

Original Article**Care Dependency and Quality of Life in Older Adult Patients****Husna Ozveren, PhD, RN**

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Correspondence: Emel Gulnar, Kirikkale University, Faculty of Health Sciences, Nursing Department, Kirikkale, Turkey E-mail: imel84@hotmail.com**Abstract**

Background: Care dependency is a situation that can be observed in individuals of all ages due to diseases and injuries. The determination of the dependency levels of older adult patients being done by nurses is important in terms of planning care and increasing quality. Nursing care planned in accordance with the dependency levels and needs of older adult patients would have a positive effect on patient satisfaction and quality of care.

Aim: The purpose of this study was to determination of the quality of life and care dependency levels of older adult patients.

Methods: This study was conducted cross-sectional descriptively. After receipt of the permit for survey, 354 patients over age of 65 of surgical treatment in clinics have been formed the study sample. Research data was collected by using the 'World Health Organization Quality of Life – Old Module and the 'Care Dependency Scale'. Using the tests which number, percentage, cronbach's alpha coefficient, correlation have been evaluated the data.

Results: The mean age of study participants was 72.2 ± 7.1 . The mean total score from the Quality of Life scale was determined as 77.3 ± 8.3 and the care dependency scale was determined as 68.7 ± 15.3 . A positive relationship at a moderate level of 62% was found between the older adult patients in surgical process care dependency scores and quality of life scores.

Conclusion: The care dependency of older adult patients was high level. Quality of life scores of older adult patients were determined to be medium high level. A middle positive relationship was found between individuals' care dependency and quality of life scores. Nursing interventions to reduce the dependency of older adult patients is important in surgical process. The determination of the factors affecting the levels of care dependency of older adult patients in surgical process will guide on nursing interventions.

Key words: Nursing, older adult patient, care dependency, Quality of life**Introduction**

Care is one of the basic concepts in the foundation of nursing practice and its contemporary roles. Determination of the care needs and independence status of individuals makes the quality of care given to patients

increase (Kissel et al., 2010). Dependence can be in many forms such as physical, mental, emotional, cognitive, social, economic and environmental. Care dependency, on the other hand, is defined as the decrease in individuals' ability to meet their self-care needs and individuals being in need of professional support

(Dijkstra et al., 2005). Care dependency is a situation that can be observed in individuals of all ages due to diseases and injuries (Lohrmann et al., 2003). Chronic diseases, old age, sensory loss, and changes in physical and psychological state are conditions that cause dependency to increase in meeting the needs of individuals. For this reason, the dependency levels of the individuals in this group need to be evaluated. Especially the old individuals in this group losing their independence could lead to serious problems. Surgical interventions in old patients can cause limitedness in daily life activities, neediness in care and care dependency (Muszalik et al., 2011). The aim of surgical intervention in old patients is to improve health, reduce function inadequacy and improve quality of life as a result (Andsoy et al., 2012). Therefore, dependency in old patients affects quality of life negatively (Lohrmann et al., 2003; Muszalik et al., 2011; Dijkstra et al., 2015).

The determination of the care needs of old patients hospitalized in surgical clinics provides the basic foundation for care management in the planning of nursing care. The care dependency levels of patients are important indicators in the determination of care needs. Nurses should take the self-care needs of old patients into consideration when providing care in surgical clinics. The aim of the nursing care given to elders is to make patients independent by enabling them to sustain their daily life activities and as a result, increase quality of life (Lohrmann et al., 2003; Muszalik et al., 2011; Dijkstra et al., 2015). For this reason, the determination of the dependency levels of individuals being done by nurses is essential in terms of planning care and increasing quality. It is thought that nursing care planned in accordance with the dependency levels and needs of patients would have a positive effect on patient satisfaction, quality of care, and quality of life. Also, evaluation of the care dependency levels of patients helps with communication among medical staff in patient transfer and discharge between clinics and institutions (Kissel et al., 2010). The care dependency levels of older adult patients are important indicators in the revelation of care needs. This study was carried out based on the view that knowing the care dependency levels of patients would contribute to both the planning of care management and the improvement of care quality. In the literature review (Janssen et al., 2011; Muszalik et al., 2009), it was found that

care dependency was generally studied in patients hospitalized in internal medicine clinics. No studies investigating care dependency in surgical and older adult patients were found. For this reason, this study was conducted with the aim of determining the care dependency levels and life qualities of old patients hospitalized in surgical clinics. The purpose of this study was to determination the care dependency levels and life qualities of older adult patients.

Research Question

What are the older adult people care dependency?

What are the older adult people quality of life?

How do older adult people impact the care dependency quality of life? care?

Methods

Study design: This study was conducted cross sectional descriptively with the aim of the determination of the quality of life and care dependency levels of older adult patients.

Sample and data collection: The study was conducted in the surgical clinics of two hospitals in Turkey between the dates June - December 2014. The inclusion criteria for sample were that the participants needed to be 65 years or older and needed to provide consent to participate in the study. The study was conducted on 354 patients over the age of 65 who agreed to participate in the study.

Measurements: Data were acquired using the identifying characteristics form, the Care Dependency Scale and the Quality of Life (WHOQOL-OLD) scale.

The identifying characteristics form: The form was prepared by researchers, drawing from literature (Dijkstra et al., 2005; Lohrmann et al., 2003; Janssen et al., 2013). On the identifying characteristics form, there are questions such as age, gender, and operation condition.

The Care Dependency Scale (CDS): is a scale that was grounded in accordance with Virginia Henderson's human needs, developed by Dijkstra in Holland in 1998 with the aim of evaluating the dependency levels of patients (Dijkstra et al., 1996). The validation and reliability study of CDS in Turkey was conducted by Hakverdioglu-Yönt et al. (2010) CDS is a scale that determines the dependency levels of individuals, is graded with 5-point likert type scoring, and comprises of a total of 17 items that include daily life activities. Grading is in the form of 1= entirely dependent, 5= nearly/entirely independent. The

minimum score from the scale is 17 and the maximum score is 85. While a high score from the scale shows that the patients are independent in fulfilling their care needs, a low score from the scale shows that the patients are dependent on others in fulfilling their care needs.

WHOQOL-OLD Quality of Life Scale: The data were collected using the personal information form, which consist of descriptive information about the older adult and WHOQOL-OLD Turkish used to evaluate their QOL. The WHOQOL-OLD was validated for use in Turkey by Eser et al. (2010) To determine the QOL of the older adult, the WHOQOL-OLD Turkish version was used (Eser et al., 2010; Power et al., 2005). The WHOQOL-OLD module comprises of 24 questions in six dimensions, answers to which are determined with the 5-point likert scale. These six dimensions are presented under the titles "sensory abilities", "autonomy", "history", "Past-present-and-future activities", "social participation", "Death-and-dying", and "intimacy". The 5-point likert scale is graded as 1: none, 2: slightly, 3: moderately, 4: too much, 5: extremely. The minimum possible score for each question is 1, and the maximum score is 5. The possible dimension scores are in between 4 and 20. Also, "overall score" can be calculated by adding each singular point value together. The maximum overall score from the scale is 120, and the minimum overall score is 24. Quality of life improves as the score from the scale increases.

Ethical consideration: In order for the study to be applied, permission was obtained from the Selçuk University Medical Faculty Ethics Committee 2014/186. Also, official written permission from the hospitals where the study was conducted and written informed consent from the participants were obtained.

Evaluation of Data: The data were analyzed with the SPSS Statistics Standard Pack 21. In the assessment of data, number, percentage, mean, and standard deviation in descriptive statistics were calculated with the One Way Anova test and correlation analysis.

Results

Table 1 contains the identifying characteristics of the patients. It was determined that the age average of the patients included in the study was 72.2 ± 7.1 , that 49.4% of them were female and that 43.1% of them had educational backgrounds of primary school or less. It was determined that

66.9% of the patients were married, 65.3% lived in their own house with their partner, and 82.8% did not have any physical inadequacy. It was determined that 59.6% of the patients were postoperative and 50.3% did not have any chronic diseases.

Table 2 the distribution of the mean total score from the Quality of Life Scale and subscale and the mean total score from the Care Dependency Scale was given. The mean total score of the care dependency scale was determined as 68.7 ± 15.3 . WHOQOL-OLD from the subscales of the Quality of Life Scale, it was determined that the mean total score from sensory abilities was 10.2 ± 2.3 , the mean total score from autonomy was 14.1 ± 2.5 , the mean total score from past-present-and-future activities was 14.2 ± 2.2 , the mean total score from social participation was 12.7 ± 2.9 , the mean total score from death-and-dying was 10.1 ± 3.1 , and the mean total score from intimacy was 15.1 ± 2.6 . The mean total score from the Quality of Life scale was determined as 77.3 ± 8.3 .

Table 3 the distribution of the comparison between the Quality of Life total score and the Care dependency scale items was given. It was determined that there was a statistically significant difference between the total score from the Quality of Life scale and all items from the care dependency scale ($p < 0.05$). It was determined that as dependency in terms of Mobility increases, which is among the items of the patients' care dependency scale, the total score from the Quality of Life Scale decreases and that this difference is significant. It was determined that as dependency in terms of Avoidance of danger increases, which is among the items of the patients' care dependency scale, the total score from the Quality of Life Scale decreases and that this difference is significant ($p < 0.05$). It was determined that as dependency in terms of Daily activities and Recreational activities increases, which are among the items of the patients' care dependency scale, the total score from the Quality of Life Scale decreases and that this difference is significant ($p < 0.05$).

Table 4 the results of the correlation analysis, performed in order to determine whether there was a relationship between the patients' mean total scores from the Quality of Life Scale and subscale and the CDS, are given. It was determined that there was a moderate negative relationship between the patients' scores from the

CDS and the "Sensory abilities" subscale of the Quality of Life Scale ($r=-0.675$). It was determined that there was a moderate positive relationship between the patients' scores from the CDS and the "Autonomy" subscale of the Quality of Life Scale ($r=0.516$). It was determined that there was a weak positive relationship between the patients' scores from the CDS and the "Past-present-and-future activities" subscale of the Quality of Life Scale ($r=0.427$). It was determined that there was a moderate

positive relationship between the patients' scores from the CDS and the "Social participation" subscale of the Quality of Life Scale ($r=0.671$). It was determined that there was a weak positive relationship between the patients' scores from the CDS and the "Intimacy" subscale of the Quality of Life Scale ($r=0.330$). It was determined that there was a moderate positive relationship between the patients' CDS and the Quality of Life Scale scores ($r=0.628$).

Table 1. Identifying characteristics of the older adult patients (n=354)

Characteristic	n	%
Age	72.2 ± 7.1	(Min. 65 Max. 96)
Gender		
Female	175	49.4
Male	179	50.6
Educational Status		
Primary school or less (5 years or less)	209	59.0
Secondary school (8 years)	95	26.9
High school (11 years and over)	50	14.1
Marital Status		
Married	237	66.9
Single	117	33.1
Life-style		
Alone	30	8.5
In own house with partner	231	65.3
With children	85	24.0
In nursing home	8	2.2
Physical Inadequacy		
Yes	61	17.2
No	293	82.8
Surgical process		
Preoperative	143	40.4
Postoperative	211	59.6
Presence of chronic diseases		
Yes	176	49.7
No	178	50.3

Table 2. The Care Dependency Scale of older adult patients and the distribution of their mean score from WHOQOL-OLD Turkish (n=354)

Scales	$\bar{x} \pm SD$	Min.	Max.
Care Dependency Scale	68.7 ± 15.3	17.0	85.0
WHOQOL-OLD total scores	77.3 ± 8.3	54.0	100.0
WHOQOL-OLD Sub-scales	Sensory abilities	10.2 ± 2.3	6.0
	Autonomy	14.1 ± 2.5	7.0
	Past-present-and-future activities	14.2 ± 2.2	8.0
	Social participation	12.7 ± 2.9	4.0
	Death-and-dying	10.1 ± 3.1	4.0
			20.0

Intimacy	15.1±2.6	8.0	20.0
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Table 3. The comparison of the older adult patients' total scores from the WHOQOL-OLD Turkish and the items on the Care dependency scale (n=354)

Care Dependency Scale Item	WHOQOL-OLD Score					Statistical Analysis
	Entirely Dependent $\bar{x} \pm SD$	Highly Dependent $\bar{x} \pm SD$	Partially Dependent $\bar{x} \pm SD$	Very Little Dependent $\bar{x} \pm SD$	Not Dependent $\bar{x} \pm SD$	
Eating and drinking	69.9±7.8	73.9±9.3	77.8±9.3	82.8±10.2	88.5±10.8	F: 26.905 p:0.000
Continence	69.5±7.3	72.0±11.0	72.8±9.3	81.7±9.8	88.4±9.7	F:39.916 p:0.000
Body posture	71.1±7.2	71.8±11.2	75.5±8.9	83.9±9.3	90.9±9.2	F:48.829 p:0.000
Mobility	70.3±6.6	71.3±11.1	79.8±9.9	84.4±9.5	91.4±9.3	F:42.141 p:0.000
Day/night pattern	67.3±8.0	71.6±6.9	77.2±9.8	79.6±10.3	88.8±11.7	F:28.799 p:0.000
Getting dressed and undressed	68.1±7.6	75.8±10.2	76.9±11.1	83.2±9.8	90.5±9.5	F:37.099 p:0.000
Body temperature	68.0±8.2	74.2±10.0	73.2±10.1	79.2±9.5	87.9±10.4	F:29.083 p:0.000
Hygiene	67.0±7.4	75.0±9.7	80.4±10.7	83.7±8.8	91.4±9.5	F:47.992 p:0.000
Avoidance of danger	70.2±8.0	72.7±10.0	72.8±10.2	82.0±9.7	90.0±9.4	F:42.100 p:0.000
Communication	73.4±6.1	72.1±6.9	73.6±10.1	78.0±10.4	88.5±11.7	F:35.741 p:0.000
Contact with others	73.4±6.1	71.2±8.1	73.0±10.1	78.1±10.5	88.8±9.4	F:42.172 p:0.000
Worship	70.3±11.5	71.2±9.9	73.3±10.0	82.1±10.3	88.8±9.5	F:36.933 p:0.000
Sense of rules and values	68.8±10.2	73.2±9.2	73.6±10.4	80.2±9.6	87.3±10.7	F:23.333 p:0.000
Daily activities	68.9±6.7	73.5±10.7	78.3±10.4	84.1±9.6	91.8±8.6	F:46.053 p:0.000
Recreational activities	66.2±7.4	72.9±9.0	80.2±10.1	85.4±8.7	91.8±9.11	F:58.934 p:0.000
Memory / Learning	72.3±7.8	73.7±7.5	70.8±9.5	70.8±9.5	89.8±8.6	F:53.397 p:0.000
Learning ability	73.5±10.6	72.0±8.4	72.6±9.7	79.9±11.3	83.8±11.7	F:44.738 p:0.000

Table 4. The relationship between the parents' mean scores from the care dependency scale and the WHOQOL-OLD Turkish.

Scales	Sensory abilities	Autonomy	Past-present-and-future activities	Social participation	Death-and-dying	Intimacy	WHOQOL-OLD
CDS	r=-0.675 p=0.00 p=0.00	r=0.516 p=0.00	r=0.427 p=0.00	r=0.671 p=0.00	r=0.073 p=0.173	r=0.330 p=0.00	r=0.628 p=0.00

Discussion

The care dependency of the older adult patients participating in the study was determined as 68.7 ± 15.3 out of 85 points (Table 2). This finding shows us that the patients' care dependency score is high. This finding is also important in terms of showing that patients are independent in fulfilling their care needs. Muszalik et al. (2011) determined in their study that older adult were independent in fulfilling their care needs. Kilic et al. (2017) found that the care dependency of the patients hospitalized in internal medicine clinics were on higher levels compared to the patients in surgical clinics. The developments in postoperative care in surgical clinics and the mobilization of patients on short notice after surgery could be the reasons for the fact that care dependency is low in these patients.

The quality of life of the patients participating in the study was determined as 77.3 ± 8.3 out of 120 points (Table 2). This finding shows us that the patients' quality of life score is medium high level. It was determined in the studies conducted (Bilgili & Arpacı, 2014; Renne & Gobbens, 2018; Romero et al., 2015) that the quality of life score was high. It was determined in this study that the patients had the highest mean score in the intimacy sub-dimension of the quality of life scale and the lowest mean score in the death-and-dying sub-dimension. There are different results regarding subscale scores in the studies conducted (Bilgili & Arpacı, 2014; Romero et al., 2015; Joanović et al., 2019).

It was determined in the study that as the patients' dependency in terms of the care dependency scale items "Body posture, Mobility, Getting dressed and undressed, Hygiene, Avoidance of danger, Daily activities and Recreational activities" decreases, their quality of life increases (Table 3). In line with this result, it can be said that individuals' dependency levels are important factors in affecting their quality of life. The fact that surgical interventions result in functional changes in individuals also affects quality of life (Andsoy et al., 2012). For this reason, older adult' daily life activities should be fulfilled and their independence should be increased (Muszalik et al., 2011; Dijkstra et al., 2015; Doroszkiewicz et al., 2018). Accordingly, the main purpose of nursing care should be to maintain the daily life activities of individuals, to ensure recovery and to improve quality of life (Muszalik et al., 2011). Managed care

dependency of older adult patients hospitalized in surgical clinics should be evaluated (Janssen et al., 2011; Janssen et al., 2013). A positive relationship at a moderate level of 62% was found between the individuals' care dependency scores and quality of life scores (Table 4). This finding shows that quality of life increases as individuals' dependency level decreases. At the same time, a moderate positive relationship was found between care dependency scores and the scores from the quality of life sub-dimensions "Autonomy" and "Social Participation" (Table 4). It was found in the study conducted by Romera et al. (2015) on older adults who underwent heart surgery that autonomy and social participation affected quality of life positively. Accordingly, older adults gaining their independence causes them to feel better and increases their participation in social life (Romera et al., 2015; Brandão et al., 2018). The determination of the quality of life and dependency levels of older adults hospitalized in surgical clinics will contribute to the planning of nursing care towards the individual needs of these patients. Nursing care planned in accordance with the dependency levels and needs of patients would have a positive effect on patient satisfaction and quality of care.

Conclusion: In this study, the care dependency of older adult patients was high level. Quality of life scores of older adult patients were determined to be medium high level. A middle positive relationship was found between individuals' care dependency and quality of life scores. Nursing interventions to reduce the dependency of older adult patients is important in surgical process. The determination of the factors affecting the levels of care dependency of older adult patients in surgical process will guide on nursing interventions. When older adult patients gained autonomy in their own care, their quality of life will be affected positively. The regular evaluation of the care dependency levels of older adult patients hospitalized in surgical clinics is advised.

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