Death Anxiety and Depression in Oncological Diseases.
How the Caregivers are Influenced by the Cancer Diagnosis of Their Relatives

Teodora E. Itul-Toderesc[i], Vasile Constantin

University of Bucharest, Faculty of Psychology and Educational Sciences, Romania

Abstract

Introduction: This study aims to look at how a diagnosis of cancer influences the mental state of the patients' relatives, but also whether death anxiety can be a predictor of depression among them. Relatives of patients or their legal representatives deal with providing direct care and emotional support to the patient, this resulting in feelings of fear, anxiety, exhaustion, financial problems and/ or a lower quality of life.

Objectives: The main purpose of this paper is to assess the level of death anxiety among relatives of cancer patients and whether it differs from the population that does not have a patient in care. We also looked at variables such as age, sex, education, type of kinship with the patient and duration of the disease and how they influence death anxiety and whether death anxiety is a predictor of depression.

Methods: Participants were divided into two groups, a group of people who did not have sick people in their care and a group of people who had in their families a patient diagnosed with cancer. Both groups were given a revised Death Anxiety Scale and questions about demographics. The Patient Health Questionnaire was also administered to the caregivers group.

Results: Following the application of tests, by use of SPSS software, the results showed that for the first two hypotheses we accept the null hypotheses, namely, death anxiety is not significantly different between caregivers and non-caregivers population and that the independent variables (age, sex, level of education, duration of illness, type of kinship with the patient) do not influence death anxiety. The third hypothesis was statistically significant, namely that death anxiety positively predicts depression among relatives.

Conclusions: Even though most of the hypotheses were statistically insignificant, this study helps in the development of the literature, because such a study, as far as we have knowledge, has not been performed on the Romanian population before.

Keywords: psycho-oncology, caregiver burden, psychosocial function, psychological health

---

[i] Corresponding author: Teodora E. Itul-Toderesc, Faculty of Psychology and Educational Sciences, University of Bucharest, 90 Sos. Panduri, District 5, Bucharest, Romania, 050663, email: teodoraitul@yahoo.com.

I. Introduction

According to the National Centre for Health Assessment and Promotion (CNEPSS) within the National Institute of Public Health, in 2018 there were 83,461 new cases of cancer and 50,902 deaths in cancer patients, representing the second largest cause death in the world. A total of 488,824 confirmed cancer patients were registered in 2018.

The National Institute of Public Health (2019) defines cancer as "a disease that occurs when changes in a group of cells lead to abnormal, uncontrolled growth and a swelling, called a tumor, which is available for all cancers except leukemia (blood cancer). Untreated, tumors can grow and spread to normal surrounding tissues or to other parts of the body through the blood and lymph circuits, and can affect the digestive, nervous and circulatory systems, or release hormones that can alter the body's functioning". According to the statistics made by CNEPSS, the most common types of cancer are: lung, breast, colorectal, prostate, non-melanomas, gastric and skin cancer.

Death anxiety is defined as an unpleasant emotion with multiple concerns, having an existential origin, which can be caused by contemplation of the death of oneself or others (Nyatanga & de Vocht, 2006). It can be caused by awareness of death (Lehto & Stein, 2009), stressful or traumatic events in a person's life, such as health problems, accidents, disasters, death of a loved one (Upchurch Sweeney et al., 2013), remembrance of mortality or thoughts about death (American Psychiatric Association, 2016). Death anxiety occurs when a person's balance is disturbed by a negative event (experience of rejection, significant loss, remembrance of death) or even by an unusually positive event (a new close, sexually satisfying, loving relationship, or successful career) (Firestone & Catlett, 2009).

Death anxiety is a multi-dimensional cognitive construct that contains beliefs and ideas about the process of death, thoughts about being dead or destroyed, images of loved ones, thoughts about the unknown, conscious thinking about death, ideas about the body after death, and thoughts about premature death (Lehto & Stein, 2009), denial of death, reluctance to talk to sick people, fear of death of oneself or others, and avoidance of the subject of death (Nyatanga & de Vocht, 2006).

Symptoms of death anxiety can be constant checking of the body, search for reassurance, prominent health-oriented behaviors (Furer & Walker, 2008). Regarding the delimitation of the concepts of death anxiety and fear of death, some specialists perceive the two concepts as different while others perceive them similarly. According to Nyatanga & Vocht (2006), fear has a clear object (imminent danger), while anxiety is linked to uncertainty that leads to insecurity. The fear of death is also considered a belief that death is frightening, while the anxiety of death is the fear of complete annihilation, but there are experts who consider the two concepts are similar and cannot exist individually, one without the other (Lehto & Stein, 2009). In this study, we will treat the two concepts as similar.

From the point of view of existential philosophy, the anxiety of death comes from person's fear of the way in which the state of non-existence is reflected. The existential approach suggests that human beings must face their own mortality to live a fulfilled life. The perception of death does not allow us to reach our potential unless we can understand its meaning. Existentialists also believe that death anxiety is closely linked to mental health and may be a cause of psychopathology (Hoelterhoff, 2015).

Death anxiety is determined by two factors: psychological health (death anxiety, in a narrower sense) and specific life experiences regarding death (fear of death) (Neimeyer, 1994). Anxiety is also caused by regret about the past, regret about the future, and the significance of death. The contemplation of death is different depending on how each person does or does not attribute death a positive or negative aspect, or meaning (Tomer, 2000). "In contrast to those forms of defense against the fear of death, they can become phobias, hypochondria, obsessive-compulsive disorder and anxiety, which means running away from reality, from being touched – resulting in isolation from affect" (Firestone & Catlett, 2009).

Death anxiety can have adaptive and maladaptive consequences. Among the adaptive ones we find the intensification of cultural beliefs, the increase of involvement in romantic relationships or new methods of coping, learning, growth, and acceptance. The maladaptive ones are: mental health problems, negative attitudes towards the elderly and high anxiety about the aging process, ambivalence about the body, ruptures in personal relationships, non-acceptance of sexual intimacy (the body reminds of death), self-harm (Lehto & Stein, 2009), hypochondria (aan de Stegge et al., 2018), panic disorders, separation anxiety, depression, eating disorders (Iverach, 2014; Lehto & Stein, 2009), substance addictions, obsessive-compulsive routines and rituals (Firestone & Catlett, 2009).

Awareness of death affects the quality of relationships in two ways: unconsciously and consciously (defense reactions induce fear of intimacy

resulting in avoidance of contact with loved ones from a sentimental and personal point of view) (Firestone & Catlett, 2009). A study which involved people with cancer shows that those with a high score of death anxiety are more likely to be diagnosed with an Axis I disorder than with other psychiatric disorders compared to those with low scores of death anxiety. Also, in this study, the strongest relationship existed between death anxiety and reactive depression, but also with anxiety disorders (Gonen et al., 2012).

Depression is a mood disorder that affects body functions, behaviors, thoughts, and emotions. It has emotional symptoms (sadness, loss of pleasure, loss of emotional attachment, loss of gratification, loss of joy in response), cognitive (negative self-image, low self-esteem, guilt, thoughts of suicide, suicide attempt, hopelessness, reduced concentration and memory, confusion, indecision where patients may perceive decision making as a burden and may manifest it even in the slightest decisions, distortion of body image), motivational (passivity, does not initiate and persevere in activities, paralysis of will, tendencies to avoidance, escape and withdrawal, increased dependence) and/ or physical, vegetative symptoms (such as changes in appetite, insomnia/ hypersomnia, agitation, fatigue, increased pain and illness, somatic illusions), nihilistic illusions, illusion of poverty (Beck & Alford, 2009; Paykel, 2008; Smith et al., 2005).

Depression has several possible predictors such as: developmental factors, childhood adversity (early trauma or abuse), personality traits or personality disorders (e.g., neuroticism or stress reactivity), psychological stressors, comorbid disorders, biological factors, or cognitive factors (Dobson & Dozois, 2008), adverse life events (job loss, psychological trauma) or health problems (World Health Organization).

The relatives of the oncology patients are important people from the patient's life, who help them with the adjustment to the diagnosis as well as with the needs he/ she requires. Some types of care needed by cancer patients are: daily activities needs (transportation, meals, home assistance), medical care (wound care, medication management, injections), personal care tasks and mobility (walking, transfer, bathing, feeding), social support (company, encouragement, communication with family and friends), general support (with providers and insurers), auxiliaries, coordination of care and prevention/ information on procedures (Berry, Dalwadi & Jacobson, 2017; Leşe & Suciu, n.d.; National Center for Biotechnology Information, 2010).

Following the general suffering caused by the patient's diagnosis, providing direct care, performing medical procedures, interrupting daily routines, providing emotional support, the relatives manifest negative consequences in several life areas: emotional (depression, anxiety, feelings of fear, uncertainty, hopelessness, lack of power and/ or mood disorders) (Braun et al., 2007; Given et al., 2004; Pochard et al., 2005; Stenberg, Ruland & Miaskowski, 2010), social (alienation of family, friends, community, financial shortcomings, problems in education, isolation, personal neglect) (Stenberg, Ruland & Miaskowski, 2010), physical (sleep troubles, fatigue, pain, loss of physical strength, loss of appetite and/ or weight loss) (Grunfeld, 2004; Stenberg, Ruland & Miaskowski, 2010), lower quality of life than the rest of the population (Geng et al., 2018; Götze et al., 2018). Studies over the years have shown that people with mental illnesses have a higher risk of mortality (Schulz & Beach, 1999) because their immune function is impaired by the onset of physical illnesses (Schulz, Visintainer & Williamson, 1990). The higher the death anxiety, the lower the quality of life of the relative (Sherman, Norman & McSherry, 2010; Soleimani et al., 2017).

In particular, the patient's spouse has more severe symptoms of anxiety and depression than the rest of the family. Thus, the partners of cancer patients represent a population with a high risk of depression (Braun et al., 2007; Nipp et al., 2016; Pochard et al., 2005). Attachment anxiety and avoidance are associated with depression. Marital dissatisfaction also makes a significant contribution to the onset of depressive symptoms (Braun et al., 2007). Family members show symptoms of depression especially when facing the death of the patient (Pochard et al., 2005).

Depression and anxiety in relatives may be influenced by: the condition duration, the age and the level of education of the relative (Ambigga Devi, Sherina & Suthahar, 2005; Nipp et al., 2016), the duration of the patient's illness and mainly the burden perceived, especially if he is young (Dumont et al., 2006), type of work, sex (females have higher scores of depression), length of care, level of kinship, level of risk, the existence of chronic diseases/ health and physical functioning, the financial situation of the owner (Berry, Dalwadi & Jacobson, 2017; Geng et al., 2018; Given et al., 2004; Nipp et al., 2016) and / or religion (Nipp et al., 2016).

The level of burden perceived by the caregiver is an important predictor of depression and anxiety. The burden is perceived by the caregiver due to several factors such as: the presence of cancer, the relationship

and communication between the patient and the caregiver, the psychological characteristics of the caregiver (Geng et al., 2018), hospitalization costs and/or low income, lack of care, concern for patient's death/physical damage, treatment side effects, difficulty in managing patient pain (Grunfeld, 2004; Rhee et al., 2008; Robison et al., 2009), the need to make major changes in one's life, the inability to function normally due to stress (Yun et al., 2005). It has been shown that the psychological burden can be greater for the caregiver than for the patient as the disease progresses (Berry, Dalwadi & Jacobson, 2017). It was also shown that there was a positive relation between fatigue and the impact of care on the program. Thus, the more demanding the caregiver's schedule, the greater their fatigue is felt (Jensen & Given, 1993).

Caregivers tend to neglect their own needs and health, thus worsening pre-existing diseases or increasing vulnerabilities and stress-related problems (National Center for Biotechnology Information, 2010). According to a study on cancer patients, those who made major changes due to financial problems (change of address, delay in addressing the medical needs of another family member, alteration of a family member's educational plans), loss of savings, had significantly lower scores of life quality than those who did not have these problems. These financial issues were perceived by the caregivers as a burden, disruptions to the normal rhythm of life and additional worries. However, they had higher adaptation scores (Yun et al., 2005). In many cases, the relatives must care after the patient, which is why they may have to give up their job and financial problems arise. Caregivers may experience risky behaviors such as substance abuse, sleep problems, unhealthy diets, sedentary behaviors, smoking, alcohol use, stress (National Center for Biotechnology Information, 2010).

A study by Semenova & Stadtlander (2016) investigated whether death anxiety is a predictor for depression and the coping level of adult patients' caregivers. Most patients had cancer, followed by Alzheimer's and dementia. Research has shown that death anxiety is a negative predictor of depression (if death anxiety increases, depression decreases) and that death anxiety is a negative predictor of coping level (if death anxiety increases, coping level decreases).

There are also studies showing that a caregiver is in better general health and that the symptoms of depression and anxiety are the same as of person who does not have in their close social circle (family or friends) someone who suffers from a chronic illness (Robison et al., 2009). Thus, caring for a family member can also produce positive effects such as: feeling of reward or benefit from care, appreciation for life, personal growth, increased self-efficacy, competence, mastery, self-esteem, and closer relationships. The positive effects can alleviate the negative ones, so the positive effects are associated with lower levels of burden and depression, better mental health, and lower psychological stress (National Center for Biotechnology Information, 2010).

According to the theory of post-traumatic growth, traumatic experiences such as the death of a loved one or periods of crisis can result in positive change. This appears in the effective use of an adaptive coping method. Thus, positive change can occur in self-perception, in the experience of relating to others, in the general philosophy of life (a greater appreciation of life, the adoption of a healthier lifestyle, etc.) (Calhoun & Tedeschi, 2006; Furer & Walker, 2008).

Terror Management Theory is also a model that explains the anxiety of death. According to this theory, the fear of annihilation underlies the anxiety of death. Thus, when a person becomes aware of their own mortality, they engage in proximal defense mechanisms (suppressing thoughts associated with death, denial, or desire to fulfill, or engaging in health-oriented behaviors) and distal defense mechanisms (self-esteem and confidence-promoting behaviors) that aim to reduce the fear associated with awareness of one's own death (Sharpe et al., 2018).

The relatives take care of the patient's mental state to the same extent as the physical one. They provide relief, understanding, a loving environment for the patient. If the caregiver is experiencing depression, anxiety, poor quality of life, this will affect the patient. In this case, the caregiver will no longer be able to care for the patient or will negatively affect their condition. Because of this, relatives, like patients, should receive help during this period (as well as after, in the event of death).

The needs of a loved one include social needs (communication, financial support), cognitive needs (educational support and decision support), psychological needs (support for psychological trauma, help in preparing for the death of a loved one, support for mourning) (Hashemi, 2018).

High anxiety in the family and the feeling of burden may be due to the lack of knowledge and skills of the family. Healthcare providers should find solutions so that caregivers are prepared for the tasks that come with the need to care for the patient. To reduce anxiety

and a sense of burden, it is necessary for the members to have the knowledge and to develop the necessary skills to maximize the quality of care. If relatives are unable to benefit from this educational assistance, they may have a low level of confidence in their care skills. Lack of information of the caregiver can negatively affect patients as well as the physical, psychological, and social well-being of the caregiver (Given et al., 2004; Nipp et al., 2016).

Also, in the population of health professionals, health promotion and health behaviors are usually neglected due to work-related duties, lack of time and energy, or the breakdown of stressful social networks (National Center for Biotechnology Information, 2010). The skills of the family members are based on knowledge and are divided into psychomotor (catharsis and wound care), cognitive (monitoring, decision making and problem solving) or psychological (providing emotional support) competences. One of the most important skills is effective communication with healthcare professionals.

Thus, it is very important to inform the patient about the care plan and to facilitate communication between the relative and the service providers (Given et al., 2004). Family members should be provided with psychological counseling, where they should be instructed in effective coping methods. Using these adaptive coping methods can improve both the life of the caregiver and the patient (Nipp et al., 2016).

II. Methods

Objectives and hypotheses

The study aims to identify the needs and certain obstacles faced by family members of cancer patients. Thus, we want to see if there is a significant difference between the death anxiety of relatives of cancer patients and the general population. Through this study we intend to identify their psychological needs, which can require the attention of medical staff, because if the relatives face problems of any kind, they cannot take care of the patient to the fullest. We are also aiming to see whether depression is influenced by death anxiety and how.

H1. Relatives of cancer patients face greater death anxiety than people who do not have someone with an incurable disease in their family.

H2. Demographic factors (such as level of education, gender, type of family, duration of illness) influence the anxiety of death in relatives of cancer patients.

H3. Death anxiety is a predictor of depression in relatives of cancer patients.

Design and variables

The design of the research is quasi-experimental, because the groups are divided randomly, due to the need to have an experimental group and a control group. Caregiver status is the independent variable. To be able to manipulate the independent variable, we chose to build two non-randomized samples. The independent variables for the first two hypotheses are represented by the state of being a caregiver, the level of education, sex, the type of kinship with the patient and the duration of the disease. The dependent variable for the first two hypotheses is death anxiety. In the case of the third hypothesis, we have a predictor – death anxiety and a criterion – depression.

Instruments

Death Anxiety Scale-Revised (DAS-R) represents the revised version of Templer's 1970 Death Anxiety Scale, consisting of 15 items. The revised scale consists of the original one combined with Boyar's scale (see Templer, 1970). It contains 25 items that can be measured as true-false or on a five-point Likert scale. The Cronbach's Alpha Index from this study was significant at .83. Each item in turn has a significant index (Thorson & Powell, 1992). The scale has been translated by a certified translator. In this study we measured on a 5-point Likert scale from 0 ("Not at all") to 4 ("Always"). Some examples of items are: "I'm terrified of an operation", "I'm afraid of dying a painful death", "Coffins make me nervous". We performed a validity test for this instrument with the sample used in this study and a Cronbach Alpha index of .76 with a 95% CI of .70-.82 resulted.

Patient Health Questionnaire (PHQ-9). This questionnaire measures the severity of depression and how the patient responds to treatment but is also used to try to diagnose depression in people with medical vulnerabilities (Löwe et al., 2004; Patient.info, 2021). It is based on the criteria presented in the DSM-IV for the diagnosis of depression and has a high validity (Löwe et al., 2004). The Cronbach Alpha Index from a study by Kroenke, Spitzer & Williams (2001) is significant: .89 in one group and .86 in another group. The scale has been translated by a certified translator. The test contains nine questions measured on a 4-point Likert scale (0 – not at all, 1 – a few days, 2 – more than half a day. 3 – almost every day). Participants answer these questions by referring to the past two weeks (Kroenke, Spitzer &

Williams, 2001). Some examples of items are: "I have little interest or pleasure in doing things", "Feeling tired or low in energy", "You feel bad about yourself, you feel like a failure, you have disappointed your family or yourself". We performed a validity test for this instrument with the sample used in this study and a Cronbach Alpha index of .86 with a CI95% of .82-.89 resulted.

III. Procedure

To determine the optimal number of participants we used the G * Power software (Faul et al., 2007). We used a significance threshold of .05, the effect size of .5. We introduced both test that we used, but we took the largest sample, because it ensured a minimum for all the tests applied. It showed us that the minimum number of participants is 176 (88 participants in the experimental group and 88 participants in the control group). Due to the pandemic context, data collection, especially in hospitals, was difficult, so we did not manage to meet the number provided by the software. In total, we had 141 participants (Age = 36.80, SD = .14), of which 46 were males (32.6%) and 95 were females (67.4%). Participants were divided into two groups.

The first group, the experimental group, contains people who care for or have someone in their family who suffers from a cancerous disease. This group was formed with the help of patients from the "Prof. Dr. Th. Burghele" Hospital from Bucharest (36 participants) and from the Oncological Institute "Professor Doctor Alexandru Trestioranu" (19 participants). Volunteer members were recruited using social media networks on support platforms for cancer patients and their relatives (14 participants) were also added. There was a total of 69 participants (Age = 49.66, SD = 1.20), of which 22 were males (31.9%) and 47 were females (68.1%).

The second group was the control group, consisting of volunteers recruited using social media networks, resulting in a convenience sampling. It included people who do not have a family and do not care for people who suffer from an incurable disease. In total, there were 72 participants (Age = 29.28, SD = .15), of which 24 were male (33.3%) and 48 were female (66.7%).

The conditions of participation were: to be over the age of 18 and the giving of informed consent according to the legislation in force. Data collection was done using Google Forms software, as well as sheet-based questionnaires for hospitals. Prior to being administered the questionnaires, the participants were instructed on the purpose of the study and on how to complete each test. They were also informed that the answers would be anonymous and would be used only at the sample level for statistical purposes. In the case of the clinic "Prof. Dr. Th. Burghele", the data collection was done together with the medical staff, because, due to the pandemic context, the access to the hospital was restricted. For the participants who filled it in online, the instructions were included in the questionnaire. All participants agreed to the processing of the data, signing a consent form at the beginning of the questionnaire. Both groups were given demographic questions (to collect data on gender, age and level of education) and the Revised Scale of Death Anxiety (DAS-R), while the group of patients' caregivers also received the Patient Health Questionnaire (PHQ-9). In the case of the experimental group, in the demographic data we also included questions regarding the type of cancer, the duration of the illness and what kinship the relative has with the patient. At the end of the questionnaire, the experimental group had two more short-answer questions: "What steps should be taken by the medical staff to make your care for the loved one (the oncological patient) easier?" and "What do you consider to be your needs and the needs of your relative (the oncological patient), which arose after the patient was diagnosed?".

Statistical analysis

In order to test the hypothesis, we used IBM SPSS Statistics software 23, as follows:

H1. For the first hypothesis we used the T test for two independent samples. Thus, we checked whether there is a statistically significant difference between the sample of relatives of cancer patients and the sample of people who do not have sick people in their immediate circle, in terms of death anxiety.

H2. For the second hypothesis we used the one-way analysis (One-way Anova). Each demographic data has been be taken independently and measured in levels, on a categorical scale. Gender was measured on a dichotomous scale (female/ male), therefore we used the T test for two independent samples.

H3. To test the third hypothesis, we used the simple Linear Regression Analysis. Death anxiety is the predictor and depression the criterion. This showed us what the regression coefficient is and how much of the depression score is explained by the predictor.

IV. Results

Descriptive analysis

From the descriptive analysis it resulted that out of the 141 participants, 69 were represented by caregivers and 72 by non-caregivers. In the case of the

relatives, we envisaged these characteristics: the level of education, how long it has been since the diagnosis of the patient they are caring for, what type of oncological pathology the patient suffers from and the type of kinship with the patient. Thus, in the case of the relatives, for 25 of them the last form of education completed was high school (36.2%), 8 have completed post-secondary education (11.6%), 22 have completed their bachelor's degree (31.9%) and 14 have completed at least a master's degree (20.3%). Regarding the time passed since the patients were diagnosed, we have: 23 relatives who knew the diagnosis of the patient for less than 6 months (33.3%), 6 who knew for 6 months to one year (8.7%), 11 who knew for one to two years (15.9%), 10 who have known for at least two to three years (14.5%) and 17 who have known for more than three years (24.6%); 2 caregivers didn't remember how much time has passed since finding out about the diagnostic. The study revealed several types of oncological pathologies, which were grouped according to ICD-10 (National Center for Classification in Health, Sydney, 2002). Thus, we have 10 relatives with patients diagnosed with a disease from the group of malignant tumors of the bronchi and lungs (C34) (14.5%), 17 from the group of malignant tumors of the breast (C50) (24.6%), 2 from the group of malignant tumors of the skin (C44) (2.9%), 8 from the group of unspecified tumors (C80) (11.6%), 3 from the group of malignant tumors of the female genitals (C51-C58) (4.3%), 10 from the group of primary malignancies located in the digestive organs (C15-C26) (14.5), 3 in the group of malignant tumors of the mouth, oral cavity and pharynx (C00-C14) (4.3%), 1 in the group of malignant tumors of mesothelial and soft tissues (C45-C49) (1.4%), 5 in the group of malignant tumors of the urinary tract (C64-C68) (7.2%), 2 in the group of malignant tumors of the thyroid and other endocrine glands (C73-C75) (2.9%), 2 in the group of malignant tumors of lymphoid tissue, hematopoietic and related (C81-C96) (2.9%) and 6 respondents who did not want to share or did not know the patient's diagnosis (8.7%). The last classification of the relatives was made according to the type of kinship that the relatives had with the patients. 18 respondents stated that the patient was their spouse (26.1%), for 12 respondents the patient was a parent – mother or father (17.4), for 16 respondents the patient was son/ daughter (23.2%), for 4 respondents the patient was sister/ brother (5.8%) and 19 respondents ticked the other box (27.5%).

The assumption of the normal condition for the study variables was verified using the values of skewness and kurtosis. For the variable death anxiety,

the values were found in the range -1 and 1 (skewness = .48 and kurtosis = -.50). Also, for the variable depression, the values were found in the range -1 and 1 (skewness = .74 and kurtosis = .15).

Inferential data analysis

For the first hypothesis we applied the t test for two independent samples, using a threshold $\alpha = .05$, to assess whether the anxiety of death differs significantly between the relatives of cancer patients and the general population, in which we do not find sick people in their families. t test was statistically insignificant, $t(139) = 1.43$, $p > .05$, d(effect size) = .34. The confidence interval (95%) for the difference between the averages is between -1.29 and 8.14. The sample of relatives (M = 44.78, SD = 13.95) does not show a statistically significantly different death anxiety compared to the general population (M = 41.36, SD = 14.36).

Table 1. Results t for two independent samples. Death anxiety in relatives versus death anxiety in non-relatives.

Variable	Exp. Group		Control group		t	p	Cohen's d
	M	SD	M	SD			
t test scores	44.78	13.95	41.36	14.36	1.43	>.05	.34

For the second hypothesis, to evaluate the difference in death anxiety in females and males, we used the t test for two independent samples, using a threshold $\alpha = .05$. Test t was statistically insignificant $t(67) = -1.75$, $p > .05$ and d(effect size) = -.44. The confidence interval (95%) for the difference between the averages is between -13.30 and .86. The sample of male members (M = 40.54, SD = 13.71) did not show a different anxiety of death than the sample of female members (M = 46.76, SD = 13.75).

Table 2. Results t for two independent samples. Female anxiety versus male versus male.

Variable	Exp. Group M		Exp. Group F		t	p	Cohen's d
	M	SD	M	SD			
t test scores	40.54	13.71	46.76	13.75	-1.75	>.05	.-.44

For the evaluation of death anxiety according to age, we formed age groups, resulting in five groups: between 18 and 25 years (7.2%), between 25-35 years (18.8%), between 35-45 years (27.9%), between 45-55 years (26.5%) and over 55 years (18.8%). Using a threshold $\alpha = .05$, we applied the One-Factor Variance Analysis. The test of homogeneity of the Levene variants $F = .54$, $p < .05$ and it results that the condition for the application of the One-Way Anova Test is

fulfilled. The results show that there are no statistically significant differences in age-related death anxiety. The effect size index η2 = .05, showing that approximately 5% of death anxiety is attributed to age.

Table 3. Analysis of variance for age-related death anxiety.

	SS	df	MS	F	Sig.
Between	771.7	4	192.92	.98	>.05
Within	12340.35	63	195.87		
Total	12112.05	67			

A Post-Hoc analysis was performed by the Bonferoni procedure to determine if there were any pairs in the five groups that differ statistically significantly. Members aged between 18 and 25 years (M = 38.40, SD = 5.88) do not differ statistically significantly from those aged between 25 and 35 years (M = 42.53, SD = 3.39), nor from those aged between 35 and 45 years (M = 42.00, SD = 3.00), neither from those aged between 45 and 55 years (M = 48.72 and SD = 3.41), nor from those older than 55 years (M = 47.23, SD = 4.52). There is also no statistically significant difference between the other groups.

Table 4. Results of the Bonferoni Post-hoc Analysis and effect size for death anxiety by age of owner.

Difference between averages (Size of effect is shown in parentheses)					
Age	Average	1	2	3	4	5
18-25 years	38.40	-				
25-35 years	42.53	-4.13(-.29)	-			
35-45 years	42.00	-3.6(-.25)	.53(.03)	-		
45-55 years	48.72	-10.32(-.51)	-6.19(-.43)	6.72(.48)	-	
Over 55 years	47.23	-8.83(-.63)	-3.70(-.33)	-5.23(-.37)	.94(.10)	-

For the evaluation of death anxiety according to education we used the analysis of unifactorial variance using a threshold α = .05. The homogeneity test of the Levene variants F = 1.59, p > .05, resulting that the condition for the application of the One-Way Anova test is accomplished. The results shows that there are no significant differences in the level of death anxiety depending on the level of education of the owner F(3, 65) = .36, p > .05. We calculated the effect size, η2 = .01, showing that about 1% of death anxiety is attributed to education.

Table 5. Analysis of variance for death anxiety by level of education.

	SS	df	MS	F	Sig.
Between	218.87	3	72.95	.36	>.05
Within	13020.86	65	200.321		
Total	13239.73	68			

A post-hoc analysis was performed by the Bonferoni procedure to determine if there were any pairs of the four groups that differ statistically significantly. There was no statistically significant difference between those whose last form of education was high school (M = 46.28, SD = 14.73), and those whose last form of education is higher than high school (M = 40.37, SD = 15.34), with persons who completed a master's degree program (M = 44.36, SD = 11.14) and between persons who completed a master's program (M = 45.28, SD = 16.54). There is also no statistically significant difference between the other groups.

Table 6. Results of the Bonferoni Post-hoc Analysis and the magnitude of the effect for death anxiety depending on the age of the owner.

Difference between averages (Size of effect is shown in parentheses)					
Education Level	Average	1	2	3	4
Highschool	46.28	-			
Secondary school	40.37	5.91(.05)	-		
Bachelor	44.36	1.92(.01)	-3.99(.03)	-	
Master	45.28	1(.00)	-4.91(-.04)	-0,92(.00)	-

To see if on our sample the death anxiety of the relatives is influenced by the time elapsed since the patient's diagnosis, we applied the Uni-factorial Variance Analysis, using a threshold α = .05. The homogeneity test of the yeast variants F = 2.30, p > .05, resulting that the condition of application of the One-Way Anova test is fulfilled. The test results shows that there are no significant differences in the death anxiety of caregivers of oncology patients, depending on the time elapsed since the diagnosis of the patient that is in their care F(4, 62) = .33, p > .05. We calculated the effect size, η2 = .02, showing that approximately 2% of death anxiety is attributed to the time that has elapsed since the patient was diagnosed.

Table 7. Analysis of variance for death anxiety based on how long it has been since the patient was diagnosed.

	SS	df	MS	F	Sig.
Between	261.60	4	65.40	.33	>.05
Within	11988.81	62	193.36		
Total	12250.41	66			

A Post-Hoc analysis was performed, using the Bonferoni procedure to determine if there are any pairs of the five groups that differ statistically significantly. There was no statistically significant difference between the relatives who had patients diagnosed for less than six months (M = 45.86, SD = 14.19), with the group of six months-one year (M =

44.50, SD = 14.20), with those in the one-two-year group (M = 47.45, SD = 12.57), with those in the two-three-year group (M = 41.30, SD = 8.39) and those in the over-three-year group (M = 43.35. SD = 16.45). There is also no statistically significant difference between the other groups.

Table 8. Results of Bonferoni Post-hoc Analysis and effect size for death anxiety based on the time elapsed since the patient's diagnosis.

Difference between averages (Size of effect is shown in parentheses)						
Duration since diagnostic	Average	1	2	3	4	5
6 months	45.86	-				
6 months-1 year	44.50	1.36(.09)	-			
1-2 years	47.45	1.58(.11)	-2.95(-.21)	-		
2-3 years	41.30	4.56(.32)	3.20(.23)	6.15(.44)	-	
Over 3 years	43.35	2.51(.18)	1.14(.08)	4.10(.29)	-2.05(-.14)	-

To assess the death anxiety of caregivers according to the type of kinship they have with the patient, we used Unifactorial Variance Analysis, using a threshold α = .05. The Levene homogeneity test F = .60, p > .05, showed that the condition for applying the Anova One-Way test is met. Its result shows that there are no significant differences in the level of death anxiety depending on the type of relatives that patients have with relatives $F_{(4, 64)} = 1.52$, p > .05. We calculated the effect size, η2 = .08, showing that approximately 8% of death anxiety is attributed to the type of kinship with the patient.

Table 9. Analysis of variance for death anxiety according to the type of kinship that the relative has with the patient.

	SS	df	MS	F	Sig.
Between	1150.055	4	287.51	1.522	>.05
Within	12089.68	64	188.90		
Total	13239.73	68			

A Post-Hoc analysis was performed, using the Bonferoni procedure, to determine if there were any pairs in the five groups that differ statistically significantly. There were no statistically significant differences between relatives who had a cancer spouse (M = 47.66, SD = 14.87), and relatives who had a sick mother/ father (M = 43.50, SD = 15.60), and relatives who had a son/ daughter with cancer (M = 46.75, SD = 11.29), with relatives who had a sick sister/ brother (M = 54.00, SD = 18.85), and other relatives who ticked others (M = 39.26, SD = 13.95).

Table 10. The results of the Bonferoni Post-hoc Analysis and the size of the effect for death anxiety depending on the type of kinship that the relative has with the patient.

Difference between averages (Size of effect is shown in parentheses)						
Type of relationship	Average	1	2	3	4	5
Spouse	47.66	-				
Father/ Mother	43.50	4.16(.30)	-			
Son/ Daughter	46.75	.91(.06)	-3.25(-.23)	-		
Brother/ Sister	54.00	-6.33(-.46)	-10.50(-.76)	-7.25(-.52)	-	
Others	39.26	8.4(.61)	4.23(.30)	7.48(.54)	14.73(1.07)	-

For the last hypothesis, we used simple linear regression to determine whether death anxiety predicts depression among cancer patients. Following the analysis, we concluded that death anxiety explains a significant variance of depression, $F_{(1,67)} = 19.11$, p < .001 (p = .00), R2 = .22, R2 adjusted = .21. Thus, it turns out that death anxiety predicts 22% of depression scores. The regression coefficient (β = .21, CI [.11, .31]) indicates that a one-point increase in death anxiety, on average, will cause an increase in the depression score by .21 points.

Table 11. Linear regression coefficients. Death anxiety as a predictor of depression.

Variable	B	β	t	p
Constant	.65		.28	>.05
Death anxiety	.218	.47	4.37	<.001
Dependent Variable = Depression				

We also find a significantly positive correlation of .47 between death anxiety and depression, where p<.001.

Table 12. Correlation of death anxiety and depression.

Variable	1	2
1. Depression	-	.471*
2. Death anxiety	.471*	-
*p<.001		

V. Discussion

Interpretation of results

The aim of this paper was to study the death anxiety among the relatives of cancer patients and whether it can be a predictor of depression.

The first hypothesis showed that there were no significant differences in death anxiety among relatives compared to general population. There are several types of similar results in the literature. First of all, we have current research that proves that people have a higher level of anxiety, which is due to several factors, such as

providing direct care, performing medical procedures, providing medical support, etc. (Braun et al., 2007; Pochard et al., 2005). Other studies show that relatives may have equal or even lower scores than the non-caregiver's population (Robison et al., 2009). This may be possible according to the Theory of Post-Traumatic Growth, which states that the illness or death of a loved one can bring about positive change, so that those affected will move towards health-promoting behaviors (Calhoun & Tedeschi, 2006; Furer & Walker, 2008; Maxfield, John & Pyszczynski, 2014). Also, caring for a family member can cause feelings of reward or benefit, appreciation for life, higher self-esteem, closer relationships, and so on (National Center for Biotechnology Information, 2010).

Another possibility for this result is the religion, but this variable was not considered in this study. According to the literature, religious people have lower scores on death anxiety than non-religious people (Lundh & Radon, 1998; Van Tongeren, 2020). This is possible because very religious people believe in life after death, which reduces the anxiety of death – because for them, death is not the last stage of life. Believers also engage in prayer, meditation, and religious services, which can enhance positive feelings and a sense of community, resulting in lower anxiety scores (Van Cappellen, Edwards & Fredrickson, 2021). Religion is a common coping method among informal family members, so that they can cope with a possible death of the patient (Pearce, 2005). Romania is a country with a high rate of believers. In a 2013 census conducted by the Romanian National Institute of Statistics, approximately 73% of the population identified with the Orthodox religion, and only approximately 6.6% declared themselves as having no religion.

The second hypothesis shows that none of the measured variables (age, sex, education, type of kinship with the patient and the time elapsed since the diagnosis of the patient) significantly influence the anxiety of death among caregivers (family members) of cancer patients. In the literature we find different results in terms of other psychological difficulties, such as depression and poor quality of life among relatives, but not how these variables influence the anxiety of death for those caring after cancer patients. Thus, the results of other research show that young people have a harder time perceiving the patient's diagnosis and face anxiety and depression more than older people (Ambigga Devi, Sherina & Suthahar, 2005; Dumont et al., 2006; Nipp et al., 2016). Another risk group is women. They have higher scores on anxiety and depression when placed in

the position of caring for a patient (Geng et al., 2018). Also, the type of kinship, education and duration of care influence certain psychological difficulties, such as depression and anxiety in general, the highest risk being in the life partners of patients, such as spouses (Ambigga Devi, Sherina & Suthahar, 2005; Geng et al., 2018; Nipp et al., 2016; Pochard et al., 2005).

From the third hypothesis, it turned out that death anxiety predicts 22% of depression, and that this is a positive predictor of depression, which means that when death anxiety increases, depression also increases and vice versa. In the literature we found only one research to study this (Semenova & Stadtlander 2016). This study showed that death anxiety negatively predicts depression (if death anxiety increases, depression decreases and vice versa), which is the opposite of the results of our study.

Theoretical and practical implications

Caregivers help cancer patients, who are often family members, with most of their needs. After caring for patients, their relatives face various physical, psychological and/ or financial problems, which make their tasks much more difficult to perform. Thus, they must be provided with resources to be able to care for the patient to their full potential.

We note that death anxiety is a predictor of depression among relatives. Depression, in turn, makes it difficult or even impossible to care for the patient. Through this research we wanted to identify some of the needs of caregivers who emerged after diagnosing patients, as well as what measures should be taken by medical staff to alleviate the chores of patients. The most mentioned need expressed by the relatives is that of psychological support. They consider it extremely important for both the patient and the caregiver to have psychological counseling, or support groups/ communities, where they can open up and share their experiences. The need for information has also been expressed by many people. They consider that they do not receive enough openness from the medical staff regarding the patient's diagnosis and their needs. They mostly help with their treatment, but they are not informed about it. It is necessary to implement courses to teach relatives how to administer certain treatments at home, how to identify certain symptoms and how to take the best possible care of the patient in general. Among the needs that have been expressed quite a lot we find financial needs, permanent assistance in case of serious cases, more empathy from the medical staff and more open communication with the medical staff.

Limits and future directions

A limit of this study is the large difference between male (32.6%) and female (67.4%) participants. This limit may have led to the insignificant results obtained on the second hypothesis regarding the anxiety of death by sex. This may also affect the study because it does not represent the population of Romania, when we talk about the percentage of men and women. For future research, it is recommended to form a representative sample with the general population. Also, another limitation is the multiple cancers types present in the patients the participants cared for. In the future, it is recommended to research relatives with patients who have the same or close diagnosis because not all cancers are untreatable, and the cure rate is different.

One more limit is the pandemic context, which could have led to an increase in death anxiety scores (Lee et al., 2020). However, these results do not invalidate the obtained outcome.

VI. Conclusion

We believe that the results of this study are important, even if most of them were statistically insignificant. In case of death anxiety among caregivers, there still are uncertainties, some research states that there are relatives with higher scores, others that there are lower scores due to the Theory of Post-Traumatic Growth. For this reason, it is important to carry out more research focusing on the anxiety of death among caregivers and on different types of populations, as they are an "at-risk population" that requires additional resources from the relevant staff. Adaptive coping methods for death anxiety also need to be discovered. It is possible that in this study the two samples had approximately equal means (thus, no significant differences) because Romania is a religious country and religion can be a coping method for death anxiety. In the future, we intend to consider the variable religion in order to observe to what extent it influences the death anxiety.

✻

✻   ✻

References

aan de Stegge, B. M., Tak, L. M., Rosmalen, J. G. M., & Oude Voshaar, R. C. (2018). Death anxiety and its association with hypochondriasis and medically unexplained symptoms: A systematic review. *Journal of Psychosomatic Research*, *115*, 58-65. https://doi.org/10.1016/j.jpsychores.2018.10.002.

Ambigga Devi, K., Sherina, M. S., & Suthahar, A. (2005). Depression and anxiety among family caregivers of cancer patients in an oncology clinic. *Malaysian Journal of Psychiatry*, *13*(1), 35-42.

American Psychological Association (APA) (2016). *Dictionary of Psychology.* dictionary.apa.org/death-anxiety.

Asociația Națională de Îngrijire Paliativă (ANIP) (National Palliative Care Association) (2019). *Îngrijirea Paliativă (Palliative Care).* www.anip.ro/ingrijire-paliativa/.

Beck, A. T., & Alford, B. A. (2009). *Depression: Causes and treatment* (2nd ed). University of Pennsylvania Press.

Berry, L. L., Dalwadi, S. M., & Jacobson, J. O. (2017). Supporting the Supporters: What Family Caregivers Need to Care for a Loved One with Cancer. *Journal of Oncology Practice*, *13*(1), 35-41. https://doi.org/10.1200/JOP.2016.017913.

Braun, M., Mikulincer, M., Rydall, A., Walsh, A., & Rodin, G. (2007). Hidden Morbidity in Cancer: Spouse Caregivers. *Journal of Clinical Oncology*, *25*(30), 4829-4834. https://doi.org/10.1200/JCO.2006.10.0909.

Calhoun, L. G., & Tedeschi, R. G. (Ed.) (2006). *Handbook of posttraumatic growth: Research and practice*. Lawrence Erlbaum Associates.

Committee on Family Caregiving for Older Adults; Board on Health Care Services; Health and Medicine Division; National Academies of Sciences, Engineering, and Medicine; Schulz, R., Eden, J. (Eds.) (2016). *Families Caring for an Aging America. 3. Family Caregiving Roles and Impacts.* Available from: https://www.ncbi.nlm.nih.gov/books/NBK396398/. Washington (DC): National Academies Press (US).

Dobson, K. S., & Dozois, D. J. A. (Eds.) (2008). *Risk factors in depression* (1ˢᵗ ed.). Elsevier [u.a.].

Dumont, S., Turgeon, J., Allard, P., Gagnon, P., Charbonneau, C., & Vézina, L. (2006). Caring for a Loved One with Advanced Cancer: Determinants of Psychological Distress in Family Caregivers. *Journal of Palliative Medicine*, *9*(4), 912-921. https://doi.org/10.1089/jpm.2006.9.912.

Existential Analysis Society of Canada (n.d.). *What Is Existential Analysis.* www.existentialanalysis.ca/what-is-existential-analysis.

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power3: A flexible statistical power analysis program for the social. Behavioral, and biomedical sciences. *Behavior Research Methods* (39), 175-191.

Firestone, R., & Catlett, J. (2009). *Beyond death anxiety: Achieving life-affirming death awareness*. Springer Pub. Co.

Furer, P., & Walker, J. R. (2008). Death Anxiety: A Cognitive-Behavioral Approach. *Journal of Cognitive Psychotherapy*, *22*(2), 167-182. https://doi.org/10.1891/0889-8391.22.2.167.

Geng, H., Chuang, D., Yang, F., Yang, Y., Liu, W., Liu, L., & Tian, H. (2018). Prevalence and determinants of depression in caregivers of cancer patients: A systematic review and meta-analysis. *Medicine*, *97*(39), e11863. https://doi.org/10.1097/MD.0000000000011863.

Given, B., Sherwood, P. R., & Given, C. W. (2008). What Knowledge and Skills Do Caregivers Need?. *Journal of Social Work Education*, *44*(sup3), 115-123. https://doi.org/10.5175/JSWE.2008.773247703.

Given, B., Wyatt, G., Given, C., Sherwood, P., Gift, A., DeVoss, D., & Rahbar, M. (2004). Burden and Depression Among Caregivers of Patients with Cancer at the End of Life. *Oncology Nursing Forum*, *31*(6), 1105-1117. https://doi.org/10.1188/04.ONF.1105-1117.

Gonen, G., Kaymak, S. U., Cankurtaran, E. S., Karslioglu, E. H., Ozalp, E., & Soygur, H. (2012). The Factors Contributing to Death Anxiety in Cancer Patients. *Journal of Psychosocial Oncology*, *30*(3), 347-358. https://doi.org/10.1080/07347332.2012.664260.

Götze, H., Brähler, E., Gansera, L., Schnabel, A., Gottschalk-Fleischer, A., & Köhler, N. (2018). Anxiety, depression and quality of life in family caregivers of palliative cancer patients during home care and after the patient's death. *European Journal of Cancer Care*, *27*(2), e12606. https://doi.org/10.1111/ecc.12606.

Grunfeld, E. (2004). Family caregiver burden: Results of a longitudinal study of breast cancer patients and their principal caregivers. *Canadian Medical Association Journal*, *170*(12), 1795-1801. https://doi.org/10.1503/cmaj.1031205.

Hashemi, M. (2018). Caregivers needing care: The unmet needs of the family caregivers of end-of-life cancer patients. *Support Care Cancer, 8*.

Hoelterhoff, M. (2015). A theoretical exploration of death anxiety. *Journal of Applied Psychology and Social Science*, *1*(2), 1-17.

Institutul Național de Sănătate Publică, Centrul Național de Evaluare și Promovare a Stării De Sănătate, Centrul Regional de Sănătate Publică Timișoara (National Institute of Public Health, National Centre for Health Assessment and Promotion, Timisoara Regional Centre of Public Health) (2019). *Săptămâna Europeană de Luptă Împotriva Cancerului, 25-31 Mai 2019. Analiză De Situație (European Week of Fight Against Cancer, 25-31 May 2019. Situation Analysis).* insp.gov.ro/sites/cnepss/wpcontent/uploads/2019/05/03_EPS_Timisoara_Analiza_SELI C_2019.pdf.

Iverach, L. (2014). Death anxiety and its role in psychopathology: Reviewing the status of a transdiagnostic construct. *Clinical Psychology Review, 14*.

Jensen, S., & Given, B. (1993). Fatigue affecting family caregivers of cancer patients. *Support Care Cancer, 1*(6), 321-5. doi: 10.1007/BF00364970. PMID: 8156250.

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606-613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x.

Lee, S. A., Jobe, M. C., Mathis, A. A., & Gibbons, J. A. (2020). Incremental validity of coronaphobia: Coronavirus anxiety explains depression, generalized anxiety, and death anxiety. *Journal of Anxiety Disorders*, *74*, 102268. https://doi.org/10.1016/j.janxdis.2020.102268.

Lehto, R. H., & Stein, K. F. (2009). Death Anxiety: An Analysis of an Evolving Concept. *Research and Theory for Nursing Practice*, *23*(1), 23-41. https://doi.org/10.1891/1541-6577.23.1.23.

Leşe, M., & Suciu, M. (n.d.). *Protocol de comunicare cu familia pacientului în îngrijirea paliativă (Communication protocol with family caregivers in palliative care).* 22 p. Asociația Națională de Îngrijire Paliativă (ANIP) (National Palliative Care Association). https://www.anip.ro/media/2014/08/17_Lese_Protocolul-relatiei-cu-apartinatorii.pdf.

Löwe, B., Unützer, J., Callahan, C. M., Perkins, A. J., & Kroenke, K. (2004). Monitoring Depression Treatment Outcomes with the Patient Health Questionnaire-9. *Medical Care*, *42*(12), 1194-1201. https://doi.org/10.1097/00005650-200412000-00006.

Lundh, L.-G., & Radon, V. (1998). Death anxiety as a function of belief in an afterlife. A comparison between a questionnaire measure and a Stroop measure of death anxiety.

Personality and Individual Differences, *25*(3), 487-494. https://doi.org/10.1016/S0191-8869(98)00072-5.

Maxfield, M., John, S., & Pyszczynski, T. (2014). A terror management perspective on the role of death-related anxiety in psychological dysfunction. *The Humanistic Psychologist*, *42*(1), 35-53. https://doi.org/10.1080/08873267.2012.732155.

National Center for Biotechnology Information (2010). *The Role of Human Factors in Home Health Care: Workshop Summary.* National Research Council (US) Committee on the Role of Human Factors in Home Health Care.

National Centre for Classification in Health (Sydney, N.S.W.) (2002). *The International statistical classification of diseases and related health problems, 10th revision, Australian modification (ICD-10-CM)*. National Centre for Classification in Health.

Neimeyer, R. A. (Ed.) (1994). *Death anxiety handbook: Research, instrumentation, and application*. Taylor & Francis.

Nipp, R. D., El-Jawahri, A., Fishbein, J. N., Gallagher, E. R., Stagl, J. M., Park, E. R., Jackson, V. A., Pirl, W. F., Greer, J. A., & Temel, J. S. (2016). Factors associated with depression and anxiety symptoms in family caregivers of patients with incurable cancer. *Annals of Oncology*, *27*(8), 1607-1612. https://doi.org/10.1093/annonc/mdw205.

Nyatanga, B., & de Vocht, H. (2006). Towards a definition of death anxiety. *International Journal of Palliative Nursing*, *12*(9), 410-413. https://doi.org/10.12968/ijpn.2006.12.9.21868.

Patient.info (2021). *Patient Health Depression Questionnaire (PHQ-9).* https://patient.info/doctor/patient-health-questionnaire-phq-9.

Paykel, E. S. (2008). Basic concepts of depression. *Dialogues in Clinical Neuroscience*, *10*(3), 279-289. https://doi.org/10.31887/DCNS.2008.10.3/espaykel.

Pearce, M. J. (2005). A Critical Review of the Forms and Value of Religious Coping Among Informal Caregivers. *Journal of Religion and Health*, *44*(1), 81-117. https://doi.org/10.1007/s10943-004-1147-4.

Pochard, F., Darmon, M., Fassier, T., Bollaert, P.-E., Cheval, C., Coloigner, M., Merouani, A., Moulront, S., Pigne, E., Pingat, J., Zahar, J.-R., Schlemmer, B., & Azoulay, É. (2005). Symptoms of anxiety and depression in family members of intensive care unit patients before discharge or death. A prospective multicenter study. *Journal of Critical Care*, *20*(1), 90-96. https://doi.org/10.1016/j.jcrc.2004.11.004.

Rhee, Y. S., Yun, Y. H., Park, S., Shin, D. O., Lee, K. M., Yoo, H. J., Kim, J. H., Kim, S. O., Lee, R., Lee, Y. O., & Kim, N. S. (2008). Depression in Family Caregivers of Cancer Patients: The Feeling of Burden as a Predictor of Depression. *Journal of Clinical Oncology*, *26*(36), 5890-5895. https://doi.org/10.1200/JCO.2007.15.3957.

Robison, J., Fortinsky, R., Kleppinger, A., Shugrue, N., & Porter, M. (2009). A Broader View of Family Caregiving: Effects of Caregiving and Caregiver Conditions on Depressive Symptoms, Health, Work, and Social Isolation. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *64B*(6), 788-798. https://doi.org/10.1093/geronb/gbp015.

Romanian National Institute of Statistics (2013). *Religious affiliation of the Romanian population*. https://insse.ro/cms/files/publicatii/pliante%20statistice/08-Recensamintele%20despre%20religie_n.pdf

Schulz, R., & Beach, S. R. (1999). Caregiving as a Risk Factor for Mortality: The Caregiver Health Effects Study. *JAMA*, *282*(23), 2215. https://doi.org/10.1001/jama.282.23.2215.

Schulz, R., Visintainer, P., & Williamson, G. M. (1990). Psychiatric and Physical Morbidity Effects of Caregiving. *Journal of Gerontology*, *45*(5), 181-191. https://doi.org/10.1093/geronj/45.5.P181.

Semenova, V., & Stadtlander, L. (2016). Death Anxiety, Depression, and Coping in Family Caregivers. *Journal of Social, Behavioral, and Health Sciences, 10*(1). https://doi.org/10.5590/JSBHS.2016.10.1.05.

Sharpe, L., Curran, L., Butow, P., & Thewes, B. (2018). Fear of cancer recurrence and death anxiety. *Psycho-Oncology*, *27*(11), 2559-2565. https://doi.org/10.1002/pon.4783.

Sherman, D. W., Norman, R., & McSherry, C. B. (2010). A Comparison of Death Anxiety and Quality of Life of Patients with Advanced Cancer or AIDS and Their Family Caregivers. *Journal of the Association of Nurses in AIDS Care*, *21*(2), 99-112. https://doi.org/10.1016/j.jana.2009.07.007.

Smith, E. E., Nolen-Hoeksema, S., Fredrickson, B. L., Loftus, G. R., Bem, D. J., Maren, S., Borş, A., Şinca, M., & Mănescu, I. (2005). *Introducere în psihologie (Introduction to psychology)*. Editura Tehnică.

Soleimani, M. A., Lehto, R. H., Negarandeh, R., Bahrami, N., & Chan, Y. H. (2017). Death Anxiety and Quality of Life in Iranian Caregivers of Patients with Cancer. *Cancer Nursing*, *40*(1), E1-E10. https://doi.org/10.1097/NCC.0000000000000355.

Stenberg, U., Ruland, C. M., & Miaskowski, C. (2010). Review of the literature on the effects of caring for a patient with cancer: Effects of caring for a cancer patient. *Psycho-Oncology*, *19*(10), 1013-1025. https://doi.org/10.1002/pon.1670.

Templer, D. I. (1970). The Construction and Validation of a Death Anxiety Scale. *The Journal of General Psychology, 82*(2), 165-177. https://doi.org/10.1080/00221309.1970.9920634.

Thorson, J. A., & Powell, F. C. (1992). A revised death anxiety scale. *Death Studies*, *16*(6), 507-521. https://doi.org/10.1080/07481189208252595.

Tomer, A. (Ed.) (2000). *Death attitudes and the older adult: Theories, concepts, and applications*. Brunner-Routledge.

Upchurch Sweeney, C. R., Turner, J. R., Turner, J. R., Barrett, C., Soto, A. V., Whang, W., Korbel, C., Matwin, S., Gorrin, D., Schroeder, B., Turner, J. R., Dekker, J., Levin, B., Turner, J. R., Pishori, A. Z., Grabowski, J., Yard, S., Nelson, K., Denton, E., … & Rieckmann, N. (2013). Death Anxiety. In M. D. Gellman & J. R. Turner (Eds.), *Encyclopedia of Behavioral Medicine* (p. 541-542). New York: Springer. https://doi.org/10.1007/978-1-4419-1005-9_1580.

Van Cappellen, P., Edwards, M. E., & Fredrickson, B. L. (2021). Upward spirals of positive emotions and religious behaviors. *Current Opinion in Psychology*, *40*, 92-98. https://doi.org/10.1016/j.copsyc.2020.09.004.

Van Tongeren, D. R. (2020). Face to face with death: The role of religion in coping with suffering. In K. E. Vail, III & C. Routledge (Eds.), *The Science of Religion, Spirituality, and Existentialism* (p. 37-49). Elsevier. https://doi.org/10.1016/B978-0-12-817204-9.00004-4.

World Health Organization (n.d.). *Depressive disorder (depression)*. www.who.int/news-room/fact-sheets/detail/depression.

Yun, Y. H., Rhee, Y. S., Kang, I. O., Lee, J. S., Bang, S. M., Lee, W. S., Kim, J. S., Kim, S. Y., Shin, S. W., & Hong, Y. S. (2005). Economic Burdens and Quality of Life of Family Caregivers of Cancer Patients. *Oncology*, *68*(2-3), 107-114. https://doi.org/10.1159/000085703.