

## **PERCEPTIONS OF CARING BETWEEN SLOVENE AND RUSSIAN MEMBERS OF NURSING TEAMS**

Majda PAJNKIHAR, PhD, RN

Associate Professor, Dean, Head of Institute for Nursing Care

University of Maribor Faculty of Health Sciences, Zitna ulica 15, 2000 Maribor, Slovenia

Dominika VRBNJAK, PhD, RN

Assistant

University of Maribor Faculty of Health Sciences, Zitna ulica 15, 2000 Maribor, Slovenia

Natalia KASIMOVSKAYA, PhD, RN

Associate Professor, Dean of the Faculty of Higher Nursing Education and psycho-social work,  
Head of management of nursing and social work activities

I.M. Sechenov First Moscow State Medical University, 2-4 Bolshaya Pirogovskaya st.,  
Moscow 119991, Russia

Roger WATSON, PhD, RN, FRCN, FAAN

Professor of Nursing

University of Hull, Faculty of Health Sciences, School of Health and Social Work Hull HU6  
7RX, United Kingdom

\*Gregor STIGLIC, PhD

Associate Professor, Vice Dean for Research, Head of Research Institute

University of Maribor Faculty of Health Sciences, Zitna ulica 15, 2000, Maribor, Slovenia

University of Maribor Faculty of Electrical Engineering and Computer Science, Smetanova  
ulica 17, 2000 Maribor, Slovenia

Address correspondence to:

Gregor Stiglic, PhD

University of Maribor, Faculty of Health Sciences

Zitna ulica 15, 2000 Maribor, Slovenia

Tel: +386 2 30 04 701

Fax: +386 2 300 47 47

E-mail: [gregor.stiglic@um.si](mailto:gregor.stiglic@um.si)

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## **Abstract**

**Purpose:** To measure the perceptions of caring between Slovene and Russian members of nursing teams and compare the results with earlier findings in other European Union (EU) countries.

**Methods:** A cross sectional study that included nurses and nursing assistants in Slovenia (n = 294) and Russia (n = 531). Data were collected using the 25-item Caring Dimensions Inventory.

**Results:** The most endorsed item for Slovene and Russian members of nursing teams was an item related to medication administration. All items that were endorsed by Russian participants were also endorsed by Slovenian participants; however, they ascribed a different level of importance to individual aspects of caring.

**Discussion:** Compared with other EU countries, such as the UK and Spain, Slovenian and Russian members of nursing teams endorsed more technical aspects of nursing duties as caring, suggesting cultural differences and previous influences of the biomedical model on nursing education and practice.

**Keywords:** nursing, caring, culture, cross sectional study

## **INTRODUCTION**

Nursing is recognized as “the art and science of caring” (Pajnkihar, 2003; Peng, Liu & Zeng, 2015). The concept of caring is fundamental to nursing and there are many ways to define and describe it (O’Connell & Landers, 2008) because nurses’ work is complex (Hudacek, 2008). Watson describes caring as the ‘heart’ of contemporary nursing as meaning a wholeness of mind, body and soul (Watson, 2015). Caring can be defined as “a context-specific interpersonal process that is characterized by expert nursing practice, interpersonal sensitivity and intimate relationships” (Finfgeld-Connet, 2008, p. 202). It is important to note

that caring relationships are also vital for an organizational caring culture to exist (Vrbnjak, Pahor, Nelson, & Pajnikihar, 2017).

To be a caring nurse, nurses need artistic as well as scientific knowledge and expertise (Pajnikihar, 2003, 2008). Caring by nurses for patients includes instrumental and expressive behaviour or dimension (Duffy, Brewer, & Weaver, 2014; Woodward, 1997) or, in other words, technical skills and caring behaviours (Glenn, Stocker-Schnieder, McCune, McClelland, & King, 2014). Instrumental behaviour and technical skills are needed for the provision of physical care (Brilowski & Wendler, 2005; Woodward, 1997). Expressive behaviour is associated with the provision of psychosocial and emotional care (Woodward, 1997). Instrumental and expressive behaviour are both considered as caring, and both are equally important for patient care (Brilowski & Wendler, 2005). However, nurses perceive caring differently (Swanson, 1999; Patiraki et al., 2014). Swanson (1999) found that expressive behaviour, such as listening to the patient, allowing expression of feelings, and touching when comforting is needed are more frequently considered as caring, whereas instrumental behaviour such as knowing how to give medications, managing equipment and giving good physical care are considered less frequently as caring.

Nurses' perceptions of caring differ also between cultures and countries (Akansel, Watson, Aydin, & Özdemir, 2013; Watson et al., 2003). To our knowledge, no studies have been conducted in Slovenia and Russia into nurses' perception of caring. Previous research showed that patients in Slovenia feel depersonalised, dissatisfied, wishing for a more human, individual approach with focus on caring for patients and not only focusing on assuring physical and psychosocial needs (Pajnikihar, 2003). The Russian government is working on improving the healthcare system and services, to become similar to Western systems, especially in comparison with the U.S. system (Goodyear, 2012). Therefore research on what nurses perceive as caring is needed.

Carrying out research on caring in different cultures and countries is also important because of nurses' and patients' mobility (Palese et al., 2011) as well as students' mobility.

Familiarity with nurses' perceptions of caring in different cultures and countries may contribute to the organisation of educational programmes so that nurses can understand cultural differences (Watson et al., 2003). Only then can they understand "how their new peers work and how to adapt or retain valuable aspects of their own culture in a new situation" (Watson et al., 2003, p. 89). Cross-cultural understanding of caring is helpful in preparing effective teaching and practical approaches so that students will be able to grow as caring individuals (Labrague, McEnroe-Petite, Papathanasiou, Edet, & Arulappan, 2015) and gaining new perspectives of the caring concept. This could also help to understand and develop caring as a science (Slettebø & Fredriksson, 2015). Researching what caring means to nurses and researching concepts from different perspectives adds to knowledge about human caring (Turkel, Watson, & Giovannoni, 2018).

## **Background**

Culture is a complex phenomenon, influenced by different dimensions, such as geological, historical, social, lingual and national (Watson et al., 2003). In our study, culture is defined by some of these dimensions. First, Slovenia and Russia are two geologically distinct countries with different languages (Slovene, Russian), although both belong to a group of Slavic languages. In Slovenia, most people belong to the Roman Catholic Church. In the Russian Federation, the majority belong to the Orthodox Christian denomination (Central Intelligence Agency, n.d.). Slovenian has compulsory health insurance, and also voluntary health insurance implemented by insurance companies, and insurance for health services that are not addressed by compulsory insurance (Republic of Slovenia National Contact Point on cross-border healthcare, 2017). The Russian Federation has a mandatory health insurance, which guarantees all citizens equal opportunities to receive medical care in accordance with

the annually adopted programs (International Labour Organization, 2013). In both countries, undergraduate and postgraduate education in nursing have been influenced by the biomedical model and have started later than in most EU countries. In the biomedical model, cure and technical skills often have primary position, whereas care in terms of caring and provision of psychosocial and emotional care are considered less important (McKenna, Pajnikihar, & Murphy, 2014).

There is also a lack of research in this field in both countries. Both countries have low numbers of nurses with higher professional education, compared with other European countries. In Slovenia 72% (n = 12,387) of members of nursing teams have a 4-year secondary vocational education (nursing assistants) and 28% (n = 4,871) of nurses have 2-year college level education (nurses with associate degree) or 3-year first cycle Bologna study programme (nurses with diploma degree) or 2-year second cycle Bologna study programme (nurses with master degree) (National Institute of Public Health of the Republic of Slovenia, 2014). Nursing assistants work under supervision of nurses and predominately carry out direct patient care and are responsible in assisting patients' daily activities of life. Nurses with associate degrees, diploma degrees and master degrees are responsible not only for patient care but also for diagnostics and therapeutic treatment (Pajnikihar, Štiglic, & Vrbnjak, 2017). Their education is equivalent to registered nurses in North America. In the Russian Federation there are 1,287,659 members of nursing teams and 94% (n = 1,221,669) have a secondary vocational education (Ministry of Health of the Russian Federation, 2014). Education for nursing assistants is similar to vocational schools, closely linked to medicine (Rosebrough, 1997).

Slovenian and Russian societies are very individualistic with prevailing feminine values, being used to the state taking care of people (Prašnikar, Pahor & Vidmar Svetlik, 2008). As mentioned by Goodyear (2012) there is still a very strong governmental influence on the

healthcare system development in Russia in comparison to most western countries, including Slovenia. Knapp, Norton and Rihn (2009) also mentioned the different way of life and different mindset of nurses and the general population when comparing Russia to the U.S.

There are similarities in both countries, but the question is: how do they perceive caring and how is this comparable with results of similar studies conducted in the EU?

The aim of our research was to determine perceptions of caring between Slovene and Russian members of nursing teams and to see how this compares or contrasts with findings from other countries. A cross-sectional survey using the 25-item Caring Dimensions Inventory (CDI-25) developed by Watson and Lea (Watson & Lea, 1997) was used. Previous research using this instrument showed differences in the perception of caring regarding nurses' age and sex (Watson & Lea, 1998) and also differences regarding the clinical work area, between medical and surgical wards (Lea & Watson, 1999). The CDI-25 has been used to study the perceptions of caring in nursing among UK and Spanish nurses (Akansel et al., 2013; Watson et al., 2003).

## **METHODS**

### **Design**

This study was of a descriptive cross sectional design using surveys to collect data about perceptions of caring among members of nursing teams in Slovenia and Russia.

### **Setting and sample**

The research took place in two university clinical centres, one in north east Slovenia and one in the Moscow Region in Russia. Both university clinical centres in these two geographical areas are among the largest national health care institutions in the selected countries and

largest in the selected regions. Members of nursing teams (nursing assistants and nurses) working in surgical and medical wards were included in the research. We decided to include surgical and medical wards in this research as there is similar frequency of nursing tasks and proportion of employees in both wards caring for adult patients. Previous research also showed that there are no significant differences in the frequency of nursing tasks in medical and surgical wards (Farquharson et al., 2013). Convenience sampling was used and included all eligible personnel present at the time of questionnaire distribution. Questionnaires were distributed to 386 members of nursing teams in Slovenia, and 800 members of nursing teams in the Russian Federation. A total of 294 questionnaires were returned in Slovenia, giving a response rate of 76.2% and 531 questionnaires were returned in Russia, giving a response rate of 66.4%.

## **Measure**

The research tool used in this study was a questionnaire. The first section included demographic questions regarding participants' sex, age, education, ward, position, and working experience. The second section included the standardized questionnaire of the Caring Dimension Inventory (CDI) with acceptable content validity and reliability. The CDI is a quantitative tool designed by Watson and Lea (1997). There are many different instruments designed to measure caring (Watson, 2009), focusing on how nurses are caring for patients. The CDI is used to research what nurses conceptualise as caring. The CDI consists of 25-items (Table 1). Each question determines a nursing action and asks nurses whether or not they correspond to this aspect as caring (Lea, Watson, & Deary, 1998). The CDI is formulated as a five-point Likert Scale with responses from 1 = 'strongly disagree' to 5 = 'strongly agree'. The original CDI-25 has acceptable internal consistency (Cronbach's  $\alpha$  = 0.91) (Watson et al., 2003).



*Please insert Table 1.*

Approval to use and translate the instrument was acquired from the developer of the CDI-25. The translations of the questionnaire were done using backward and forward translation (Polit & Beck, 2017). A questionnaire was translated from the original English into the Slovene and Russian languages, and then translated back into the English by a translator who was unfamiliar with the original wording. This step was followed by a comparison between the wording of the original and back-translated items to detect any possible alterations resulting from the translation. In case of inconsistencies, we changed items to stay as similar as possible to the original questionnaire. Back-translated versions were not discussed with the developer of the original version.

The Slovene version of the instrument was then evaluated for content validity by six nurses with knowledge about caring science. Item content validity indices (I-CVI) and average scale validity index (S-CVI/Ave) were computed (Polit & Beck, 2006, 2012). All items of CDI-25 showed I-CVI ranging from 0.83 to 1.00. S-CVI/Ave for CDI-25 questionnaire had a score 0.97. Content validity indices were evaluated as acceptable, because I-CVI and S-CVI/Ave achieved values 0.78 and 0.90 or higher (Polit, Beck, & Owen, 2007). The Russian version was evaluated for its suitability of expressions and terminology by three academic researchers. Content validity was not evaluated.

### **Data collection**

Data collection took place in April 2015. Nursing managers were contacted prior to the questionnaire administration. The questionnaires were distributed in both health care

institutions in the morning shift by researchers. The maximum time for completing the questionnaire was 5 days. The completed questionnaires for members of nursing teams were returned in a sealed box.

### **Ethical consideration**

The study was approved by the institutional ethics committees in Slovenia and Russia. Participants were notified about the study purpose before distributing the questionnaires and their participation was voluntary. Completed questionnaires were collected in designated boxes to allow anonymous participation. Participants were informed that completion of the questionnaires will be considered as consent to participate in the survey. Research was done according to the principles of *The code of ethics for nurses and nurse assistants of Slovenia* (Nurses and Midwives Association of Slovenia, 2014) and *The code of ethics of nurses of Russia* (Ivanyushkin, & Samoilenko, 2010).

### **Data analysis**

Data were analysed with IBM SPSS Statistics (Version 22.0 for Windows, Armonk, NY, USA) for descriptive statistics and Pearson's correlation coefficient. These data were then saved in a tab-delimited form for import into the Mokken Scaling Procedure (MSP). Mokken scaling was done with the MSP (Akansel et al., 2013; Molenaar & Sijtsma, 2000) package in R statistical computing language, version 3.0.3 (R Core Team, Vienna, Austria) (van der Ark, 2007). MSP was used to examine the data for ordering of respondents on a unidimensional scale regarding to their total average on the CDI-25 Statistical package R was used to examine the data for invariant item ordering (IIO) (Akansel et al., 2013; van der Ark et al., 2007).

Loevinger's coefficient ( $H$ ) was used to check the scalability of items and measure how well the set of items meets the hierarchical criteria of the Mokken scales. Individual Loevinger's coefficient ( $H_i$ ) was computed for all items representing the number of times they violate hierarchical assumptions relative to other items. For each  $H_i$  95% CI was computed and examined whether the limit value of 0.3 lies within the 95% CI (Kuijpers, van der Ark, & Croon, 2013). An overall  $H$  was also computed for a set of items where  $H = 0.3$  was taken as the minimum value for a Mokken scale and  $H \geq 0.4$  indicated a strong Mokken scale. Rho reliability (analogous to Cronbach's alpha) was also calculated,  $Rho > 0.7$  was taken to indicate scale reliability (Watson, Deary, & Shipley, 2008). Internal consistency reliability (Cronbach's  $\alpha$ ) was also calculated for both versions. Cronbach's  $\alpha$  above 0.70 was used as the acceptable level (Polit & Beck, 2017).

## **RESULTS**

The average age of the participants was 39.46 (range = 19–69, SD = 10.35). The majority were females ( $n = 752, 92\%$ ). The majority were nursing assistants, with secondary vocational education ( $n = 631, 76.8\%$ ). Almost half ( $n = 371, 44.9\%$ ) were working on medical wards and little more than half ( $n = 447, 54.6\%$ ) on surgical wards. Ninety-three (11.3%) participants were nurse managers. Average years of work of participants experiences in their position was 14.89 (range = 0.2–53.0, SD = 10.93). Detailed participants' descriptions are shown in Table 2.

*Please insert Table 2.*

Table 3 shows the results of Mokken scaling for Slovene and Russian members of nursing teams. The Mokken scales from both groups had the 12 common items 2, 3, 4, 5, 9, 10, 12, 13, 19, 21, 22 and 25 (Table 3 and 4). Pearson's correlation between the items in the Slovene and Russian Mokken scale was 0.4 ( $p = 0.191$ ).

Cronbach's  $\alpha$  was 0.936 and 0.815 for the Slovene and Russian versions respectively.

Comparing the original version and others such as the Turkish (Cronbach's  $\alpha = 0.89$ ) (Akansel et al., 2013) and Persian versions (Cronbach's  $\alpha = 0.86$ ) (Salimi, Azimpour, Mohammadzadeh, & Fesharaki, 2014), the Slovene and Russian versions showed acceptable internal consistency reliability.

*Please insert Tables 3 and 4.*

In Table 4 the common items of CDI-25, derived from the Mokken Scaling Procedure in Slovenia, Russia, Spain and the United Kingdom, are coloured in grey and ranked by their mean score from most endorsed to least endorsed. The number next to each item refers to the Item number of CDI-25.

The results from two studies (Spain and United Kingdom) were compared with our results, as all four used same data collection tool CDI-25 questionnaire (in the United Kingdom the original version and in Spain, Slovenia and Russia translated versions) and data analysis approach (Mokken Scaling Procedure). Items retained from the Mokken Scaling Procedure in all four countries were listed in the Table and then compared for similarities and differences in a descriptive way.

Six items were common in Slovene, Russian, Spanish, and UK members of nursing teams, although with different ranking; these were: 'Observing the effects of a medication on a patient', 'Giving reassurance about a clinical procedure', 'Listening to a patient', 'Involving a

patient with his or her care’, ‘Being with a patient during a clinical procedure’, ‘Explaining a clinical procedure to a patient’.

## **DISCUSSION**

The present study compares perceptions of caring between Slovenian and Russian members of nursing teams. The most endorsed item from Slovene and Russian members of nursing teams was found for ‘Observing the effects of a medication on a patient’. Swanson (1999), however, found that medication administration as a technical skill was ranked as least caring behaviour by nurses. Also Papastavrou, Efstathiou and Charalambous (2011) found that nurses perceive psychological skills and caring behaviour as more important than instrumental and technical skills. Patients, however, value instrumental, technical caring skills and perceive them as caring behaviour and therefore more important (Papastavrou et al., 2011; Schultz, Bridgham, Smith, & Higgins, 1998; Swanson, 1999). Nurses are more aware of the need to treat patients as an individual physically, psychologically and spiritually (Pajnkihar, 2003).

All items that were endorsed by Russian participants were also endorsed by Slovenian participants. This indicates that Slovene and Russian members of nursing teams perceive caring in similar ways. The ranking of all other common items was different, suggesting that Slovene and Russian members of nursing teams ascribe a different level of importance to caring. This is also confirmed by Pearson’s correlation between items, which are not statistically important. Differences in perception could be the result of competencies of nursing teams’ members. Comparing the samples of both countries, in Russia the majority of nursing team members are nursing assistants, who are not involved in as many technical procedures as nurses. Nursing assistants are mainly responsible in assisting patients with

daily activities of life, whereas nurses independently and autonomously perform nursing procedures and interventions in the nursing process (Pajnikihar et al., 2017).

What is interesting is that twenty-three CDI-25 items were retained in the Mokken scale for Slovene participants, meaning that for Slovene members of nursing teams all aspects, except 'Keeping relatives informed about a patient' and 'Sharing your personal problems with a patient' were considered as caring. From the top ten rated items, four could be described as psychological dimensions of nursing: 'Providing privacy for a patient', 'Being honest with a patient', 'Listening to a patient' and 'Involving a patient with his or her care'. We can only speculate why. Nursing practice and education were influenced by the biomedical model and as a result, nurses could possibly endorse more technical skills as caring. However, as the situation is changing, and other nursing theories such as caring theories are being taught and introduced into nursing practice (Pajnikihar et al., 2017), the results of this transition could be that nurses perceive all of their work as caring. This needs further qualitative research.

In addition, *Hi* were markedly different between the Slovene and Russian sample, suggesting that the Slovene sample has a much more consistent perception of caring in nursing and, therefore, they respond to the items more consistently, such that there are fewer Guttman errors in the responses. Again, we can only speculate why. In the Russian Federation the biomedical model has a stronger influence on nursing education than in Slovenia. Nursing education in Russia has been provided by physicians until recently when the trend has started to change and more qualified nurse educators are in teaching positions (Goodyear, 2012). History could affect perception of caring, but this also needs further research. Nursing in Slovenia was previously very task oriented. Medically oriented nursing with a curative and routine bedside approach, without individual responsibility and personal involvement of patients and nurses, prevailed in practice. Changes in the socio-political system and in

educational structure shifted nursing practice to a more human and holistic individual approach (Pajnkihar, 2003). These historical changes could affect nurses' views of caring. The level of experience and age are other consideration. Li et al. (2016) and Watson & Lea (1998) found that older, more experienced nurses, perceive caring in more professional and technical terms. Additional research is needed to show a direct relation to differences in culture and caring in both country and internationally.

Comparing our results with the results of Spanish and UK nurses (Table 4), we can see the perceptions of caring being different between the two cultures. Two items could be described as technical: 'Observing the effects of a medication on a patient' and 'Giving reassurance about a clinical procedure'. Four others: 'Explaining a clinical procedure to a patient', 'Being with a patient during a clinical procedure', 'Listening to a patient', 'Involving a patient with his or her care' could be defined as psychological dimensions (Akansel et al., 2013). These could be defined as good communication skills. Patients need listening and compassionate nurses who can help them get out of their loneliness into a life worth living (Koskinen & Lindström, 2015). From six common items, two items: 'Observing the effects of a medication on a patient' and 'Giving reassurance about a clinical procedure' were higher rated by Slovene and Russian members of nursing teams than by Spanish and UK nurses. Technical competence is an essential aspect of nursing; however, technical knowledge and skills do not characterize nursing as a whole (Akansel et al., 2013). Research suggests that nurses endorse more psychosocial than technical items. In the study that compared the aspects in UK and Spain, 'Listening to a patient' received the highest level of endorsement from the CDI-25 (Watson et al., 2003).

Endorsing more technical than psychosocial aspects in Slovenia and the Russian Federation could be the result of the previously described influence of the biomedical model on nursing in

Slovenia and the Russian Federation, or instead of being client-oriented, proves to be more cure-oriented (Pajnkihar, 2003). This should have implications for nursing education. Emphasising the importance of psychological care may change nurses' perceptions of caring. Nurses could perceive that quality nursing is not only being technically competent, but also providing psychological care (Akansel et al., 2013). However, professional nursing implies caring for people in all health and illness situations, with respect and with dignity (Pajnkihar, 2003).

Interestingly, 'Being technically competent with a clinical procedure' was, uniquely, not endorsed by Russian members of nursing teams. This could be the result of different nursing roles in nursing practice. Differences in perceptions may be the result of cultural differences and different societal values, differences in nurse education and training, or differences in organizations where nurses work (Watson et al., 2003). Also, the biomedical model is focused on the physical care and technical experiences of nurses (Pajnkihar, 2003).

Emphasis should be placed on education, because nurses should have knowledge and apply all fundamental patterns of knowing in practice. Strong connection between practice, research and education is required in order to determine, respect and fulfil patient wishes and needs of health care system. Caring should be promoted in order that patients and society recognize nursing as a professional discipline.

### **Limitations**

The main limitation of this study is sampling. The generalization of the results is limited due to convenience sampling. The data were gathered from members of nursing teams in one geographical region area in Slovenia and one area in Russia, and as such may not be



applicable to other areas in both countries. According to recommendations developed by Straat, van der Ark, & Sijtsma (2014) we examined the adequacy of the sample size. We administered a Slovene version to 294 respondents with  $0.35 \leq Hi \leq 0.63$ , suggesting a good sample size. The Russian version was administered to a 531 sample size and reported a unidimensional scale with  $0.30 \leq Hi \leq 0.35$ , suggesting that the sample size is mediocre. Due to the fact that one can estimate the required sample size only after the  $H$  values were computed (Straat et al., 2014) we could not foresee the sample size prior to the data collection. All  $Hi$  items for the Russian version of CDI-25 were very low, which can be a result of different factors such as poor translation or not evaluating content validity, hence the results from the Russian sample should be interpreted with caution. Back-translated versions were also not discussed with the developer of the original version. Lowering the cut-off value for  $Hi$  to 0.2 yielded a result that indicated that the dimensions were reasonably defined (95 % CI never crossed the cut off value). Further research using larger sample sizes is needed. However, both Slovene and Russian version of CDI-25 showed acceptable internal reliability. It should also be noted, that studies have been conducted in different time frames. Research in Slovenia and Russia was conducted in 2015, in Spain in 2003 and in the United Kingdom in 1997.

## **CONCLUSION**

Despite the limitations, the study provided a picture of perceptions of caring in nursing between different countries. Members of nursing teams in Slovenia and the Russian Federation perceive more technical aspects of nursing duties as caring, which could be the result of the recent introduction of higher nursing education and the influence of the biomedical model on the nursing discipline. We found six common items that can be

described as both technical and psychosocial aspects of nursing duties that are perceived as caring in Slovenia, the Russian Federation, the UK and Spain. This article adds to the literature and can be in the interest of nursing educators and has also made a contribution to researching cultural differences in perceptions of caring using a CDI-25.

New education programmes for nurses can exploit the findings of this study by focusing on differences between the Slovenian and Russian perception of caring. Due to the increasing mobility of nurses patients and students our results contribute to nursing education, suggesting that Slovenia and the Russian Federation should promote caring in their education in order that the nursing workforce become comparable to other EU countries and worldwide. The trends in the health services in the Russian Federation are for providing efficient approaches (Goodyear, 2012). In healthcare systems such as in Slovenia and the Russian Federation – which face low nursing staff levels and where an emphasis is placed more on diagnostics and therapeutics than on the psychological, spiritual, and social aspects of care – the change to so-called non-caring trends is challenging (Pajnikihar et al., 2017). Nurses in education and practice must interactively promote and apply caring theories in practice to support patients and their families and to create a caring academic environment for students. This study also compares the obtained results with a similar study from the UK and Spain to give an even broader view on this field of work.

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## Tables

**Table 1** 25-Item Caring Dimension Inventory (CDI-25) items

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Stem question: Do you consider the following aspects of your nursing practice to be caring?

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1. Assisting a patient with an activity of daily living (washing, dressing, etc.).
  2. Making a nursing record about a patient.
  3. Feeling sorry for a patient.
  4. Getting to know the patient as a person.
  5. Explaining a clinical procedure to a patient.
  6. Being neatly dressed when working with a patient.
  7. Sitting with a patient.
  8. Exploring a patient's lifestyle.
  9. Reporting a patient's condition to a senior nurse.
  10. Being with a patient during a clinical procedure.
  11. Being honest with a patient.
  12. Organizing the work of others for a patient.
  13. Listening to a patient.
  14. Consulting with the doctor about a patient.
  15. Instructing a patient about an aspect of self-care (washing, dressing, etc.).
  16. Sharing your personal problems with a patient.
  17. Keeping relatives informed about a patient.
  18. Measuring the vital signs of a patient (e.g. pulse and blood pressure).
  19. Putting the needs of a patient before your own.
  20. Being technically competent with a clinical procedure.
  21. Involving a patient with his or her care.
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22. Giving reassurance about a clinical procedure.

23. Providing privacy for a patient.

24. Being cheerful with a patient.

25. Observing the effects of a medication on a patient.

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**Table 2** Participant characteristics

<b>Variable</b>	<b>All</b>	<b>Slovenia</b>	<b>Russia</b>
<i>N</i>	825	294	531
%	100	35.6	64.4
Age			
Mean	39.46	39.45	39.46
SD	10.35	8.827	11.099
Minimum-Maximum	19–69	19–59	19–69
Sex (n, %)			
Male	65 (7.9)	32 (10.9)	33 (6.2)
Female	752 (92.0)	256 (87.1)	496 (93.4)
Missing	8 (1.0)	6 (2.0)	2 (0.4)
Education			
Secondary vocational	631 (76,4)	139 (47.3)	492 (92.7)
Higher education	189 (23,0)	152 (51.7)	37 (6.9)
Missing	5 (0,6)	3 (1.0)	2 (0.4)
Ward (n, %)			
Medical	371 (44.9)	99 (33.7)	272 (51.2)
Surgical	447 (54.6)	191 (65.0)	256 (48.2)
Missing	7 (0.5)	4 (1.4)	3 (0.6)
Working position (n, %)			
RN	727 (88,1)	264 (89.9)	463 (87.2)
Nursing manager	93 (11,3)	27 (9.2)	66 (12.4)
Missing	5 (0,6)	3 (1.0)	2 (0.4)
Years of working experiences in position			

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Mean	14.89	15.608	14.487
SD	10.93	10.49	11.16
Minimum-Maximum	0.2–53.0	0.2–44.0	0.5–53.0

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**Table 3** Mokken scale derived from Slovene ( $n = 273$ ) and Russian members of nursing teams ( $n = 363$ ) CDI-25 data

Slovene members of nursing teams			Russian members of nursing teams		
Item number	Mean score	<i>Hi</i> ( <i>SE</i> )	Item number	Mean score	<i>Hi</i> ( <i>SE</i> )
25	4.45	0.60 (0.036)	25	4.92	0.30 (0.046)*
20	4.41	0.60 (0.035)	5	4.76	0.32 (0.038)*
23	4.39	0.60 (0.038)	4	4.71	0.33 (0.043)*
11	4.38	0.60 (0.034)	3	4.67	0.30 (0.040)*
18	4.38	0.63 (0.033)	13	4.66	0.31 (0.047)*
22	4.37	0.61 (0.036)	22	4.62	0.35 (0.045)*
13	4.36	0.62 (0.037)	10	4.57	0.32 (0.042)*
14	4.32	0.59 (0.041)	21	4.56	0.31 (0.044)*
21	4.3	0.63 (0.032)	19	4.42	0.33 (0.044)*
15	4.28	0.59 (0.050)	12	4.34	0.35 (0.041)*
6	4.28	0.57 (0.046)	2	4.28	0.31 (0.037)*
9	4.22	0.56 (0.043)	9	4.23	0.33 (0.039)*
10	4.16	0.60 (0.039)			
24	4.16	0.54 (0.037)			
5	4.12	0.56 (0.044)			
12	4.03	0.54 (0.039)			
1	3.98	0.41 (0.048)			
3	3.98	0.56 (0.035)			
2	3.95	0.46 (0.053)			
4	3.89	0.55 (0.043)			
19	3.86	0.35 (0.054)*			

8                    3.57            0.48 (0.040)

7                    3.53            0.43 (0.044)

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Scale  $H = 0.54$  (0.028)

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Scale  $H = 0.32$  (0.028)

$\rho = 0.958$

$\rho = 0.824$

Cronbach's alpha = 0.936

Cronbach alpha = 0.815

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\* 95% CI below 0.3.

**Table 4** Items common to Mokken scales from Slovene, Russian, Spanish and UK nurses



<b>Slovenia</b>	<b>Russia</b>	<b>Spain</b> (Watson et al., 2003)	<b>United Kingdom</b> (Watson & Lea, 1997)
25. Observing the effects of a medication on a patient.	25. Observing the effects of a medication on a patient.	13. Listening to a patient.	13. Listening to a patient.
20. Being technically competent with a clinical procedure.	5. Explaining a clinical procedure to a patient.	15. Instructing a patient about an aspect of self-care (washing, dressing, etc.).	23. Providing privacy for a patient.
23. Providing privacy for a patient.	4. Getting to know the patient as a person.	21. Involving a patient with his or her care.	22. Giving reassurance about a clinical procedure.
11. Being honest with a patient.	3. Feeling sorry for a patient.	23. Providing privacy for a patient.	21. Involving a patient with his or her care.
18. Measuring the vital signs of a patient (e.g. pulse and blood pressure).	13. Listening to a patient.	25. Observing the effects of a medication on a patient.	10. Being with a patient during a clinical procedure.
22. Giving reassurance about a clinical procedure.	22. Giving reassurance about a clinical procedure.	14. Consulting with the doctor about a patient.	5. Explaining a clinical procedure to a patient.
13. Listening to a patient.	10. Being with a patient during a clinical procedure.	20. Being technically competent with a clinical procedure.	25. Observing the effects of a medication on a patient.
14. Consulting with the doctor about a patient.	21. Involving a patient with his or her care.	22. Giving reassurance about a clinical procedure.	15. Instructing a patient about an aspect of self-care (washing, dressing, etc.).
21. Involving a patient with his or her care.	19. Putting the needs of a patient before your own.	18. Measuring the vital signs of a patient (e.g. pulse and blood pressure).	20. Being technically competent with a clinical procedure.
15. Instructing a patient about an aspect of self-care (washing, dressing, etc.).	12. Organizing the work of others for a patient.	11. Being honest with a patient.	9. Reporting a patient's condition to a senior nurse.
6. Being neatly dressed when working with a patient.	2. Making a nursing record about a patient.	5. Explaining a clinical procedure to a patient.	14. Consulting with the doctor about a patient.

9. Reporting a patient's condition to a senior nurse.	9. Reporting a patient's condition to a senior nurse.	10. Being with a patient during a clinical procedure.	18. Measuring the vital signs of a patient (e.g. pulse and blood pressure).
10. Being with a patient during a clinical procedure.		2. Making a nursing record about a patient.	
24. Being cheerful with a patient.		6. Being neatly dressed when working with a patient.	
5. Explaining a clinical procedure to a patient.			
12. Organizing the work of others for a patient.			
1. Assisting a patient with an activity of daily living (washing, dressing, etc.).			
3. Feeling sorry for a patient.			
2. Making a nursing record about a patient.			
4. Getting to know the patient as a person.			
19. Putting the needs of a patient before your own.			
8. Exploring a patient's lifestyle.			
7. Sitting with a patient.			

Grey – common items Slovenia, Russia, Spain, UK (All items are ranked by their mean score from most endorsed to least endorsed)

