < 0.001$ ). Similarly, the results of the chi-square tests for the categorical variables in the cross-country comparisons, showed that there were important differences in all variables (gender, education, whether or not the patient had surgery in the present admission,

whether or not the patient had previous experience in a hospital, type of admission and health condition) ( $P < 0.001$ ).

### Nurse profile

The majority of nurse participants were women (92%), but there were gender differences in between-country comparisons. Most male nurses were found in Cyprus (24%), and then in Italy (12%). Nurses' mean age was 38.1 years (SD = 10.2), ranging from 20 to 65 years. The lowest mean age was observed in the Czech Republic (34.3, SD = 10.3) and the highest was in Finland (42.7, SD = 10.7). The mean work experience was 15.5 years (SD = 10.3) with a range of 6 months–40 years and their mean experience in the unit in which they were currently working was 9.4 years (SD = 8.5) ranging from 2 months to 38 years. The results of the ANOVA tests, showed that there were highly important differences in the nurse demographics between the countries for all the numerical variables (all  $P < 0.001$ ), namely age, total experience and experience in the unit. Similarly, the results of the chi-square tests for the categorical variables in the cross-country comparisons, showed that there were highly important differences for the categorical variables, gender ( $P < 0.001$ ), except the type of work ( $P = 0.118$ ).

### Comparison of patients and nurses in the four factors of the CBI-24

The four factors of CBI-24 were created according to the questions that loaded on each. Factor scores ranged from 1 to 6. The highest mean of both patients and nurses was observed in the 'Knowledge and Skill factor' (5.30 and 5.29, respectively). The two groups were compared in terms of their responses to the four factors of the CBI-24. Independent samples *t*-tests showed that there were important differences in the first (Assurance of Human Presence) ( $P < 0.001$ ) and third factors (Respectful Deference to Others) ( $P < 0.001$ ), where the nurses' responses had higher means (more answers towards agree/strongly agree) compared to that of the patients' (Table 1).

### Cross-country comparisons in relation to perceptions of caring

Cross-country comparisons were performed to find out if nurses and patients in the six countries showed different perceptions of care, reflected in the CBI-24 scale. As the demographic results had already shown important differences between the countries, an ANCOVA was carried out using the



**Table 1** Comparison of nurses and patients in the four factors of CBI-24 (factor scores range from 1 to 6)

CBI-24	Group	<i>n</i>	Mean	SD	Dif <sup>†</sup>	<i>t</i> -statistic	<i>P</i> value
F1:Assurance of Human Presence	Patients	1441	4.96	0.85	0.14	4.81	< 0.001*
	Nurses	1099	5.10	0.68			
F2:Knowledge and Skill	Patients	1448	5.30	0.78	0.01	0.51	0.608
	Nurses	1111	5.29	0.63			
F3:Respectful Deference to Others	Patients	1413	4.72	0.98	0.15	4.11	< 0.001*
	Nurses	1089	4.87	0.77			
F4:Positive Connectedness	Patients	1472	4.63	1.02	0.05	1.32	0.188
	Nurses	1108	4.58	0.80			

\*Difference is statistically significant at the 0.01 level.

<sup>†</sup>Absolute mean difference.

**Table 2** Estimated marginal means\*, confidence intervals, ANCOVA results (F-Statistic, degrees of freedom, *P*-value), for cross-country comparisons for the CBI-24 scale

Nurses	Mean (95% CI)	F (d.f.)	<i>P</i> value	Patients	Mean (95% CI)	F (d.f.)	<i>P</i> value
Cyprus	4.69 (4.57, 4.82)	24.199 (5)	< 0.001	Cyprus	5.03 (4.90, 5.17)	26.945 (5)	< 0.001
Italy	5.04 (4.94, 5.14)			Italy	4.87 (4.73, 5.01)		
Hungary	5.23 (5.12, 5.33)			Hungary	5.30 (5.18, 5.43)		
Czech Republic	5.06 (4.96, 5.16)			Czech Republic	4.67 (4.56, 4.78)		
Greece	4.52 (4.42, 4.62)			Greece	4.48 (4.36, 5.58)		
Finland	5.08 (5.00, 5.16)			Finland	5.13 (5.02, 5.24)		

\*Estimated through the general linear model, ANCOVA.

demographic variables for which important differences were identified as covariates.

For the patient sample the covariates were gender, age, education, length of hospitalization, if the patient had surgery, previous hospital experience, type of admission and health condition. The scales were adjusted for these demographics and the data from the six countries were compared. Marginal means were estimated for each scale for each country, along with the 95% confidence intervals for each scale. The ANCOVA F-test was based on pairwise multiple comparisons, using the Bonferroni adjustment. The patient response results showed that there were statistically significant differences in the CBI-24 scale between the six countries ( $F = 26.945$ ,  $P < 0.001$ ) (Table 2). In addition, pairwise comparisons showed that Hungary had a higher mean compared to Italy, the Czech Republic and Greece (all  $P < 0.001$ ). The Czech Republic had a lower mean compared to Cyprus ( $P = 0.001$ ), Hungary and Finland ( $P < 0.001$ ). Finally, Greece had a lower mean compared to Cyprus, Italy, Hungary and Finland (all  $P < 0.001$ ) (Table 2). For nurses, the covariates were gender, age, total experience, experience in the unit and type of work, so the scale was adjusted for these demographics and the data from the six countries compared. Marginal means were estimated for each country, along with the 95% confidence intervals and pairwise multiple comparisons were performed using the

Bonferroni adjustment. Results from the ANCOVA showed that there were statistically significant differences in the nurses' responses on the CBI-24 scale between the six countries ( $F = 24.199$ ,  $P < 0.001$ ) (Table 2). Pairwise comparisons showed that Cyprus and Greece had significantly lower means compared to Italy, Hungary, the Czech Republic and Finland (all  $P < 0.001$ ).

### Comparisons between nurses and patients for each country separately

Independent samples *t*-tests showed that important differences between the mean values of patients and nurses and for the whole scale were only observed in Cyprus and the Czech Republic. In both cases, the nurses' means were higher compared to those of the patients. Concerning the CBI-24 factors, the results varied in terms of the factors which showed important differences, the different countries and whether the nurses' mean was higher compared to the patients' mean or vice versa. More specifically, important differences between nurses and patients were found.

- for the second (Knowledge and Skills) and fourth (Positive Connectedness) factors in Cyprus, where the patients' mean was higher compared to nurses',
- for the first (Assurance of Human Presence) and third (Respectful Deference to Others) factors, in Italy, where the

nurses' mean was higher compared to patients' and for all the factors,

- in the Czech Republic, where in all the cases the nurses' mean was higher compared to their patients,
- in Hungary, where an important difference was found only in factor one (Assurance of Human Presence), with the nurses' mean being higher than the patients'
- in Finland, where an important difference was observed in factor two (Knowledge and Skills), where the patients' mean was higher than the nurses' (Table 3).

## Discussion

### Limitations of the study

Some limitations of the study need to be taken into account before interpreting the results. The study used a convenience sample which was drawn from specific locations in each country. Therefore, geographical factors, relevant to the sample, may have influenced the perception of specific items in the CBI-24. However, the samples were large enough to

**Table 3** Nurse–Patient differences per country

	Groups	<i>n</i>	Mean	SD	Dif <sup>†</sup>	<i>t</i> -statistic	<i>P</i> value
CYPRUS							
CBI-24	Nurses	158	5.0338	0.53364	0.4198	6.244	< 0.001**
	Patients	212	4.6140	0.75892			
CBI-24:F2	Nurses	134	4.9687	0.72292	0.2154	−2.40	0.017*
	Patients	201	5.1841	0.91332			
CBI-24:F4	Nurses	133	4.4000	0.80038	0.3787	−3.73	< 0.001**
	Patients	207	4.7787	1.06412			
ITALY							
CBI-24	Nurses	178	5.0407	0.49179	0.0407	0.701	0.484
	Patients	219	5.0000	0.66534			
CBI-24:F1	Nurses	184	5.1325	0.51467	0.1289	2.228	0.026*
	Patients	245	5.0036	0.68347			
CBI-24:F3	Nurses	183	4.8616	0.66365	0.1616	2.146	0.032*
	Patients	235	4.7000	0.87541			
HUNGARY							
CBI-24	Nurses	145	5.2511	0.58459	0.0663	0.952	0.342
	Patients	205	5.1848	0.71746			
CBI-24:F1	Nurses	175	5.3586	0.57031	0.1385	2.189	0.029*
	Patients	247	5.2201	0.72716			
CZECH REPUBLIC							
CBI-24	Nurses	158	5.0338	0.53364	0.4198	6.244	< 0.001**
	Patients	212	4.6140	0.75892			
CBI-24:F1	Nurses	166	5.2116	0.57020	0.5142	7.426	< 0.001**
	Patients	233	4.6974	0.81278			
CBI-24:F2	Nurses	182	5.2802	0.63101	0.2138	3.214	0.001**
	Patients	262	5.0664	0.76555			
CBI-24:F3	Nurses	169	4.8955	0.64671	0.4975	6.500	< 0.001**
	Patients	232	4.3980	0.88580			
CBI-24:F4	Nurses	180	4.6733	0.65974	0.3593	4.852	< 0.001**
	Patients	265	4.3140	0.90159			
GREECE							
CBI-24	Nurses	154	4.5555	0.96727	0.0315	0.295	0.768
	Patients	212	4.5240	1.03522			
FINLAND							
CBI-24	Nurses	260	5.0835	0.38092	0.0348	−0.701	0.484
	Patients	250	5.1183	0.69159			
CBI-24:F2	Nurses	269	5.2275	0.50252	0.1009	−1.969	0.050*
	Patients	268	5.3284	0.67214			

\*Difference is statistically significant at the 5% level.

\*\*Difference is statistically significant at the 1% level.

<sup>†</sup>Absolute mean difference.

fulfil the requirements of the power analysis and may be considered fully representative in some countries. For example the Cypriot data were collected from all the hospitals in the country and covered the whole geographical area. The Greek and Hungarian hospital samples were representative because although the hospitals were situated in the capital area, patients were admitted from all over the country. There are risks in the comparison of data from patients of different cultures. The data from patients of different countries did differ in background variables and were not immediately comparable. To mitigate this, the ANCOVA was used to standardize the respondent's background variables in both patients' and nurses' samples (Munro 1997).

### Discussion of the results

In this study the overall scores and the scores obtained for each factor of the CBI-24, for both patients and nurses were very high. In addition, the standard deviation of the means was small, demonstrating that patients and nurses perceived that caring behaviours are adopted 'very frequently'. This is an important result for nurses because their ideas about caring, translated into caring behaviours in their daily practice are appreciated by the patients. This supports the idea that the work on caring from an educational and managerial perspective by nurse educators, head nurses, respectively, and by the nursing community in general is worthwhile.

The results demonstrate that patients and nurses perceived knowledge and skill as the most important sub-scale of the CBI-24. In this respect, this finding is similar to previous studies which have shown that patients judge nurses on the technical aspects of care and professional knowledge, (Gooding *et al.* 1993, Holroyd *et al.* 1998, Larsson *et al.* 1998, Widmark-Petersson *et al.* 1998, Zamanzadeh *et al.* 2010). These results are different from other studies over the last two decades which show that broader based nursing knowledge and skills are now more appreciated by patients. This trend can be explained in the European framework of nursing practice and education linked to the efforts to unify nursing curricula throughout Europe (EU-Directive 36\2005) and the movement in the development of student nurses from an apprentice-based training model to a university-based academic model (Papastavrou *et al.* 2010).

Significantly different opinions between patients and nurses were observed in the category 'assurance of human presence'. Nursing presence is a concept representative of caring behaviours and a holistic approach to caring in which the nurse encounters the patient as a unique human being in a unique situation and chooses to "spend" herself on his behalf (Doona *et al.* 1999, Godkin & Godkin 2004). In this

study, this 'assurance of human presence' factor containing items like 'visiting the patient, communicating, encouraging calling, responding to patients calls' was given lower ratings by patients compared to nurses. This raises questions about the sensitivity of nursing staff to understand and respond to patients' actual and perceived needs and expectations.

A seemingly more alarming finding is the lower evaluation given by patients, compared to nurses, in the category of 'Respectful Deference to Others'. This factor contains items like 'supporting the patient, respect individuality, being empathetic, giving opportunities to express feelings and satisfying patients' needs'. The difference between the patients and nurses scores may reflect the conceptual confusion about how respect is perceived and expressed by nurses given the complexity and ambiguity of everyday nursing practice (Gallagher 2007) and how patients expect to be respected.

Other comparative studies have also found that patients' ratings are lower than that of the nurses' in behaviours like 'trusting relationships' (Larson 1987, Larsson *et al.* 1998, Tucket *et al.* 2009), 'comfort' (von Essen & Sjoden 1991, 1993, Tucket *et al.* 2009), 'explains and facilitates' (Chang *et al.* 2005) and 'respecting individuality' (Hegedus 1999) giving the impression that in contrast to knowledge, certain values which are embedded in caring are not conveyed to the receivers of care.

The cross-country comparison, as expected, revealed many between-country differences which correspond to the results of previous international studies (Leino-Kilpi *et al.* 2003, Watson *et al.* 2003, Suhonen *et al.* 2008). It is possible to speculate that these differences may be attributed to organizational factors, different healthcare systems and models of nursing care delivery, different aspects of education and training and cultural differences concerned with prevailing values in the society (Watson *et al.* 2003). Therefore, in addition to the comparative findings it is necessary for the results to be explained in the context of each country considering the different constraints in the practice of nursing and the ideologies and philosophical positions of nurse education.

The lowest mean values for the CBI-24 by the patients were calculated for Greece, Cyprus and the Czech Republic (Table 2). An important variation from the other participating countries is the functional model of organized nursing care employed in Greek hospitals based on task allocation. Fragmented care and low nursing accountability (Merkouris *et al.* 1999) may explain why the caring behaviour ratings by Greek patients and nurses were the lowest among the six countries. Other reasons include a low patient-nurse ratio (OECD 2004), time pressures of a busy work environment



### What is already known about this topic

- Comparing patients' and nurses' perceptions about caring behaviours is an important step prior to the assessment of the effect of nursing care on patients' health outcomes.
- Although international comparative studies about caring behaviours are limited, there is evidence of a lack of congruence between patients' and nurses' views on the meaning of caring.
- Cross-cultural research is needed to improve evidence-based practices. The usefulness of research into caring might be reduced if the concept of caring is not culturally consistent.

### What this paper adds

- Provides information about the differences in the perceptions of caring behaviours between nurses and patients from different cultures and countries.
- Supports an international collaboration facilitating an improved understanding of caring across Europe.
- Facilitates research into the relationship between caring and patient outcomes.

### Implications for practice and/or policy

- The evidence derived from this cross-cultural comparative study may be used in the production of a common framework for caring and nurse education at a European level. In turn, this will create a rational basis for the relationship between caring and patient outcomes facilitating consistent research in this area.

and the mainly practice-based orientation of nurse education (Patelarou *et al.* 2009) which leads to restricted professional autonomy in nursing practice (Papathanasoglou *et al.* 2005). Nurses may not be perceived as carrying out caring behaviours because, due to the shortage of Registered Nurses in Greece, as in other South-East Europe countries (ICN 2004), nursing care is given by nursing assistants with 2 years of nursing education (Merkouris *et al.* 1999) and informal carers (Sapountzi-Krepia *et al.* 2008). In contrast to the other participating countries there was congruence between Greek nurses' and patients' perceptions of caring behaviours. This interesting finding may be explained by the long-term difficult working conditions in Greek hospitals acknowledged by both patients and nurses. There is no doubt that nursing staff shortage (Plati *et al.* 1998) limits opportunities for nurses to

implement changes. This and patients' low satisfaction with the provision of nursing care (Merkouris *et al.* 2004) both influence nurses' and patients' perceptions of care. By scoring congruently both patients and nurses may be recognizing the difficulties in the same way. The sharing of opinions about caring behaviours between patients and nurses is supported in a recent study (Sapountzi-Krepia *et al.* 2008), where the majority of nurses, patients and their relatives acknowledged the nursing staff shortage in the wards. Patients' relatives stayed at the patient's bedside after visiting hours either to give psychological support, or because they did not believe that the patients were safe. It was reported in this same study that some hospital staff suggested that relatives should stay for long hours or that patient's helpers should be employed by the patients themselves indicating that nursing personnel considered that the contribution of care staff, other than themselves, was necessary.

Cyprus had the youngest sample of patients and the largest number of male nurses. Herein, age and gender stereotypes may contribute to and reflect expectations of male and female caring behaviour. If caring is seen, stereotypically, as a female attribute it is possible that male nurses might avoid more caring behaviours and attitudes in their practice than female nurses (Ekstrom 1999).

The lowest mean value in the CBI-24 factors was calculated for the Czech Republic (Table 3). However, 73% of Czech nurses in this study were graduates from 4 years of secondary, vocational schooling which focused on instrumental skills and medical knowledge. In the Czech Republic nursing is not considered a science and so in their nurse education these nurses did not learn how to assess and respond to patient needs and how to communicate with them but were rather trained 'to be good assistants of the physicians' (Jarosova *et al.* 2009). However, one would expect that the Czech Republic and Hungary, which are recent members of the European Union (EU) and also part of central Europe, would have similar results. However, the highest means both for patients and nurses were given in Hungary and this may be attributed to the general health and nursing education developments in that country (Balogh *et al.* 2008, Pop *et al.* 2009).

Italian nurses gave higher scores, on average, compared to patients (Table 3). It is difficult to explain this asymmetry which might be related generally with the high value given to caring during nursing education (Bortoluzzi & Palese 2010). As effect, nurses may have developed a high ideology of caring. They also may have high expectation on caring due to the historical link of the profession with catholic religion. In addition, the asymmetry might be explained by the wish of the Italian nurses to give the best caring to their patients, in

accordance with recent professional advancements achieved. However, given the many economic constraints, it is not always possible for nurses to act according to these caring expectations, which in fact are not completely perceived by patients in their hospital experience (Palese 2008, Tomietto *et al.* 2010).

Finnish patients' and nurses' evaluations of caring were congruent. This finding may be explained in the general differences between the healthcare systems of the Scandinavian countries, mid-European region of the EU and the Mediterranean countries. Finnish patients value nurses' knowledge, but nurses seem to underestimate their own skills and knowledge. Reasons for congruence of response between the patients and nurses might include the use of patient satisfaction tools or patient/client feedback systems in many acute hospitals and nurses may have learned what patients want or expect (MASH 2009). National level guidelines about, for example, client-orientated and safe operating procedures, and making best use of evidence-based and best practice in the services may also have made a difference. Similarly the Status and Rights of Patients Act (1992/429) which safeguards, for example, patients' rights to good information and care, possibly had a positive impact on the nurses' efforts to offer care to meet their patients' needs and expectations.

## Conclusion

This study contributes empirical evidence towards the body of knowledge related to caring behaviours and suggests that obtaining patients' and nurses' evaluations about caring is critical for the development of a nursing service tailored to the patients' needs, beliefs, expectations and uniqueness. Further research is needed in other patient populations using different approaches which could explore patients' experiences in more depth. Research could also include other aspects of care such as the caring environment, the direct effects of caring on the patients' welfare and outcomes and the evaluation of caring costs. The European between-country differences need to be analysed in more depth in terms of justice, safety and equal opportunities for quality care. The evidence derived from this cross-cultural comparative study may be used to produce a harmonization of frameworks of caring and nurse education across Europe creating a rational basis for the relationship between caring and outcomes and facilitating consistent research in this area.

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## Conflict of interest

The authors report no conflict of interest.

## Author contributions

EP, RS, HL-K, EIP and CK were responsible for the study conception and design. EP, GE, RS, EIP, CK, ZB, AP, MT and DJ performed the data collection. EP, GE and HT performed the data analysis. EP, GE, HT, RS, AP and MT were responsible for the drafting of the manuscript. EP, HT, RS, HL-K, EIP, CK, ZB, AP, MT, DJ and AM made critical revisions to the paper for important intellectual content. HT provided statistical expertise. EP obtained funding. EP, GE, RS and ZB provided administrative, technical or material support. EP, H-LK, EIP and AM supervised the study.

## Permission

Written Permission to use the CBI-24 was obtained from its author. An agreement was also made about the assignment of copyright of each translation and the author agreed the modifications the research group considered necessary.

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