SZENDE ELEKES[*]

THE RELATION OF PERCEIVED MEANING OF LIFE, MEANING OF ILLNESS AND ANXIOUS-DEPRESSIVE SYMPTOMS AMONG CANCER PATIENTS

Our research is based on the literature that shows meaningfulness is a correlate of mental health both in the general population and in the case of patients with a serious illness such as cancer. We had two major goals: 1) to identify the meaning-categories patients find in their illness; 2) to test the relationships between perceived meaning of life, meaning of illness and negative indicators of well-being, like automatic thoughts, anxiety, depression in the case of a population of cancer patients from Romania.

This study was completed in March-June of 2012. A number of 102 cancer patients, interned in the 'Ion Chiricuta' Oncology Institute in Romania, completed a battery of scales that measured perceived meaning of life (Meaning in Life Questionnaire, Meaning in Life after Cancer), the intensity of automatic thoughts (Automatic Thoughts Questionnaire), anxiety, depression (Hospital Anxiety and Depression Scale), and answered the question whether they found any meaning in their lives.

We could identify the following categories of meaning patients found in their illness: character change, greater appreciation of life, change of priorities, spiritual growth, greater appreciation of close relationships, clarification of goals, development of self-knowledge.

In accordance with the literature, our results show that perceived meaning of life (measured by MLaC), correlates negatively with automatic thoughts ($r = –0.606$), anxiety ($r = –0.576$), and depression ($r = –0.542$), and these relations are significant ($p = 0.000$). Patients who found their illness meaningful, found more meaning in their lives as well ($t = 3.041$, $p = 0.003$), and they showed lower levels of anxiety and depression, but these correlations are not significant ($p = 0.567$ and 0.116).

Keywords: cancer patients, existential concerns, meaning of life, meaning of illness, anxiety, depression.

Das Verhältnis zwischen dem wahrgenommenen Sinn des Lebens, dem Sinn von Krankheit und Symptomen von Angst und Depression bei Krebspatienten: Unser Forschungsprojekt basiert auf der Literatur, die zeigt, dass die Sinnhaftigkeit sowohl bei der Allgemeinbevölkerung als auch bei Patienten mit schweren Erkrankungen wie Krebs ein Korrelat der mentalen Gesundheit ist.

[*]   Szende Elekes: Sapientia College of Theology of Religious Orders, Piarista köz 1., Budapest, H-1052, Hungary; elekes.szende@sapientia.hu.

Wir hatten zwei Hauptziele: 1. die Sinnkategorien zu identifizieren, die die Patienten in ihrer Krankheit sehen, 2. das Verhältnis zwischen dem wahrgenommenen Sinn des Lebens, dem Sinn von Krankheit und negativen Merkmalen des Wohlbefindens wie automatischen Gedanken, Angst und Depression bei einer Population von Krebspatienten aus Rumänien zu ermitteln.

Die Studie wurde von März bis Juni 2012 durchgeführt. Eine Gruppe von 102 Krebspatienten, die stationär im Ion-Chiricuță-Krebsinstitut in Rumänien behandelt wurden, füllten eine Reihe von Fragebögen aus, mit denen der wahrgenommene Sinn des Lebens (Meaning in Life Questionnaire, Meaning in Life after Cancer), die Intensität automatischer Gedanken (Automatic Thoughts Questionnaire) sowie Angst und Depression (Hospital Anxiety and Depression Scale) ermittelt werden, und beantworteten die Frage, ob sie einen Sinn in ihrem Leben sehen.

Wir konnten die folgenden Kategorien von Sinn identifizieren, den die Patienten in ihrem Leben sahen: Veränderung des Charakters, größere Wertschätzung des Lebens, Änderung der Prioritäten, spirituelle Entwicklung, größere Wertschätzung enger Beziehungen, Klärung von Zielen, Entwicklung der Selbsterkenntnis.

Im Einklang mit der Literatur zeigen unsere Ergebnisse, dass der wahrgenommene Sinn des Lebens (gemessen mit MLaC) negativ mit automatischen Gedanken (r = –0,606), Angst (r = –0,576) und Depression (r = –0,542) korreliert und diese Relationen signifikant sind (p = 0,000). Patienten, die ihre Krankheit als sinnhaft empfanden, sahen auch in ihrem Leben insgesamt mehr Sinn (t = 3,041, p = 0,003) und hatten weniger Angst und Depressionen, wobei diese Korrelationen nicht signifikant sind (p = 0,567 and 0,116).

Schlüsselbegriffe: Krebspatienten, existenzielle Sorgen, Sinn des Lebens, Sinn von Krankheit, Angst

1. Introduction

1.1. The existential plight of cancer

According to literature, it seems that a cancer diagnosis is able to provoke a real existential crisis in one's life (LEE 2008). The possibility of death that arises together with the disease, makes one face their mortality, often for the first time in their life. The existential crisis is a phenomenon best characterised by the intensification of ruminative thoughts related to existence and non-existence (LEE 2008). Crisis evoked by cancer seems not to be culture-dependent: the same existential questions preoccupy patients in Australia (MCGRATH 2004), Japan (MORITA et al. 2000), Great Britain (GRIFFITHS et al. 2002) and North-America (HALSTEAD et al. 2001). WESTMAN and colleagues (2006) pointed out that patients' reflections concentrated on the following topics: meaning of life, God/transcendence, health, work, relationships, sexuality. Although existential rumination is a universal phenomenon, the subjective distress can vary from person to person: often it is accompanied by a feeling of hopelessness, despair, and isolation (LEE 2008).

VACHON (2008) pointed out that distress is not influenced by the objective prognosis of disease, rather by the fact whether the patient perceives the so called 'global meaning' to be threatened. According to cognitive approaches, this 'global meaning' is a set of personal beliefs and assumptions that ensures the impression of order and

meaning in life. These assumptions, positive illusions, remain unquestioned until a negative event occurs. When someone faces a cancer diagnosis, this set of beliefs is shaken (Lee 2008; Coward 1997). The existential crisis turns into a search for meaning. This is a cognitive process through which the patient tries to integrate the experience of illness into his life-scheme (Vachon 2008). The search for meaning is a necessary, but emotionally difficult phase.

The concept of *search for meaning* has several interpretations in the literature. Johnston Taylor (1995) pointed out that *meaning of illness* can be understood as an explanation ('Why?'), selective incidence ('Why me?'), attribution of responsibility ('Who's fault is it?'), or significance ('Wherefore?'). The author says that for adjusting to the illness the most important is finding its significance, in other words, finding the role of the disease in one's life course. In our study, we used the concept *meaning* with this latter interpretation. According to studies quoted by Johnston Taylor (1995), patients found the following meanings in their illness: re-evaluation of life, forming a new attitude towards life, deepened self-knowledge, rearrangement of priorities, strengthening of character, appreciation of interpersonal relationships, getting closer to God, etc. As a result of the process of search for meaning, many patients present the signs of post-traumatic growth (Rajandram et al. 2010; Sawyer et al. 2010).

1.2. The relation of meaningfulness and well-being among cancer patients

The importance of meaningfulness in mental health, was first emphasised in the work of Viktor E. Frankl (1992). According to Frankl, man's deepest motivation is to find meaning in life, and in case if this search for meaning is hindered, an existential vacuum arises that is the root of psychical and physical diseases.

The relation of meaningfulness and subjective well-being was later confirmed by empirical research. According to literature, meaningfulness is related to several indicators of well-being, for example satisfaction with life, positive affectivity (Zika & Chamberlain 1992), self-esteem, optimism (Steger & Frazier 2005), self-efficacy, subjective health (Skrabski et al. 2005), and shows negative correlation with negative indicators of well-being, like oncological and cardiovascular mortality rates (Skrabski et al. 2005), smoking (Konkolÿ Thege 2009), suicidal thoughts (Edwards & Holden 2001), anxious and depressive symptoms (Mascaro & Rosen 2004).

Another category of studies found evidence that finding a meaning helps people to adjust to critical negative life experiences, just as the diagnosis of a serious disease (Fife 1995; 2005). There is accordance in literature regarding the fact that finding a meaning plays a significant role in adjusting to a serious illness. Coward (1997) says finding meaning grants patients a sense of control upon their lives. Fife (1995) found that meaningfulness is a significant negative predictor of both anxious and depressive symptoms. A Turkish study found that there is a significant positive relation between perceived meaning of illness and quality of life (Okanli & Asi

KARAKAS 2014). BRADY and colleagues (1999) pointed out that patients characterised by high meaningfulness bore the serious physical symptoms of disease easier and were more contented with their quality of life. Other studies pointed out the mediating role of meaningfulness: patients who after a mutilating operation maintained their belief in the meaning of life, showed less emotional problems (JIM & ANDERSEN 2007; SIMONELLI et al. 2008).

Patients in a final stage, who were able to find meaning in their illness, found their lives precious and worthy of living, while the inability of finding a meaning was associated with death-wish and suicidal thoughts (FEGG et al. 2008). Patients in a final stage of their disease most often named their partner, friends, recreation and nature as their sources of meaning.

However, not every study found evidence for the role of meaningfulness in adjusting to illness. KERNAN and LEPORE (2009) made a longitudinal study among patients with breast cancer, and found that patients, who find meaning in their disease, do not adjust better than the others who do not.

2. Method

Our research was carried out in the 'Ion Chiricuta' Oncology Institute in Cluj-Napoca, in the period of March–June 2012. The Institute is one of the most important healthcare centres in Romania, and in Europe, providing preventive, curative and palliative treatment for more than 10,000 cancer patients annually.

2.1. The aims and hypothesis of the study

In our study we intended to explore what kind of meanings do cancer patients assign to their disease.

Furthermore, we intended to investigate the relationship between perceived meaning of the disease, meaning of life and indicators of well-being among a population of cancer patients from Romania.

The psychosocial aspects of cancer disease is a relatively well searched area in Romania. The research of DÉGI (2013) reveals that almost half of the Romanian inpatients with cancer disease suffer from depression, anxiety disorders, and almost one third (28%) report a low quality of life. Women, unmarried patients, patients of older age and with a lower education level show higher levels of depression (KALLAY & DÉGI 2015).

We assumed that both the perceived meaning of illness and meaning of life will show negative correlation with negative automatic thoughts, anxiety and depression.

2.2. Participants

We collected data from 102 inpatients, who completed the test battery. Patients came from every region of Romania and they were either under chemotherapy or radiation

treatment. The sample included 20 men (19.4%), and 82 women (80.6%), their age varied from 23 to 73 years (m = 47).

About half of the patients (55%) had a high school degree, and 40% had a college degree.

In the sample, the average time that had passed since the diagnosis was two years (23.9 months). This interval varies from one month to twenty years. With more than half of the patients (54%), the cancer was discovered in the last nine months.

2.3. Instruments

The test battery included four scales and a question that directly asked patients about the perceived meaning of the illness ('*Do you think the illness could have any meaning in your life? In case if the answer is yes, please name what this meaning could be*?')

The *Meaning in Life Questionnaire* (MLQ, STEGER et al. 2006) assesses how meaningful the person perceives his life, respectively, how devoted he is in searching for a meaning. The scale is composed of two subscales: the Presence of meaning, respectively the Search for meaning subscale.

The *Meaning in Life after Cancer Scale* (MLaC) was developed in order to assess meaningfulness after the diagnosis of cancer. The scale has four subscales: Harmony and peace, Aims and perspectives, Confusion and meaninglessness, Spirituality.

The *Automatic Thoughts Questionnaire* (ATQ, HOLLON & KENDALL 1980) assesses the frequency of negative automatic thoughts (e.g.'*I don't think I can go on.', 'My life is a mess'* etc.).

The *Hospital Anxiety and Depression Scale* (HADS, ZIGMOND & SNAITH 1983) is a frequently used instrument in a healthcare context in order to measure patients' level of anxiety and depression.

3. Results

3.1. Perceived meaning of illness

More than half of the patients, 55 people (53.4%) answered yes to the question, whether they found any meaning in their disease. We also asked them to explain what this meaning was. After analysing patients' answers, we can state that the content of their answers fall into several categories. We identified eight larger categories of answer, and with two exceptions, patients' answers fall into one of them. Some answers satisfy more than one category. Hereinafter, we will present the meaning-categories with examples.

---

[1]   The number in brackets refers to the frequency this meaning-category was mentioned in patients' answers.

– *Character development* (23):[1] when asking about the meaning of illness, very often we found answers which reflected a deep change in character, thinking style, lifestyle, etc. after the diagnosis. Patients mentioned they became better, stronger, more attentive with others, learned to love others more. A 23-year-old girl wrote: '*The disease made me change completely. It helped me to see the world more maturely, not so childishly as before. I became a better person through it.*'

– *Appreciation of life* (15): this category refers to the fact that the person begins to see their lives in a new perspective. After the diagnosis, small joys like having a cup of coffee or going to work day by day, don't seem natural anymore, but they begin to be appreciated. A 65-year-old lady with pancreatic cancer wrote: '*I see things in a new perspective, I appreciate life more. I've descended to reality, leaving behind my 'reality'. There are things that I only now began to discover, began to discover their real value. Some activities, that I performed with automatism, have received a new content, meaning and depth.*'

– *Appreciation of important others* (8): this source of meaning is in connection with the former category, but because of its frequency, we refer to it as a separate category. A typical answer assigned here: *'(after the disease) I began to appreciate every moment that I can spend with my loved ones.'* (a 40-year-old woman with breast cancer). The disease works as a 'filter' through which love and faithfulness of the important others are tested: '*I realised who is really next to me when I need them*'.

– *Change of values and priorities* (9): answers assigned to this category refer to a change in the former value scale of patients. New values and priorities took the first places in this scale. A 51-year-old lady with ovarian cancer wrote: '*I had to make some changes in my life! Too much work, too much stress. I forgot to value myself as a woman, I put my person to the last place.*'

– *Spiritual growth* (8): this category included answers that referred to a development in the religious/spiritual life of the person or a deepened relationship with God. A 43-year-old patient with breast cancer wrote: '*the disease helped me to make contact again with God*'. Some patients interpreted their disease in the context of religious faith, as a '*test from God*'.

– *New goals* (4): in these answers patients mention that disease showed them new goals and perspectives, mobilising their motivation and energy. A 44-year-old lady wrote: '*Now I know what and who I live for.*'

– *Warning* (3): in these answers the role of illness is to warn the person to pay more attention to themselves. '*The disease taught me to pay more attention to my health hereinafter*' said a 52-year-old man suffering from pulmonary cancer.

– *Deepened self-knowledge* (2): two patients mentioned that their illness was a tool in deepening their self-knowledge: '*It helped me to know myself better as a person*' (a 41-year- old woman).

After studying patients' answers, we can draw the conclusion that the most important keyword occurring in their disclosure was *change.* Disease appears as a milestone in patients' lives that – in spite of its many negative aspects – also brings about positive changes in their lives: a change in their character, thinking style, the former unhealthy lifestyle, appreciation of the important others, and these changes are received positively by patients.

3.2. The relation between perceived meaning of life and well-being

In the following we will show the results regarding the relations between the investigated variables: meaningfulness, automatic thoughts, depression, anxiety. In order to analyse data, we used the SPSS statistical analysis software package. For comparing means, we used an independent sample t-test, and Pearson's correlation to assess relations between variables.

Demographic variables – gender, age and education level – do not correlate significantly with meaningfulness. It seems though that meaningfulness, measured by *Meaning in Life Questionnaire*, is slightly higher among higher education levels.

As it can be seen in *Table 1*, time passed after the diagnosis shows a slight positive correlation ($r = 0.202$) with the Presence of meaning subscale of the MLQ, and this proves to be significant.

Table 1
Correlation between the time after the diagnosis and perceived meaning of life

		Meaning of Life Questionnaire– presence of meaning
	r	0.202
Time after the diagnosis (months)	p	0.043[*]
	N	102

[*]: $p < 0.05$

The Presence of meaning subscale of the MLQ showed poor correlation with negative automatic thoughts, anxiety and depression, and these correlations are not significant. On the other hand, meaningfulness measured by Meaning in life after Cancer scale, shows negative, moderate correlation with automatic thoughts ($r = -0.606$), anxiety ($r = -0.576$) and depression ($r = -0.542$), and these correlations are significant (see *Table 2*). In conclusion, our hypothesis is confirmed partially, but the results are dependant on the used instrument.

	Meaning in Life after Cancer Scale			Meaning of Life Questionnaire – presence of meaning		
	r	p	N	r	p	N
Negative automatic thoughts	−0.606	0.000*	102	−0.172	0.084	102
Anxiety	−0.576	0.000*	102	−0.084	0.397	102
Depression	−0.542	0.000*	102	−0.087	0.380	102

Regarding the correlation between perceived meaning of illness and negative indicators of well-being, our hypothesis is confirmed partially, but results are not significant. At first, those who find meaning in their illness, find their life more meaningful as well, and this difference is significant. Furthermore, those who find meaning in their illness, show a lower level of negative automatic thoughts, anxiety and depression, but these correlations are not significant (see *Table 3*).

Table 3
Correlation between perceived meaning of illness, automatic thoughts, anxiety and depression

'Do you think the illness could have any meaning in your life?'		N	Mean	t-test	p
Perceived meaning of life (MLaC)	yes	55	11.23	3.041	0.003*
	no	47	9.55		
Negative automatic thoughts	yes	55	26.33	−0.347	0.73
	no	47	27.02		
Anxiety	yes	55	6.40	−0.575	0.567
	no	47	6.87		
Depression	yes	55	3.95	−1.58	0.116
	no	47	5.04		

4. Discussion

In our study, first we intended to explore the meaning-categories found in a population of Romanian cancer patients. The aforementioned literature review of Johnston Taylor (1995) presents several studies that focus on meaning found in the illness. The sources of meaning identified in our research appear in the literature as well: deepened self-knowledge, appreciation of life and important relationships, change of priorities, approach to God/the transcendent, new goals and motivations, etc. These resemblances and recurrent motifs suggest that cancer disease is a universal human experience that in different cultures launches the same processes, and draws attention to values like love, faith, patience and gratitude.

Furthermore, we found that neither gender nor age shows correlation with meaningfulness, in contrast with the study of Salmon and colleagues (1996), who found that meaningfulness is higher among patients older than 50 years. We found as well that the time passed after the diagnosis shows a slight positive correlation with meaningfulness, which can be interpreted that time facilitates the process of meaning finding.

Secondly, we assumed a negative correlation between perceived meaning of life and illness, respective negative indicators of well-being, like automatic thoughts, anxiety, and depression. This assumption was confirmed partially. Perceived meaning of life, measured with the Meaning in Life after Cancer Scale, shows negative and significant correlations with all three variables. These results are in accordance with the literature (Mascaro & Rosen 2004; Mascaro, Rosen & Morey 2006) and these relationships hold true of cancer disease (Brady et al. 1999; Fife 1995; Jim & Andersen 2007). In our study we found that results are dependent on the applied instrument measuring meaningfulness. The differences can come form the fact that the Meaning in Life Questionnaire measures meaningfulness in general, while the Meaning in Life after Cancer Scale connects meaningfulness with the experience of cancer explicitly.

Meaning found in the illness is in a positive and significant correlation with perceived meaning of life. In other words, if someone finds meaning in their illness, it is more likely that they find meaning in their life as well. From this we can conclude that at the root of these two factors there is one common motivational attitude that urges one to search for meaning. Those who found meaning in their illness showed a lower level of automatic thoughts, anxiety and depression that is in accordance with literature (Fegg et al. 2008; Fegg et al. 2010; Okanli & Asi Karakas 2014). However, these correlations are not significant most likely because of the relatively small sample size and other unidentified variables.

5. Limitations and future directions

Among the limits of our research we must mention that the sample was not representative: 80% of the patients were female, which narrows the generalisation of the results. Furthermore, our results are correlational: we don't know for sure if those who find meaning in their lives and illness are less anxious and depressive or whether a lower level of depression and anxiety helps one to find meaning in life or not. We didn't examine variables like optimism, hope or religiosity that could have influenced the results as well. In the future the research could be repeated with taking into account personality variables and positive indicators of well-being.

References

BRADY, M.J., A.H. PETERMAN, G. FITCHETT, M. MO & D. CELLA, (1999) 'A Case for Including Spirituality in Quality of Life Measurement in Oncology', *Psycho-oncology* 8, 417–28 (https://doi.org/10.1002/(SICI)1099-1611(199909/10)8:5<417::AID-PON398>3.0.CO;2-4).

COWARD, D. (1997) 'Constructing Meaning from the Experience of Cancer', *Seminars in Oncology Nursing*, 13, 248–51 (https://doi.org/10.1016/S0749-2081(97)80019-8).

DÉGI, C.L. (2013) 'Psychosocial Aspects of Cancer in Hospitalized Adult Patients in Romania', *Social and Behavioural Sciences* 82, 32–38 (https://doi.org/10.1016/j.sbspro.2013.06.221).

EDWARDS, M.J. & R.R. HOLDEN (2001) 'Coping, Meaning in Life and Suicidal Manifestations: Examining Gender Differences', *Journal of Clinical Psychology* 57/12, 1517–34 (https://doi.org/10.1002/jclp.10206).

FEGG, M.J, M. KRAMER, S. L'HOSTE & G.D. BORASIO (2008) 'The Schedule for Meaning in Life Evaluation (SMiLE): Validation of a New Instrument for Meaning-in-Life Research', *Journal of Pain and Symptom Management* 35, 356–64 (https://doi.org/10.1016/j.jpainsymman.2007.05.007).

FEGG, M.,J., M.BRANDSTATTER, M. KRAMER, M. KÖGLER, S. HAARMANN-DOETKOTTE & G.D. BORASIO (2010) 'Meaning in Life for Palliative Care Patients', *Journal of Pain and Symptom Management*, 40, 502–09 (https://doi.org/10.1016/j.jpainsymman.2010.02.010).

FIFE, B. (1995) 'The Measurement of Meaning in Illness', *Social Science & Medicine* 40, 1021–28.

FIFE, B. (2005) 'The Role of Constructed Meaning in the Adaptation to the Onset of Life-Threatening Illness', *Social Science & Medicine* 61, 2132–43 (https://doi.org/10.1016/j.socscimed.2005. 04.026).

FRANKL, V. (1992) *Man's Search for Meaning: An Introduction to Logotherapy* (Boston: Beacon).

GRIFFITHS C, L. NORTON, G. WAGSTAFF & J. BRUNAS-WAGSTAFF (2002) 'Existential Concerns in Late Stage Cancer', *European Journal of Oncology Nursing* 6, 243–46.

HALSTEAD, M.T. & M. HULL (2001) 'Struggling With Paradoxes: The Process of Spiritual Development in Women With Cancer', *Oncology Nursing Forum* 28, 1534–44.

HOLLON, S. & Ph. KENDALL (1980) 'Cognitive Self-Statements in Depression: Development of Automatic Thoughts Questionnaire', *Cognitive Therapy and Research* 4, 383–95.

JIM, H. & B. ANDERSEN (2007) 'Meaning in Life Mediates the Relationship between Social and Physical Functioning and Distress in Cancer Survivors', *British Journal of Health Psychology* 12, 363–81 (https://doi.org/10.1348/135910706X128278).

JOHNSTON TAYLOR, E. (1995) 'Whys and Wherefores: Adult Patient Perspectives of the Meaning of Cancer', *Seminars in Oncology Nursing* 11, 32–40 (https://doi.org/10.1016/S0749-2081(95) 80040-9).

KALLAY, E.K. & C.L. DÉGI (2015) 'The Investigation of the Effects Played by Demographic Variables and Coping Mechanisms on Distress and Well-Being in a Nationally Representative Romanian Sample of Cancer Patients', *Journal of Psychosomatic Research* 78, 588–634 (https://doi.org/10.1016/j.jpsychores.2015.03.068).

KERNAN, W. & S. LEPORE (2009) 'Searching for and Making Meaning after breast Cancer: Prevalence, Patterns and Negative Affect', *Social Science & Medicine* 68, 1176–82 (https://doi.org/10.1016/j.socscimed.2008.12.038).

KONKOLŸ THEGE, B. (2009) *A logoterápia és egzisztencianalízis egy egészséglélektani vetülete: az élet értelmessége és a dohányzás közti kapcsolat* (PhD diss. Semmelweis University, Budapest).

LEE, V. (2008) 'The Existential Plight of Cancer: Meaning Making as a Concrete Approach to the Intangible Search for Meaning', *Support Care Cancer* 16, 779–85 (https://doi.org/10.1007/s00520-007-0396-7).

MASCARO, N. & D. ROSEN (2004) 'The Role of Existential Meaning as a Buffer against Stress', *Journal of Humanistic Psychology* 46, 168–90 (https://doi.org/10.1177/0022167805283779).

MASCARO, N., D. ROSEN & L. MOREY (2006) 'The Development, Construct Validity and Clinical Utility of the Spiritual Meaning Scale', *Personality and Individual Differences* 37, 845–60 (https://doi.org/10.1016/j.paid.2003.12.011).

MCGRATH, P. (2004) 'Reflections on Serious Illness as Spiritual Journey by Survivors of Haematological Malignancies', *European Journal of Cancer Care* 13, 227–37 (https://doi.org/10.1111/j.1365-2354.2004.00457.x).

MORITA, T, J. TSUNODA, S. INOUE & S. CHIHARA (2000) 'An Exploratory Factor Analysis of Existential Suffering in Japanese Terminally Ill Cancer Patients', *Psychooncology* 9, 164–68 (https://doi.org/10.1002/(SICI)1099-1611(200003/04)9:2<164::AID-PON447>3.0.CO;2-S).

OKANLI, A. & S. ASI KARAKAS (2014) 'The Effect of Meaning of the Illness with Cancer Patients on Depression, Anxiety and Quality of Life', *European Journal of Oncology Nursing* 14 (Supplement 1: *Abstracts and learning outcomes*) P63, S42.

RAJANDRAM, R.K., J. JENEWEIN, J.P.J. MCGRATH & R.A. ZWAHLEN (2010) 'Post-Traumatic Growth: A Novel Concept in Oral Cavity Cancer Care', *Oral Oncology* 46, 791–94 (https://doi.org/10.1007/s00520-011-1105-0).

SALMON, P., F. MANZI & R.M. VALORI (1996) 'Measuring the Meaning in Life for Patients with Incurable Cancer: The Life Evaluation Questionnaire (LEQ)', *European Journal of Cancer* 32A(5), 755–60.

SAWYER, A., S. AYRES & A.P. FIELD (2010) 'Post-Traumatic Growth and Adjustment among Individuals with Cancer or HIV/AIDS: A Meta-Analysis', *Clinical Psychology Review* 30, 436–47 (https://doi.org/10.1016/j.cpr.2010.02.004).

SKRABSKI, Á., M. KOPP, S. RÓZSA, J. RÉTHELYI & R. RAHE (2005) 'Life Meaning: An Important Correlate of Health in the Hungarian Population', *International Journal of Behavioral Medicine* 12, 78–85.

SIMONELLI, L.E., J. FOWLER, G.L. MAXWELL & B.L. ANDERSON (2008) 'Physical Sequalae and Depressive Symptoms in Gynecologic Cancer Survivors: Meaning in Life as a Mediator', *Annual Behavioural Medicine* 35, 275–84 (https://doi.org/10.1007/s12160-008-9029-8).

STEGER, M. & P. FRAZIER (2005) 'Meaning in Life: One Link in the Chain from Religiousness to Well-being', *Journal of Counseling Psychology* 52, 574–82 (https://doi.org/10.1037/0022-0167.52.4.574).

STEGER, M., P. FRAZIER, S. OISHI & M. KALER (2006) 'The Meaning in Life Questionnaire: Assessing the Presence of and Search for Meaning in Life', *Journal of Counseling Psychology* 53, 80–93 (https://doi.org/10.1037/0022-0167.53.1.80).

VACHON, M. (2008) 'Meaning, Spirituality and Wellness in Cancer Survivors', *Seminars in Oncology Nursing* 24, 218–25 (https://doi.org/10.1016/j.soncn.2008.05.010).

WESTMAN, B., M. BERGENMAR & L. ANDERSSON (2006) 'Life, Illness and Death: Existential Reflections of a Swedish Sample of Patients who Have Undergone Curative Treatment for Breast and Prostate Cancer', *European Journal of Oncology Nursing* 10, 169–76 (https://doi.org/10.1016/j.ejon.2005.06.002).

ZIGMOND, A.S. & R.P. SNAITH (1983) 'The Hospital Anxiety and Depression Scale', *Acta Psychiatria Scandinavica* 67, 361–70.

ZIKA, S. & K. CHAMBERLAIN (1992) 'On the Relation between Meaning in Life and Psychological Well-Being', *British Journal of Psychology* 83, 133–45.