Original Article

Determination of the Relationship between Social Support and Quality of Life in Oncology Patients and Caregivers

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Abstract

Aim: The perceived social support level can impress the quality of life by reducing the negative psychological effects of cancer diagnosis and treatment. The interrelation between quality of life and social support in caregivers of oncology patients has been investigated inadequately. The research was conducted to find out the interrelation between quality of life and social support of oncology patients and caregivers.

Methods: The sample consisted of 318 cancer patients hospitalized in the oncology clinic of the same hospital and their 318 caregivers. The data were collected using the Patient and Caregiver Identification Questionnaire, Multidimensional Scale of Perceived Social Support and Rolls Royce Quality of Life Scale.

Results: It was appeared that social support levels of oncology patients and caregivers were high. It was found that factors such as diagnosis, disease duration and the duration of caregiving did not influence the social support levels of oncology patients and caregivers. It was found that the quality of life of oncology patients was high and the caregivers was moderate. It was found that the diagnosis did not influence the quality of life of the patients, and the disease duration and caregiving duration affected the quality of life of both groups.

Conclusion: As the level of social support increased, the quality of life of patients and caregivers increased. It may be recommended to increase social support resources, to get support from nurses and promote consulting and support programs in order to improve the quality of life of patients and caregivers.

Key Words: Caregiver, Cancer, Social Support, Quality of Life

Background

Cancer is an increasing universal problem in emerging countries as well as in developed countries (Torre et al., 2016). While it ranked eighth among diseases that cause death in the early twentieth century, it ranks second only to heart disease in many countries and in Turkey today (Torre et al., 2016; *WHO, 2019*). Latest statistics indicate that 14.1 million people were diagnosed with cancer in 2012 and 18.1 million in 2018 (Burnette et al., 2017). This shows that there is also a continuous increase in global cancer burden (Kizza & Muliira, 2019).

Several researches declared that cancer patients with similar diseases and treatment status have significantly different levels of quality of life, which may be due to varying levels of patient resilience (Yoo et al., 2017; Zhang et al., 2017). With the recently developed treatment methods, it is aimed to extend the life expectancy of the patients and to have a higher quality of life (Kizza & Muliira, 2019). However, as a result of the adverse effects of therapy as well as other problems caused by cancer, psychosocial problems can be observed in addition to physical disturbances, and the quality of life of cancer patients is significantly affected (Ni et al., 2019). The perceived social support level can impact the quality of life by reducing the negative psychological effects of cancer diagnosis and treatment. Therefore, in addition to the medical treatment given to the patient, social support should be given at the professional level (Eom et al., 2013). As a result of a research, it was revealed that the social support ensured to oncology patients has a considerable role in developing the quality of life of the patients (Osann et al., 2019).

Because cancer is a chronic disease, the responsibilities and problems of caregivers may increase, and as a result, their quality of life may also be adversely affected (Burnette et al., 2017; Lapid et al., 2016). Given the significant burden of providing care to the cancer patient, the factors affecting the caregiver's quality of life for this patient population need to be further investigated (Shahi et al., 2014).

Since nurses evaluate the influence of cancer on the quality of life of patients and caregivers, they can select care programs that can improve their general health understanding, well-being and functional abilities, thus improving the quality of life by increasing adherence to the disease (Dentlinger & Ramdin, 2015). In this context, the quality of life of patients and caregivers will be positively affected by addressing the problems of oncology patients and caregivers and increasing the social support resources in oncology nursing. In the literature, studies examining the connection between social support and quality of life of oncology patients and caregivers are quite inadequate. Therefore, the study was conducted to determine the connection between social support and the quality of life in oncology patients and caregivers.

Methods

The research was conducted as a relational descriptor. The study was conducted with the patients hospitalized in the oncology (medical and radiation oncology) clinic in a university hospital located in eastern Turkey between June 2015-July 2016. The universe of the research sample comprised 304 cancer patients hospitalized in the oncology clinic of the same hospital and their 304 caregivers who fulfilled the recruitment criteria and determined using the sample size formula whose universe was known. However, in order to decrease the margin of error, the study was completed with 318 patients and 318 caregivers.

Inclusion Criteria

- Patients diagnosed with cancer for at least 6 months,
- Patients who could build verbal communication and their caregivers,
- Primary caregivers who had been caring for patients for at least 6 months,
- Patients and caregivers without diagnosed psychiatric disease were included in the research. Patients and caregivers who accept to participate in the study were selected by improbable random sampling method from the universe.

Data Collection Scales: Data were collected using the Patient Identification Questionnaire, the Caregiver Identification Questionnaire, the Multidimensional Scale of Perceived Social Support (MSPSS) and the Rolls Royce Quality of Life Scale.

Patient Identification Questionnaire: This questionnaire consists of 7 questions including the expository characteristics of the patients regarding age, sex, marital conditions, employment and income status, educational level and type of disease and duration.

Caregiver Identification Questionnaire: This questionnaire consists of a total of 8 descriptive questions about the caregivers' age, marital status, sex, education level, employment and income status, degree of closeness to the patient and duration of care.

Multidimensional Scale of Perceived Social Support (MSPSS): This scale was improved by Zimet et al. (1988) and its validity and reliability in Turkey were provided by Eker and Arkar (1995). The scale has 12 questions. It consists of 3 sub-groups intended for the source of the support, each comprising 4 items. These sub-groups are friends (6, 7, 9, 12), family (3, 4, 8, 11) and a special person (1, 2, 10, 5). Each item is scored between 1-7. The subscale score is achieved by summing the scores of all four questions in the subscale, and the total score of the scale is achieved by summing all the subscale points. The minimum and maximum points that can be obtained from the subscales are 4 and 28. The minimum and maximum points that can be obtained from the whole scale are 12 and 84. An increase in the scale score indicates an increase in perceived social support. The internal consistency Cronbach's alpha coefficients of MSPSS and the subscale scores were 0.80-0.95 (Meral & Cavkaytar, 2012; Şen & Şirin, 2013; Tonsing et al., 2012). In our research, the Cronbach's alpha valuation of the scale was assigned as 0.93 in patients and as 0.92 in caregivers.

Rolls Royce Quality of Life Scale: The Rolls-Royce model quality of life scale was developed in 1986 by Guyatt et al. The scale was prepared including a total of 49 questions under 8 topics, which are evaluated as physical symptoms and activity, general well-being, appetite status, medical interaction (need for professional help), perception function, sleep disorder, sexual function, social relations and business performance. The validity and reliability study was conducted by Ozyilkan et al. (1995) and a final form of 42 questions was formed. The

reliability coefficient of the scale was reported as 0.99 (Akcay & Gozum, 2012; Arslan & Fadiloglu, 2009). In this research, the Cronbach's alpha value of the scale was 0.91 in patients and 0.92 in caregivers.

Evaluation of the Data: After the data were coded by the researcher, the SPSS (Statistical Package for Social Science) 17.0 statistical package program was used. The descriptive statistics, the Kruskal Wallis, the ANOVA and the Pearson correlation test were used in the evaluation of the data. The level of error was accepted as a p value of <0.05.

Ethical Principles of the Study: Written permission and ethical approval from university ethics committee have been obtained before the study (2016/1-6). Information about the name, plan, purpose and duration of the study was received from the patients and caregivers involved in the study, and it was stated that the information obtained would be kept concealed, that participation in the research was voluntary and their verbal/written approvals were obtained.

Results

When the descriptive characteristics of the patients included in the research were examined, 52.8% were male, 90.3% were married, 56.3% had primary education, 86.8% were not working, 67% had an income equivalent to expenses, 28.3% had gastrointestinal system cancer, 50.6% had a disease duration of 6-12 months and the average age of the patients was 54.68 ± 13.82. When the descriptive characteristics of the caregivers included in the study were examined, 65.7% were female, 81.8% were married, 46.9% had primary education, 73.6% were not working, and 66.7% had an income equivalent to expenses. It was found that 49.1% of the caregivers were the spouses of the patient, the caregiving period of 50.9% was 6-12 months and the mean age of the caregivers was 44.17±13.06.

When the relationship between the MSPSS and Rolls Royce Quality of Life Scale of the patients was investigated, a positively important connection was determined between perceived total social support and general quality of life subscales general well-being, medical interaction, sexual function, physical symptoms and activity, social relations and business performance scores and the total mean scores (Table 1).

When the relationship between MSPSS and Rolls Royce Quality of Life Scale of the caregivers was investigated, a positively important relationship was determined between the perceived total social support and general quality of life subscales general well-being, medical interaction, sexual function, physical symptoms and activity, social relations and business performance scores and the total mean scores (Table 2). There was a positive and important relationship between the MSPSS subscales and the total mean scores of patients and caregivers (Table 3). When the relationship between the patient and the caregivers' Rolls Royce Quality of Life Scale was examined, a important positive relationship between the caregiver and the patient's total quality of life score was determined (Table 4).

Table 1. Relationship Between MSPSS and Rolls Royce Quality of Life Scale of Patients

Rolls Royce Quality of Life Scale		Multidimensional Scale of Perceived Social Support							
		Family support		Friend support		Private person support		Total	
	$\overline{X} \pm SD$	25.08±5.26		15.34±7.92		15.24±7.62		55.66±17.24	
		r	P	r	p	r	p	r	P
General well-being	23.33±5.12	.106	.058	.269**	.000	.230**	.000	.258**	.000
Appetite	6.88±2.44	.015	.794	.047	.405	.084	.136	.063	.262

	X̄±SD	r	p	r	p	r	p	r	p
Perception function	17.94±4.20	.202**	.000	.056	.317	.048	.392	.109	.052
Sleep	10.42±3.13	.008	.882	.024	.668	.043	.448	.033	.563
Social relations and business performance	22.93±3.47	.247**	.000	.231**	.000	.212**	.000	.275**	.000
Sexual function	12.88±4.06	.075	.181	.291**	.000	.237**	.000	.262**	.000
Medical interaction	15.72± 2.47	.139*	.013	.177**	.001	.151**	.007	.190**	.001
Physical symptoms and activity	28.76±5.02	.105	.060	.150**	.008	.122*	.030	.155**	.006
Total	138.89±21.87	.154**	.006	.210**	.000	.171**	.000	.219**	.000

*p<0.05 **p<0.01

Table 2. Comparison of the Relationship Between Caregivers MSPSS and Rolls Royce Quality of Life Scale

Rolls Royce Quality of Life Scale		Multidimensional Scale of Perceived Social Support							
		Family support		**Friend support**		**Private person support**		**Total**	
	X̄ ± SD	25.06±4.28		19.02±7.44		17.75±7.55		61.84±15.83	
		r	**p**	**r**	**p**	**r**	**p**	**r**	**p**
General well-being	15.42±4.28	.241**	.000	.284**	.000	.195**	.000	.292**	.000
Physical symptoms and activity	21.06±5.37	.181**	.001	.307**	.000	.158**	.000	.269**	.000
Sleep	7.91±2.72	.117*	.038	.075	.181	.001	.987	.066	.237
Appetite	4.32±1.63	.094	.095	.014	.805	.092	.101	.025	.655
Sexual function	10.13±4.04	.200**	.000	.185**	.001	.099	.078	.188**	.001

Perception function	14.57±4.78	.158**	.005	.014	.804	.069	.218	.003	.956
Medical interaction	12.93±2.46	.137**	.015	.354**	.000	.300**	.000	.346**	.000
Social relations and business performance	19.53±4.58	.335**	.000	.105	.062	.027	.627	.153**	.006
Total	105.91±22.58	.262**	.000	.225**	.000	.109	.052	.229**	.000

*p<0.05** p<0.01

Table 3. The Relationship Between MSPSS of Patients and Caregives

	Patients							
Caregivers								
	Family support		**Friend support**		**Private person support**		**Total**	
	r	**p**	**R**	**p**	**r**	**p**	**r**	**p**
Family support	.477**	.000	.238**	.000	.294**	.000	.385**	.000
Friend support	.244**	.000	.456**	.000	.462**	.000	.488**	.000
Private person support	.239**	.000	.541**	.000	.575**	.000	.576**	.000
Total	.358**	.000	.537**	.000	.571**	.000	.608**	.000

*p<0.05 **p<0.01

Table 4. The Relationship Between Rolls Royce Quality of Life Scale of Patients and Caregives

	Patients																
Caregiver	General well-being		Physical symptoms and activity		Sleep		Appetite		Sexual function		Perception function		Medical interaction		Social relations and business performance		**Total**	
	r	**p**	**r**	**p**	**r**	**P**	**r**	**p**	**r**	**p**	**r**	**p**	**r**	**p**	**r**	**p**	**r**	**p**
General well-being	.094	.095	.148**	.008	.072	.200	.119*	.034	.021	.711	.203**	.000	.041	.470	.155**	.006	.152**	.007
Physical symptoms and activity	.139*	.013	.219**	.000	.031	.576	.151**	.007	.096	.086	.246**	.000	.087	.122	.170**	.002	.206**	.000
Sleep	.076	.174	.119*	.034	.142*	.011	.187**	.001	.024	.668	.193**	.001	.024	.664	.171**	.002	.158**	.005
Appetite	.004	.950	.046	.419	.108	.055	.197**	.000	.143*	.011	.238**	.000	.008	.887	.094	.095	.082	.144
Sexual function	.092	.103	.082	.143	.064	.257	.079	.160	.165**	.003	.126*	.025	.023	.678	.080	.157	.129*	.022
Perception function	.043	.450	.097	.085	.124*	.028	.323**	.000	.252**	.000	.330**	.000	.095	.090	.105	.062	.089	.115
Medical interaction	.234**	.000	.264**	.000	.090	.110	.085	.129	.256**	.000	.078	.166	.193**	.001	.109	.053	.240**	.000
Social relations and business performance	.011	.848	.065	.247	.024	.669	.143*	.011	.088	.117	.149**	.008	.121*	.031	.210**	.000	.064	.257
Total	.091	.105	.175**	.002	.098	.080	.216**	.000	.006	.918	.269**	.000	.011	.842	.188**	.001	.184**	.001

*p<0.05 **p<0.01

Discussion

It was determined that the social support of cancer patients and caregivers was good. When the source of the social support was examined in patients and caregivers, it was found that perceived support from family subscale was higher. The quality of life of cancer patients and caregivers was found to be moderate in the study and the mean quality of life scores of caregivers were found to be lower than cancer patients. In the study, it was determined that the cancer type did not affect the social support and the quality of life in patients. In the study, the duration of the disease was found as if it did not affect the social support level of the patient and the caregiver, but that it affected the quality of life. It was determined that perceived social support increased the quality of life of patients and caregivers. It was found that the social support levels of cancer patients increased as the perceived social support level of the caregivers increased. As the level of quality of life of the caregivers increased, the quality of life of the patients was also found to have increased.

Interpretations: The mean score of MSPSS of the patients included in the study was 55.66±17.24. Considering that the maximum score that can be gained in MSPSS is 84, it is seen that the social support of the patients is at good level. When the average scores obtained from the sub-groups concerned to the source of social support were investigated, it was discovered that the perceived social support from the family was the highest, while the perceived social support from a private person was found to be the lowest (Table 1). Ayaz et al. identified the total perceived social support score of the cancer patients as 69.4±13.1 and found that the score of the support they received from their families was higher (Ayaz et al., 2008). Tzonkova emphasized that the support received from the spouses was at the highest level compared to the others (Velikova-Tzonkova, 2013). In the study conducted by Sammorca and Konecny, it was found that the patients received the most support from their friends and later from their families (Sammarco & Konecny, 2010). It is thought that social support is useful for cancer patients and there is a favorable relationship between support received from family members and psychological and physical conformation to cancer (Isikhan, 2007).

Within the scope of the research, the total mean score of the perceived social support by the caregivers was 61.84±15.83, which was found to be higher than the patients' mean scores (Table 2). The mean perceived social support score of the caregivers, such as the patients score, was highest from the family, while the level of perceived social support from a private person was the lowest. Han et al. found that the mean total score of MSPSS was 65.66±10.3, and that the most support was obtained from the family with the caregivers of patients with esophageal cancer (Han et al., 2014). Our research results are in similar with the results of the research mentioned above. These findings suggest that family members are important individuals for social support. The generally perceived social support levels of patients and caregivers were found to be at a good level. The most support received from the family in relation to the traditional Turkish family structure in case of a disease can be said to come from the family members, namely the spouse and children.

The mean total quality of life scores of the patients was found to be 138.89±21.87 (Table 1). According to the study, we can say that the quality of life was good since the patients scored above average. Can et al. discovered that the quality of life was above average in their study carried out with patients with lung cancer (Can et al., 2010). Pinar et al. found patients with gynecologic cancers to have a similar average level of quality of life scores in their study (Pinar et al., 2008). This situation is thought to be related to the developing treatment opportunities in cancer and effective nursing care.

The mean score of caregivers in the quality of life area was 105.91±22.58 (Table 2). The quality of life of caregivers was found to be average. In their study with 223 family members of cancer patients, Fridriksdottir et al. found a good level of quality of life in caregivers (Friðriksdóttir et al., 2011). Yakar et al. found an average quality of life score respect to the results of their research with family members who were caregivers for the oncology patients (Karabuga Yakar & Pinar, 2013). The quality of life of caregivers was found to be lower than that of cancer patients. This situation is thought to be caused by many problems such as increased responsibilities of caregivers during the disease period, deterioration of the social life, economic problems, inefficient use of support systems and increased stress levels.

In the study, it was found that there was a statistically important positive connection between the perceived social support of the

patients and the quality of life, and the social support increased as the quality of life increased (Table 1). There was a favorable connection between the social support received from the family and perception function, social relations and business performance, and the medical interaction subscales of quality of life. There was a positive relationship between the support from a friend and a private person and general well-being, medical interaction, sexual function, social relations and business performance and physical symptoms and activity subscales of the quality of life. In the research, a positive important relationship was determined between the total quality of life scores of the patient and all subscales of social support. Cheng et al. found that social support and quality of life correlated in patients with lung cancer (Chen et al., 2004). Tilburgs et al. found that social support improved the quality of life (Tilburgs et al., 2015). Our study results are similar to the previous study results. Social support is thought to increase the quality of life as it will have a favorable effect on the health and well-being levels of cancer patients.

There was a statistically important favorable connection between the perceived social support and quality of life in caregivers included in the study (Table 2). The quality of life in caregivers improves with the increase in social support scores. As the grade of support received by the caregivers from the family increased, the mean scores of all other dimensions except the appetite subscale of the quality of life increased. A favorable relationship was determined between the social support from a friend and the sexual function, general well-being, medical interaction, physical symptoms and activity subscales of the quality of life. It was found that there was a similarity between the perceived support from a private person and the support of friends, but there was no significant relationship with the sexual function subscale. In the study, a favorable important relationship was determined between the total quality of life scores of caregiver and all subscales of social support. It is thought that economic, spiritual and social dimensions of caregivers improve with the increase in social support resources, care burden decreases and therefore their quality of life increases.

A favorable important relationship was perceived between the MSPSS subscales and the total mean scores of the patients and caregivers included in the research (p<0.01) (Table 3). It was detected that the social support levels of the patients increased as the perceived social support levels of the caregivers increased. The role of social support systems in the effective adaptation and development of caregiver to patient care is very important. In this context, it is thought that as the social support resources of caregivers increase, it will be easier for them to cope with the problems they face. Therefore, it is thought that the perceived social support levels by patients will increase when the negative elements in their lives and their caregivers' lives decrease.

In the study, a favorable important relationship was determined between the total quality of life scores of patients and caregivers (p<0.01) (Table 4). It was determined that when the quality of life of the patients increased, the quality of life of the caregivers increased, and when the quality of life of the caregivers increased, the quality of life of the patients increased. Cancer is a disease where the care burden and responsibilities of caregivers are heavy compared to other chronic diseases. It is thought that as the quality of life of the patients increases, the quality of life of the caregivers will increase as the symptoms of the disease and the need for care will decrease.

Study limitations: The limitation of the study is that the patients and caregivers included in the study were selected by random sampling method from the universe.

Clinical implications: The following suggestions can be made in line with the results of the study: Organizing in-service training programs for nurses working in oncology units aimed at improving the quality of life of patients and caregivers. Determining the social support levels of cancer patients and caregivers and strengthening their social support by supporting them in social, physical, spiritual and psychological aspects. The number of studies examining the connection between social support and quality of life in caregivers is insufficient in the literature. It is recommended that this subject be re-studied in larger sample sizes and different centers.

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