ASSOCIATIONS OF INDIVIDUALIZED NURSING CARE AND QUALITY ONCOLOGY NURSING CARE IN PATIENTS DIAGNOSED WITH CANCER

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ABSTRACT

Purpose: To assess patients' diagnosed with cancer perceptions on individualized nursing care and quality of oncology nursing care in Cyprus.

Methods: This was a descriptive correlational research with 150 patients diagnosed with cancer and receiving treatment as in-patients at three different urban hospitals of Cyprus, based on predetermined inclusion and exclusion criteria. Data were collected with the Individualised Care Scale-ICS and the Quality Oncology Nursing Care Scale-QONCS. Statistical significance was set at the 0.05 level.

Results: Data showed that a medium level of support of patients' individuality was provided by nurses (ICS-A mean=3.41, SD=0.98) and a high level of realization of perceived individuality in the provided care. Quality of oncology nursing care was found high on three dimensions of care, i.e. being supported and confirmed, being respected and having a sense of belonging. A statistically significant positive correlation was observed between the two scales of ICS, i.e. ICS-A and ICS-B (r=0.80), and four of the dimensions of QONCS, i.e. "Being supported and confirmed", "Being cared for religiously and spiritually", "Sense of Belonging" and "Being respected" and all the subscales, i.e. Clinical Situation (r=0.45, 0.27, 0.41, 0.42), Personal life situation (r=0.30, 0.51, 0.44, 0.35) and Decision control (r=0.35, 0.46, 0.35, 0.40).

Conclusion: The correlations found between individualized care and quality of oncology nursing care, highlight the need to provide a more personalized nursing care as a means to achieve a high level of quality nursing care.

Key words: individualized nursing care, quality of oncology nursing care, patients diagnosed with cancer, Individualised Care Scale (ICS), Quality Oncology Nursing Care Scale (QONCS)

1. Introduction

Being treated for cancer is not only accompanied by negative side-effects but also it has serious implications on patients diagnosed with cancer and their families. Because of the range of symptoms and side-effects and the nature of the disease, patients with cancer have different and more complex needs compared to other patients (Helliwell et al., 2016; Shin, 2014). Thus, patients with cancer need to manage their feelings towards their disease and treatment, to improve their coping ability, to reduce their anxiety and mood disturbances and be prepared for a rather lengthy period of treatment and medical interventions (Shin, 2014). In order to improve the well-being of these patients and holistically meet their needs, it is important to provide individualized and quality nursing care in a behavioural, cognitive and comprehensive way, as a right of all the patients (Browall et al., 2013).

Individualized nursing care is planned care that aims to meet the particular needs that each patient has across the disease continuum (i.e. as these might change over time), regardless the routine applied to other patients with a similar disease (Charalambous et al., 2017). Thus, individualized nursing care is patient- and family-centered, which means that decision making and delivery processes are based on the concept that both the patients and their families constitute integral components and prerequisites for quality healthcare (Hughes, 2011). In order to provide individualized nursing care, healthcare providers have to develop an individualized healthcare plan, through co-operation and exchange of opinions with the patient and the specialists (i.e. multidisciplinary and multi-professional approach) that treat them, regarding the best possible method for treatment and care. In this way, the patient's needs may be identified and plans to satisfy them may be articulated (Coyle, 2014; Shuman et al., 2013; Wiegand & Russo, 2013). Moreover, healthcare providers ought to be competent, skillful and committed to provide with empathy the best healthcare, which meets the patient's particular needs, satisfies their preferences and constitutes best evidence-based practice (Beck et al., 2016).

Despite the conceptual challenges at hand, there are two definitions that seem to reflect the essential elements of quality nursing care within the oncology context. Thus, according to Radwin (2000), quality of oncology nursing care is the extent to which patients diagnosed with cancer believe that the nursing care they receive reaches excellence. Secondly, according to Charalambous et al. (2008, 2009) quality of oncology nursing care can be defined in terms of the following six constituent characteristics:

a) Being valued during oncology nursing care and decision making, while the treatment policy ought to be based on equity and effective resource management.

b) Being respected by being informed about health-related issues and choices, being involved in decision making and developing a partnership working with nurses.

c) Being cared for by communicative and supportive nurses that help the patient manage stress and uncertainty, clarify complex information and take the appropriate decisions, even when they are life-altering.

d) Being confirmed by being treated by clinically competent and knowledgeable nurses that provide skillful care that promote the feeling of being safe.

e) Being cared for religiously and spiritually in order to achieve holistic care.

f) Having a sense of belonging in terms of having support and care by the family, which may support and assist patients to deal with the disease.

When the above elements are present, then it may be assumed that there is quality oncology nursing care (Charalambous et al., 2009; Köberich & Farin, 2015). Often healthcare providers though emphasize survival over quality of nursing care, at the expense of the patient's well-being and their satisfaction from the healthcare services (Suhonen et al., 2018). However, the evaluation of a person's quality of life is a subjective process. Thus, when healthcare providers choose a particular treatment for patients diagnosed with cancer, the views of the particular patient regarding their perception of quality care should be taken into consideration (Charalambous et al., 2016). Awareness on the needs of patients diagnosed with cancer is perceived to be an equally important factor to survival prognosis when deciding the appropriate treatment. In fact, having quality nursing care and treatment for cancer is a fundamental right of patients diagnosed with cancer (Adam et al., 2017; Ferrell et al., 2013).

It has to be noted though that, based on a research by Adam et al. (2017) with 596 patients diagnosed with cancer from four European countries (i.e. Cyprus, Finland, Greece and Sweden), patients' perceptions of quality may differed across the participating countries. Hence, it is important to assess the provision of individualized nursing care and quality of oncology nursing care based on the patients' views from different countries, especially in European countries where cross-border care is prevalent. On a National level, this is of particular importance for Cyprus, for which limited data regarding the patients' views were found. Thus, through research, useful data for nurses may be gathered that may guide them towards the design of effective care plans for patients diagnosed with cancer. In addition, more awareness among nurses regarding the needs of patients diagnosed with cancer is expected to be fostered, leading to quality individualized nursing care of patients diagnosed with cancer (Fessele et al., 2012). Finally, although individualized and quality nursing care are advocated as fundamental aspects of a patient's care, there is scarce and systematic evidence on what the associations are between these concepts (Suhonen et al 2018).

2. Materials and methods

2.1. Aim

The aim of this study was to assess the levels and explore any correlations between the individualized nursing care and the quality of oncology nursing care in patients diagnosed with cancer in Cyprus.

2.2. Research questions

The study was designed to provide answers the following research questions:

1. To what extent oncology nursing care is individualized, according to patients with cancer?

2. What is the level of quality oncology nursing care, according to patients with cancer?

3. Are there any correlations between individualized care and quality oncology nursing care?

4. To what extent the internal consistency reliability of the QONCS and the ICS questionnaires were good in this specific population.

2.3. Study design – setting

A descriptive correlation design was employed. The study was conducted at three different urban hospitals in Cyprus, which are provide in-patient cancer care.

2.4. Recruiting

The population of the study consisted of patients diagnosed with cancer that were selected with consecutive sampling from the patients' list of recruiting sites. The process of recruiting included the identification of prospective participants that met the inclusion and exclusion criteria from the recruiting sites and the process continued until all 150 eligible and consenting participants were included in the study. The response rate was 74%.

2.5. Sample size

The sample consisted of 150 patients diagnosed with cancer in Cyprus that met the predetermined inclusion criteria, based on the rule of number of items X minimum 5-10 participants.

2.6. Inclusion and exclusion criteria

The prospective participants were assessed against the following inclusion criteria:

- Participants had to be adults, over 18 years.
- They had to be able to read and write in Greek.
- They had to be patients diagnosed with cancer.
- They had to have received care as in-patients for at least 48 hours.
- They had to be able to answer the questionnaires independently.

Patients with one or more of the following criteria were excluded from the study:

- Patients in protective isolation.
- Newly diagnosed patients (< 6 months).
- Terminally ill patients (End-of-Life care).

2.7. Research tool

Data were collected with the Individualized Care Scale-patient version (ICS) and the Quality of Oncology Nursing Care Scale (QONCS) additionally to sociodemographic information. The ICS is a self-administered, validated instrument with proven construct, criterion and cross-cultural validity, which assesses the patients' views regarding individualized care (Suhonen et al., 2007, 2010). It comprises two parts with 17 items each in Likert type scale, ranging from 1=fully disagree to 5=fully agree). The first part is the Support of Individuality (ICS-A). The second part is Individuality in Care Received (ICS-B). Both parts have the following sub-scales: clinical situation, personal life-situation and decisional control. A high score indicates more support of patients' individuality by nurses (ICS-A) and better realization of individuality in care (ICS-B) (Suhonen et al., 2010).

QONCS assesses the self-perceived quality levels of the provided nursing care for patients diagnosed with cancer from a holistic perspective. Thus, the assessment is based on the patients' views and expectations. The questionnaire consists of 34 items, grouped in the following five domains: a) "being supported and confirmed" (16 items), b) "being cared for religiously and spiritually" (6 items), c) "sense of belonging" (5 items), d) "being valued" (4 items) and e) "being respected" (3 items). The items are assessed with a Likert type scale, ranging from 1 (completely disagree) to 5 (completely agree). Higher scores correspond to better quality nursing care. The questionnaire was validated in Cyprus, with a Cronbach alpha 0.95 for the total scale (Charalambous & Adamakidou, 2014; Charalambous et al., 2017).

2.8. Research procedure

Prior to collecting the data, participants were informed about the purposes of the study and their right to deny participation or withdraw from the study without consequences (Berg, 2015; Mishra et al., 2018). Patients were given enough time to think about their participation and those who were willing to participate provided written consent. The questionnaires were then delivered by the nurses working in the recruiting sites. The patients were given enough time to complete the questionnaire. In order to reassure anonymity and confidentiality, the patients were asked to place the completed questionnaires, in a box that was placed in the hospital for this purpose. The data collection process was 9 months and was completed in 2017. Upon completion of data collection, the data were codified and analyzed, in order to draw inferences.

2.9. Data analysis

Data were analyzed statistically using the SPSS ver20 (Field, 2009). Demographic and clinical characteristics were presented as frequencies (N) and proportions (%). The QONCS and ICS subscales were calculated as the mean score of the associated items according to the scale developers' guidelines (Charalambous et al., 2016). Descriptive statistics (Mean, Standard Deviation, Standard Error, Minimum, Max) were presented for each subscale. Associations between the subscales were analyzed using the Pearson

correlation coefficient. To adjust for the joint association of the QONCS subscales to ICSA and ICSB subscales with the QONCS subscales, two separate linear regressions models were fitted. Internal consistency reliability was assessed by using the Cronbach's alpha coefficient.

2.10. Ethical considerations

The study was approved by the Ethics Committee of the Cyprus University of Technology, the Bioethics Committee of Cyprus and the hospital directors (Ministry of Health 0020/2012, 3.28.37), in compliance to National law and the principles of the Declaration of Helsinki (World Medical Association, 2013).

3. Results

3.1. Patients demographics

More than half of the participants were male (57%). One third of the participants were 51-60 years old (31%) and one fourth was 61-70 years old (25%). Almost half of the participants had secondary education (45%). One third of them had tertiary education (31%) and the rest had only primary education (24%). Most of the participants were married (71%). Most of the participants believe that individualized care is very important (62%) or important (27%) (Table 1).

A wide variety of cancer diagnoses were included in the sample. The most frequent cancer diagnosis for the participants was lung cancer (17%), followed by breast cancer (13%). Regarding treatment, most of the participants had cancer treatment (88,7%). Very few were treated with surgical methods for excision of a tumor (4,7%) or nursing interventions (3,3%). Most of the participants were treated for 2 to 4 days (81%)(Table 2).

Most of the participants were admitted in the hospital in order to have oncological treatment (73,3%). Very few were admitted for the management of symptoms (or treatment-induced side effects) related to treatments (18,7%) or postoperative care (7,3%). The majority of the participants had a scheduled admission (81%)(Table 3).

3.2. Individualized oncology nursing care

The first question explored the extent to which nursing care was individualized, according to patients with cancer. Based on data analysis it was found that the level of support of patients' individuality (ICS-A) was at 3.4 (SD = 0.9). This level of support is considered to be of a medium level compared to preceding studies (e.g. Suhonen et al 2018). Higher levels of support were recorded for clinical situations (mean=3.68, SD=1.00), followed by decision control (mean=3.34. SD=1.14) and personal life situations (mean=3.05. SD=1.27) (Figure 1).

Regarding the individuality in care received, a high level of realization of individuality in care (ICS-B) was perceived by the patients (ICS-B mean=3.92, SD=0.86). Realization of individuality in care was found higher for decision control (mean=4.03. SD=0.18), followed by clinical situations (mean=3.94, SD=0.95) and personal life situations (mean=3.74, SD=1.03) (Figure 2).

3.2.3. Internal consistency reliability

For the ICS.A scale, the Cronhach's alpha coefficient was found good for all the subscales and the total scale, ranging from 0.81 to 0.93. Likewise, for the ICS.B scale Cronhach's alpha coefficient was also found good for all the subscales and the scale, ranging from 0.78 to 0.93.

3.3. Quality of oncology nursing care

The second research question explored the level of the received quality oncology nursing care, according to patients with cancer. Based on data analysis, it was found that quality of oncology nursing care was high regarding three dimensions of care, i.e. "being supported and confirmed" (mean=4.27, SD=0.64), "being respected" (mean=4.19, SD=0.88) and "having a sense of belonging" (mean=3.99, SD=0.91). For the other two dimensions, i.e. "being valued" and "being cared for religiously and spiritually", quality of oncology nursing care was found to be medium to low (mean=2.88, SD=0.69 and mean=2.60, SD=1.36, respectively) (Table 4).

3.3.1. Internal consistency reliability

For the QONCS scale, Cronhach's alpha was found good for all the dimensions and the total scale, ranging from 0.78 to 0.95.

3.4. Correlations between individualized care and quality oncology nursing care

The third research question explored whether there were any correlations between individualized care and quality oncology nursing care. Based on data analysis, a statistically significant (p<0.01) positive correlation was observed between the two scales of ICS, i.e. ICS-A (The Support of Individuality) and ICS-B (The individuality in Care Received) (r=0.80), all the subscales, i.e. Clinical Situation (r=0.45, 0.27, 0.41, 0.42), Personal life situation (r=0.30, 0.51, 0.44, 0.35) and Decision control (r=0.35, 0.46, 0.35, 0.40), and four of the dimensions of QONCS, i.e. "Being supported and confirmed", "Being cared for religiously and spiritually", "Sense of Belonging" and "Being respected". No statistically significant (p>0.05) correlation was observed between the two scales of ICS, i.e. ICS-A and ICS-B, all the subscales, i.e. Clinical Situation, Personal life situation and Decision control, and the fifth dimension of QONCS, i.e. "Being valued" (Table 5).

Regarding the correlations between the five dimensions of QONCS the following statistically significant correlations were observed (Table 5):

- "Being supported and confirmed" is positively related to "Sense of belonging" and "Being respected" (r=0.53 and 0.71 respectively, p<0.01).

- "Being cared for religiously and spiritually" is positively related to "Sense of belonging" (r=0.35, p<0.01) and negatively related to "Being valued" (r=-0.16, p<0.05).

- "Sense of belonging" is positively related to "Being respected" (r=0.45, p<0.01).

3.5. Multivariate models

Two linear regression models were fitted; a) Support of Individuality (dependent variable) on the QONCS subscales (independent variables), b) The individuality of Care Received (dependent) on the QONCS subscales (independent variables). The model assumptions of normality of residuals and heteroscedasticity were validated using a normal QQ-plot and a Predicted vs Residual scatterplot. There was no significant multicollinearity as observed via the Variance Inflation Factors (models' VIF < 2).

The analysis revealed the following:

The QONCS subscales explain the 41.7% (Adj. R^2 = 0.417, p <0.001) of the variation of the Support of the Individuality (ICSA). *Being supported and confirmed* (b=0.34, p=0.026), *Being cared for religiously and spiritually* (b=0.31, p<0.001) and *Being respected* (b=0.26, p = 0.011) are significantly related to the level of the Support of Individuality.

The QONCS subscales explain the 38.1% (Adj. R^2 = 0.381, p <0.001) of the variation of the Individuality of care received (ICSB). *Being cared for religiously and spiritually* (b=0.19, p<0.001) and *Being respected* (b=0.35, p=0.01) are significantly related to the level of the Individuality in Care Received.

3.6. Summary of findings

Firstly, it was found that the higher the support of individuality is, the higher are the following: total individuality in care received, individuality in clinical situation, individuality in personal life situation and individuality in decision control, and vice-versa. In addition, the higher the support of individuality, the total individuality in care received, the individuality in clinical situation, the individuality in personal life situation and the individuality in decision control are, the stronger is the feeling that the patient belongs and is being supported and confirmed, cared for religiously and spiritually and respected, and vice-versa.

Secondly, it was found that the more the patients are being supported and confirmed, the more they have a sense of belonging; the more they are being cared for religiously

and spiritually the more they have a sense of belonging and the less they feel valued, and vice-versa. Finally, the more the patients feel a sense of belonging, the more they feel respected, and vice-versa.

Thirdly, the analysis for the joint association of the QONCS subscales with the Individuality showed that *Being supported and confirmed*, *Being cared for religiously and spiritually* and *Being respected* are associated with increased level of Support of the Individuality. Moreover, *Being cared for religiously and spiritually* and *Being respected* associated with increased levels of Individuality in Care Received.

4. Discussion

The findings of this study provided evidence on the importance of providing individualized care to patients with cancer, in order to achieve quality nursing care, which, in this study as in other studies (e.g. Theodorou et al., 2012), were positively correlated. In fact, patients with cancer often express the desire to be seen as unique persons with individual needs (Browall et al., 2013). As confirmed in a 20-week prospective cohort study (10 weeks using standard of care, 10 weeks using individualized care plans) by Hird et al. (2015), individualized care is a prerequisite for the effectiveness of cancer treatment. In addition, as young adult patients with cancer stressed in a study by Jacobsen et al. (2015), an important component of quality care was feeling that they were 'not just a number' but a unique individual that was seen as a person, separate from the disease. Although quality nursing care ought to be individualized as part of an effective treatment, the findings shoed only a medium level of perceived support of patients' individuality provided by nurses was found. The above finding though may be related to cultural and personal factors and previous experiences that influence the perception of care provided to patients diagnosed with cancer (Radwin et al. 2013; Yates, 2012).

In addition, as explained by previous research, patients' perceptions may be confounded by individual characteristics such as gender and marital status (Rose, 2018), the patients' culture and ethnic origin (Astrow et al., 2018; Radwin et al. 2013), the type of cancer and treatment characteristics (Rose, 2018). For example, Rose (2018) found significantly higher perceptions of individualized care for male compared to female patients, partnered patients compared to single ones and patients not receiving chemotherapy compared to chemotherapy patients. The above differences may be attributed to gender differences regarding perceptions of care (Rose, 2016), more supportive partners within relationships (Rizalar et al., 2014), and severity of treatment with chemotherapy that renders patients more irritated and anxious (Shin, 2014). Moreover, Astrow et al. (2018) in a study with 727 racially/ethnically and religiously diverse patients found significantly different perceptions of quality of care and satisfaction among white, Hispanic, black and Asian patients.

In addition, the results of this study demonstrated that the participants' views on how their individuality was supported in Cypriot hospitals were average. In contrast, accord-

ing to Rose (2018), in Australian hospitals the participants in her study showed moderate to high levels of perceived support of their individuality. It has to be noted though that the different views between the patients of the above and this study may be related to the type of treatment that the participants received. Thus, contrarily to the participants in this study, all participants in Rose's (2018) study were treated with radiation, which renders interaction with nurses more frequent; as a result, better relationships between radiation patients and nurses are more likely, which may lead to tailored to the patients' needs care and, consequently, increased support of individuality (Rose & Yates, 2013).

Likewise, a higher perceived level of support for individuality and receipt of individualized care was found in studies with Swedish (Suhonen et al., 2018) and Canadian (Jacobsen et al., 2015) patients. Compared to the perceptions of the participants of this study, it may be assumed that more efforts should be made in order to maximize individualized oncology nursing care in Cyprus, as a right and a basic need of all patients with cancer. To this end, it is important to frequently assess both the actions of nursing personnel and the patients' perceptions of being individually noticed and care for. In fact, patients' perceptions may be a quite accurate indicator of individuality in health care, since the above perceptions are based on personal experience (Coyle, 2014; Ferrell et al., 2013).

On the other hand, according to the participants in this study, quality of oncology nursing care was high regarding three dimensions of care, i.e. "being supported and confirmed", "being respected" and "having a sense of belonging". Compared to a study that was conducted in three European countries by Charalambous et al. (2017), with a total sample of 610 patients from Cyprus, Greece and Czech Republic, it was found that "being supported and confirmed" had a high score in all countries. The above high score reflects the important role of characteristics such as communication, expression of interest, empathy, promptly response, comprehensive information, competence and respect, which oncology nurses ought to demonstrate during their interaction with the patients (Charalambous et al., 2017; Peppercorn et al., 2011). According to a study by Kersey-Matusiak (2012), being cared for by competent, supportive and aware nurses is important for patients with cancer because such practice makes the patients feel safe. In addition, the necessity of being supported and confirmed was emphasized by every participant in Jacobsen's et al. (2015) study, because of making them feel that they were someone worthy and giving them the courage to fight the disease.

A high score was also observed in both this study and Charalambous et al. (2017) study regarding "being respected" and "having a sense of belonging" dimensions. These findings mean that oncology nurses in Cyprus care with respect and give patients the option and adequate information in order to enable them to participate in decision-making. In addition, oncology nurses not only clarify the family's desire to be present, but also acknowledge and encourage their presence and participation in decision-making and delivery of care. Since the above characteristics are important for the effective management of the symptoms and the side-effects of treatment on behalf of patients diagnosed

with cancer (Charalambous et al., 2009; Peppercorn et al., 2011), it is essential to include them in oncology nursing care. As researchers explain, the cancer experience is usually accompanied by more queries than other diseases and difficulties to accept the situation that render treatment with respect and belonging imperative (Fredericks et al., 2012; Gachoud et al., 2012). Moreover, because of the difficult nature of the disease, research findings demonstrate that most patients with cancer prefer either shared treatment decision responsibility or be in control of their treatment decision, even though older and distressed patients showed increased willingness to leave control to their physicians (Albrecht et al., 2014; Schuler et al., 2017).

For the other two dimensions though of quality of oncology nursing care, i.e. "being valued" and "being cared for religiously and spiritually", quality of oncology nursing care was found medium to low. Previous findings (e.g. Charalambous et al., 2009; Groot et al., 2017) though stressed the importance of religious beliefs, spirituality and being valued; in fact religion and spirituality have a primary role for Cypriots and, particularly, people with a serious disease. Despite then the central role of the above in health and social life in Cyprus and the strong religious beliefs that are prevalent among Cypriots (Papazisis et al., 2014), the participants in this study felt that these needs were not adequately met as part of the provided oncology nursing care.

In particular, patients diagnosed with cancer in this study believed that nurses were not that interested to know their views on life and death or clarify and respect their religious preferences, did not initiate discussions around spiritual issues and did not facilitate the religious rituals while receiving care. The findings of this study also showed that participants thought that nurses were neither available to discuss or encourage spiritual issues nor sensitive regarding religious issues. Yet, according to Groot et al. (2017) spirituality is an inherent and important part of holistic care of patients with cancer. Moreover, according to Ellington et al. (2017) emotional and spiritual needs are inextricable from physical and psychological needs, while spiritual conversations can increase patients' satisfaction with care and improve their overall well-being.

The above perceptions regarding the limited availability of nurses may be explained by a likely deficient patient-nurse interaction because of the nurse shortage. Thus, when the nurse staffing ratio results to more patients per nurse, then time for closer relationships is also less, leading to negative patients perceptions about the care they receive (Suhonen et al., 2018). Hence, budget cuts and staff reduction may have negative impact on patient-nurse relationships, not only because the patients feel that nurses are not available, but also because the nurses are actually pre-occupied only with what is considered essential due to time pressure (Alameddine et al., 2012; Charalambous et al., 2017; Blackman & Willis, 2014). On the other hand, limited discussions about spiritual and religious issues between nurses and patients may be related to a general reluctance of some nurses to discuss such issues or encourage people to behave spiritually and religiously because of cultural differences (Astrow et al., 2018).

In addition, the above findings may be explained by a deliberate omission because of fear or inadequate training and preparation of nurses that might feel not competent enough or uncomfortable to treat patients with cancer (Astrow et al., 2018). Moreover, nurses may feel too much pressure to respond to overloaded tasks that limit their time with patients (Blackman & Willis, 2014). However, since, as Hubbard et al. (2007) found in a previous study, the inequalities observed in the provision of and access to oncology care result to family problems, it seems that shortcomings in oncology care have negative effects not only to the patients but also their families. Hence it is important to find ways to provide the care that patients diagnosed with cancer need (Hendrix et al., 2013). To this end, national and international organizations, such as the European Oncology Nursing Society (2014) stress the importance of providing patient-tailored care to the patient diagnosed with cancer across the cancer continuum.

5. Strengths and limitations of the study

The results of this research can be generalized with caution to the population with the same criteria used by this study due to the consecutive sampling method. In addition, since the study was descriptive and correlational, it was not possible to draw causal relationships. Moreover, the study was based only on patients' views, even though it would be more informative if the nurses' views about quality of oncology nursing care were also included.

Despite the limitations the study has strengths, too. In particular, the study was undertaken across different healthcare centers where cancer patients are being treated, providing a relatively representative sample. Furthermore, it provides information regarding the perceived nursing care regarding patients diagnosed with cancer in Cyprus, which may enable a better understanding of the patients' needs. Alongside these, the study also provided the evidence on the associations between quality nursing care and individualized care. Based on this information better provision of quality oncology care may be implemented.

6. Conclusion

In conclusion, according to the participants in this research, the score of individuality in care of patients diagnosed with cancer in Cyprus is above the average. In addition, important characteristics of quality oncology care, i.e. "being supported and confirmed", "being respected" and "having a sense of belonging" are above average across hospitals in Cyprus, like in other countries. However, other characteristics of quality oncology care such as "being valued" and "being cared for religiously and spiritually", which are essential for quality oncology nursing care, have been scored below average by our participants.

Hence, measures ought to be taken in order to maximize the quality of oncology nursing care in all dimensions and provide patients diagnosed with cancer effective and individualized care that is tailored to their needs and desires (Charalambous et al., 2008, 2009; Suhonen et al., 2018). In order to improve then the patients' situation, it is not

enough to provide them with the right diagnosis or a fixed treatment; more importantly, it is essential to listen to the patients and see them as individual persons that deserve the best possible treatment (Hendrix et al., 2013). In this way patients may be inspired to collaborate with nurses within a working therapeutic relationship that is effective and may combat cancer (Radwin et al. 2013; Suhonen et al., 2018).

Conflicts of interest

The authors declare that they have no conflicts of interest.

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Table 1

Demographic characteristics of the participants

Demographics	Category	N	%
Gender	Male	86	57%
	Female	64	43%
Age	18-28	7	5%
	29-39	7	5%
	40-50	27	18%
	51-60	46	31%
	61-70	38	25%
	>70	25	17%
Eductional level	Primary education	36	24%
	Secondary education (high-school)	67	45%
	Tertiary education (University)	47	31%
Family status	Married	107	71%
	Live With Somebody	4	3%
	Separated	4	3%
	Divorced	5	3%
	Widower	19	13%
	Single, Never Being Married	11	7%
Place of residence	Nicosia	42	28%
	Limassol	66	44%
	Paphos	16	11%
	Larnaca	14	9%
	Ammochostos	12	8%
How important is individualized care for you	Very important	93	62%
	Important	41	27%
	Somewhat important	6	4%
	Not very important	5	3%
	Not at all important	1	1%

Table 2
Type and days of treatment for the participants

	N	%
Type of treatment		
Cancer treatment	133	88,7%
Surgical methods for excision of a tumor	7	4,7%
Nursing interventions	5	3,3%
Days of treatment		
2-4 days	122	81%
5-7 days	11	7%
8-10 days	4	3%
11-13 days	1	1%
>13 days	12	8%

Table 3

Reason for admission of the participants and admission type

	N	%
Reason for admission		
Provision of treatment	110	73,3%
Management of symptoms related to treatments	28	18,7%
Postoperative care	11	7,3%
Admission type		
Planned Admission	121	81%
Emergency Admission	29	19%

Table 4

QONCS - Quality of Oncology Nursing Scale Scores: Descriptive statistics across QONCS subscales and internal consistency index (Cronbach's alpha)

	Mean	SD	SE	Me-dian	Mini-mum	Maxi mum	Cron bach's alpha
QONCS - Quality of On-cology Nursing Scale							0.912
Being supported and con-firmed	4.27	0.64	0.05	4.5	2.3	5	0.91
Being respected	4.19	0.88	0.07	4.3	1.0	5	0.67
Sense of Belonging	3.99	0.91	0.07	4.2	1.4	5	0.78
Being valued	2.88	0.69	0.06	2.7	1.7	5	0.87
Being cared for religiously and spiritually	2.60	1.36	0.11	2.6	1.0	4.8	0.95

Note:
SD=Standard   Deviation
SE=Standard Error

Table 5
Correlations between ICS-A, ICS-B and QONCS scales and subscales

	ICS-A: The Support of Individuality	ICS-A-Clinical Situation	ICS-A-Personal life situation	ICS-A-Decision control	ICS-B - Individuality of care received	ICS-B-Clinical Situation	ICS-B-Personal life situation	ICS-B-Decision Control	QONCS: Being supported and confirmed	QONCS: Being cared religiously and spiritually	QONCS: Sense of Belonging	QONCS: Being respected	QONCS: Being valued
ICS-A: The Support of Individuality	1												
Clinical Situation	0,874**	1											
Personal life situation	0,859**	0,613**	1										
Decision control	0,904**	0,649**	0,721**	1									
ICS-B - The individuality in Care Received	0,800**	0,690**	0,646**	0,762**	1								
Clinical Situation	0,762**	0,658**	0,604**	0,735**	0,950**	1							
Personal life situation	0,738**	0,634**	0,636**	0,676**	0,877**	0,762**	1						
Decision Control	0,697**	0,604**	0,547**	0,674**	0,912**	0,797**	0,706**	1					
QONCS: Being supported and confirmed	0,432**	0,458**	0,302**	0,358**	0,458**	0,457**	0,329**	0,448**	1				
QONCS: Being cared for religiously and spiritually	0,467**	0,279**	0,516**	0,469**	0,349**	0,348**	0,312**	0,292**	-0,001	1			
QONCS: Belonging	0,455**	0,418**	0,445**	0,350**	0,421**	0,430**	0,365**	0,349**	0,536**	0,354**	1		
QONCS: Being respected	0,455**	0,428**	0,354**	0,407**	0,530**	0,535**	0,424**	0,476**	0,717**	0,061	0,454**	1	

| QONCS: Being valued | - 0,02 | - 0,05 3 | 0,05 9 | 0,05 9 | 0,04 2 | 0,01 | 0,06 8 | 0,05 1 | 0,10 3 | - ,166 * | - 0,03 5 | 0,15 1 | 1 |

Figure 1. ICS.A - The Support of Individuality: Mean level of ICS.A scores across the total scale and the three subscales. Error bars represent ± standard deviation (SD)

ICS.A - The Support of Individuality (N=150)

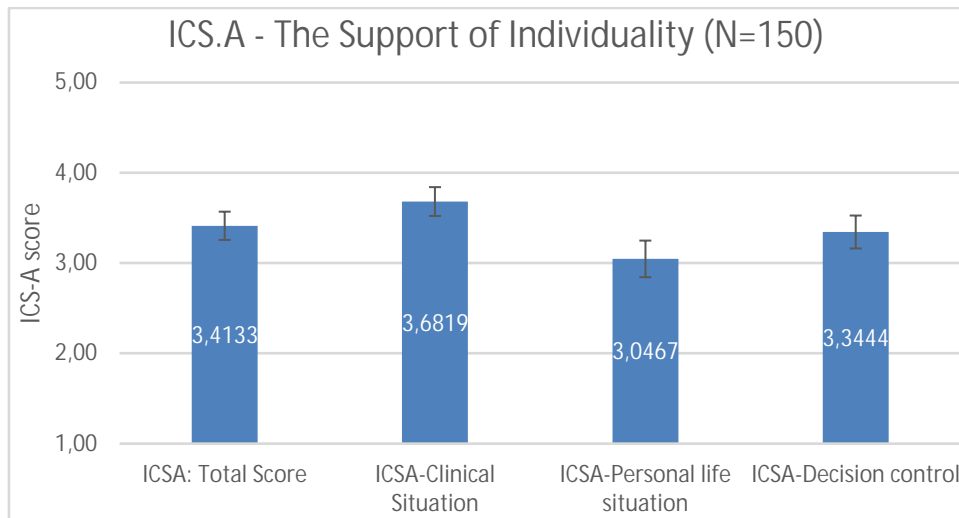|	ICSA: Total Score	ICSA-Clinical Situation	ICSA-Personal life situation	ICSA-Decision control
ICS-A score	3,4133	3,6819	3,0467	3,3444

Figure 2. ICS.B - The Individuality in Care Received: Mean level of ICS.B scores across the total scale and the three subscales. Error bars represent $\pm$ standard deviation (SD)