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Spirituality and Religious Orientation in Relation to Posttraumatic Growth in Cancer Patients

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Religious orientation, spirituality, posttraumatic growth, cancer survivors

The main objective of the present study is to explore the posttraumatic growth of cancer patients in relation to their religious orientation and spirituality. A partial objective is to look for differences in posttraumatic growth between religious and non-religious cancer patients as well as between patients undergoing treatment at time of the study and cured patients. Two hundred cancer patients participated at the research divided into two groups. The first group included hundred cancer patients undergoing treatment at the time. The second group comprised hundred cancer survivors. Two methods were applied, the Posttraumatic Growth Inventory (PTGI) of Tedeschi and Calhoun, along with the Swedish Religious Orientation Scale (SROS) created by Allport and Ross. The results of the study confirmed the existence of a relationship between posttraumatic growth and religious orientation in cancer patients. We also found a higher level of posttraumatic growth in religious cancer patients than in the non-religious ones. The higher level of posttraumatic growth was also found in cancer survivors in comparison to cancer patients who were undergoing treatment at the time.

1 Introduction

Cancer is one of the most feared medical diagnoses that may affect any organ and system of human body (Tóthová and Žiaková 2017, 6). Very close attention is paid to this disease due to its high occurrence in the population and level of mortality connected to it.

A cancer diagnosis may have a significant impact on the mental state of patients from the early stage (determination of the diagnosis), through the process of treatment, up to the psychological experience of a patient after being cured (Schroevers *et al*. 2010, 46). Cancer is thus regarded as a traumatizing experience with long-term psychological effects. Traumatic events are defined as events involving actual or imminent death or a serious injury, where the person exposed to such an event experiences the feelings of dread, helplessness, and fear (Zoellner and Maercker 2006, 628). The patients interrupt their education and work careers, isolate themselves from their friends and social groups (Zebrack *et al*. 2014, 1267).

Apart from a negative impact, difficult events in human life, such as cancer, may also have a positive impact on individual's life. The positive changes help to protect the mental, social, relational, and physical state of the patients. Casellas-Grau, Font and Vives (2014, 9) claim, there is an evidence that cancer may positively influence on self-perception, relationships and values of cancer patients, which may result in the reorganization of their priorities in life. According to Manne *et al*. (2004, 442), positive changes reported by cancer patients cover the range from existential changes, such as significantly changed views of spirituality, to behavioral changes. These changes are recognized by 60% to 90% of the cancer survivors. The positive changes caused by a traumatic event are described as *posttraumatic growth*. Brunet *et al*. (2010, 831) introduce the construct of *posttraumatic growth* as a process of achieving positive results attributed to or occurring in relation to a response to a crisis or a traumatizing experience. Existential treatises by Frankl constitute the basis of the concept of posttraumatic growth introducing a positive shift in perspective and priorities that might occur when one faces death (Barakat, Alderfer and Kazak

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2006, 413). The *existential theory* is based on an assumption that the individuals are able to comprehend the meaning of suffering through braveness and compassion (Brunet *et al.* 2010, 830). Constanzo, Ryff and Singer (2009, 155) studied psychosocial damage and resistance in cancer patients and compared them to individual without any diagnosis. The results show higher levels of personal growth, social wellbeing, and spirituality. Cancer survivors are more resistant in case of upsetting of moods or various psychiatric symptoms.

Religious orientation, or *religiousness*, plays an important role in cognitive processing of events, as individuals try to come to terms with traumatic events through religious practices (Pearce, Singer and Prigerson 2006, 744). According to Stríženec (in Halama and Semancová 2014, 2), the religiousness represents the opinion on God or another higher power that is manifested in the individual's behavior. "*The term 'religiousness' describes the religious experience associated with affiliation to a religion or adopting an approach with a religious content that is manifested in the system of values and in the behavior*" (Pospíšilová 2014, 14).

In connection with religiousness, there is also the concept of *spirituality*. Based on theoretical knowledge, we can say that there is a relationship between spirituality and religiosity. But on the other hand, Paloutzian and Park (in Dutková, 2016, 24) claim that there is also the difference between spirituality and religiosity in the following sense: Religiosity is meant as organized and institutionalized component of faith, while spirituality deals with the inner and personal aspects of faith. Marciniak *et al.* (2019, 645) define spirituality as "*the central experiential function of religion, which through thinking, feeling, action leads to the finding, preservation and transformation of the sacred into human life.*"

Sifers and Warren (in Dutková, 2016, 18) argue that spirituality can have various functions for individuals. Spirituality can unite people, thanks to which a social system is built. Spirituality supports the individuality of the individual and at the same time provides him with support, stability, and faith. Spirituality rituals can provide the individual with hope and pleasure in difficult situations. Spirituality can be helpful for individuals in interpersonal relationships and personal development.

If the religiousness was considered from the social point of view, Purnell, Andersen and Wilmot (2009, 2) emphasize the socially organized character of religion. According to Pearce, Singer and Prigerson (2006, 745), religious individuals report higher levels of social security and satisfaction as opposed to individuals without any religious affiliation. It is necessary to note that the religiousness tends to develop. For better understanding, we provide a typology by Gordon W. Allport, who distinguishes between *intrinsic* and *extrinsic religious orientation*. Halama *et al.* (2006, 105–106) claim that the extrinsic religiousness helps an individual to fulfill and achieve their set goals. Religion provides them with consolation, joy, protection, and a role within the society. The individuals with extrinsic religiousness engage in religious ceremonies irregularly and only adopt certain religious opinions. They mainly focus on themselves and their own interests; their relationship to religion and church is insufficient. On the other hand, the intrinsic religiousness views religion as the meaning. The individuals adopt religions and live their lives according to the principles and rules of their religion. They are compelled to participate in the church ceremonies and view the religion and the church as one.

Fighting and suffering constitute a common variable between religiousness and growth. Laufer *et al.* (2009, 862) studied the role of religiousness in relation to the posttraumatic growth in Israeli adolescents. Their results might lead to a conclusion that a subjective response of an individual seems like an important factor when attributing an importance to a traumatic event. It was found that the fear of a traumatic event correlated positively with growth. The research findings suggest that the predictors of growth differ based on the level of religiousness reported by the individuals. The study supports the relationship between the religious orientation and the process of growth.

The main objective of the present study is to explore relation between the posttraumatic growth and religious orientation in cancer patients. A partial objective is to look for differences in posttraumatic growth between religious and non-religious cancer patients. We also aimed at exploring the differences in posttraumatic growth between cancer survivors and cancer patients undergoing treatment.

2 Method

2.1 Sample and Procedure

The participants were 200 cancer patients, 143 females (71.5%) and 57 males (28.5%). Age of the participants was from 20 to 83 years (M = 54.6; SD = 14.2). They were divided into two groups. The first group included 100 cancer patients, 69 females and 31 males, who were undergoing treatment at the time. The length of the period from the diagnosis and the beginning of treatment was from 3 months to 8 years. The second group comprised 100 cancer survivors, 74 females and 26 males. The research was carried out at the National Cancer Institute and was approved by the ethics committee of the National Cancer Institute. The length of the period from overcoming the disease was from 6 months to 25 years. Using the scale, the participants also reported whether they found themselves strongly religious – 1, or strongly non-religious – 5. Based on their answers, the participants were divided into three categories: 1) religious, 2) ambivalent, 3) non-religious. A more detailed description and gender distribution are provided in the Table 1.

2.2 Measures

The posttraumatic growth was measured using the Posttraumatic Growth Inventory (PTGI) created by Tedeschi and Calhoun. The original inventory contained 34 items. In our study, we used its reduced form with 21 items measuring 5 domains: 1) *Relationships with others* (seven items, e.g., "I know I can count on people in times of trouble"); 2) *New opportunities* (five items, e.g., "I developed new interests"); 3) *Personal development* (four items, e.g., "I feel more self-confident"); 4) *Spiritual change* (two items, e.g., "I have a stronger religious faith"); 5) *Appreciation of life* (three items, e.g., "I can better appreciate each day"). The indicated items represent positive changes determining the domain in which an individual, who has coped with certain situation, has changed. The participants rate the items using a Likert scale from 0 ("I did not experience this change as a result of my crisis") to 5 ("I experienced this change to a very great degree as a result of my crisis"). The participants focused on cancer when responding to the individual statements.

The religiousness of the participants was measured using the Swedish Religious Orientation Scale (SROS) designed by Allport and Ross. The scale includes 28 items and comprises 3 subscales: 1) *Intrinsic religiousness* (ten items, e.g., "The primary purpose of prayer is to gain relief and protection"); 2) *Extrinsic religiousness* (twelve items, e.g., "It is great there is Church, because all of us might get into situations where we need relief and spiritual support"); 3) *Dimension of searching* (six items, e.g., "Questions are much more important for my religious life than answers"). The participants rate the individual items using a Likert scale from 1 (strongly disagree) to 5 (strongly agree).

Table 1.
Number of Participants in Three Categories Describing their Attitude to Religion

Categories	Currently Treated (N=100)		Cured (N=100)	
	Female	Male	Female	Male
1. Religious	27	10	40	13
2. Ambivalent	27	12	18	5
3. Non-Religious	15	9	16	8

3 Results

A correlation analysis was performed to verify the relationship between the posttraumatic growth and religious analysis. We assumed there was a statistically significant positive relationship between the religious orientation and posttraumatic growth.

Table 2.
Correlation Analysis of Posttraumatic Growth and Religiousness

		Searching	Extrinsic Religiousness	Intrinsic Religiousness
Posttraumatic Growth	Pearson's r	0.351	0.320	0.388
	p-value	<.001	<.001	<.001

Based on the results shown in the Table 2, it can be concluded that a medium-strong, statistically significant, positive correlation was found between the domains of religious orientation and posttraumatic growth.

We further used comparative analysis to compare the posttraumatic growth in religious and non-religious cancer patients. We assumed that the religious cancer patients would show statistically significant higher levels of posttraumatic growth as opposed to the non-religious cancer patients.

Table 3.
Comparative Analysis of Posttraumatic Growth in Religious and Non-Religious Cancer Patients

	Group	N	M	SD	Mdn	U-value	df	p	Cohen's d
Posttraumatic Growth	Religious	90	75.10	18.00	80.00	1657	136	0.012	0.430
	Non-Religious	48	66.70	22.50	70.50				

The results in the Table 3 show we found a statistically significant difference in the overall posttraumatic growth score ($p = 0.012$; $d = 0.4$) between religious and non-religious cancer patients. The difference was of a medium effect size.

In next step, patients undergoing treatment and cancer survivors were compared in the posttraumatic growth dimensions. In relation to the goal of the study, we asked a question, whether there were any statistically significant differences in posttraumatic growth between the cancer patients undergoing treatment and cancer survivors.

Table 4.
Comparative Analysis of Posttraumatic Growth Domains in Cancer Patients Undergoing Treatment and Cancer Survivors

	Group	M	SD	Mdn	U-value	df	p	Cohen's d
Relationships with Others	Treated	23.02	7.69	23.0	3398	198	<.001	0.540
	Cured	26.73	5.94	28.0				
New Opportunities	Treated	13.10	5.99	14.0	3463	198	<.001	0.546
	Cured	16.32	5.82	17.0				
Personal Development	Treated	12.25	5.01	12.5	3246	198	<.001	0.660
	Cured	15.17	3.66	16.0				
Spiritual Change	Treated	5.00	3.35	5.0	3848	198	0.005	0.387
	Cured	6.30	3.37	8.0				
Appreciation of Life	Treated	11.75	3.43	13.0	4375	198	0.122	0.273
	Cured	12.59	2.67	14.0				

The results show a statistically significant differences between the cancer patients undergoing treatment and cancer survivors in the domains of Relationships with others ($p < .001$; $d = 0.540$), New opportunities ($p < .001$; $d = 0.546$), Personal development ($p < .001$; $d = 0.660$), Spiritual change ($p = 0.005$; $d = 0.387$). We consider these differences to be of medium effect size. We have not found a statistically significant difference between the cancer patients undergoing treatment and cancer survivors in the domain of Appreciation of life ($p = 0.122$).

4 Discussion

Based on the studies by Milam *et al.* (in Hafnidar, Chang and Lin 2012, 239), we assume there is a positive correlation between the religiousness and posttraumatic growth. All three religious orientation subscales correlated positively with the posttraumatic growth, with the correlation being the strongest in case of intrinsic religiousness. It can be said that the individuals with intrinsic religiousness find a meaning in religion that makes it easier for them to cope with a traumatic event, such as cancer. They might view their illness as a challenge or an opportunity to deepen their faith and to gain a better understanding of their spiritual needs. If an individual copes with a traumatic event, they can perceive their faith as stronger, or, on the other hand, as Pearce, Singer and Prigerson (2006, 744) claim, the religious practice helps an individual to try to cope with a traumatic event, as the religiousness plays an important role in cognitive processing of the event.

We also assumed that the religious cancer patients would show higher levels of posttraumatic growth as opposed to the non-religious ones. Our findings are in line with those of Hafnidar, Chang and Lin (2012, 239). We believe that religion and faith themselves provide individuals with anchorage and hope, which help them to overcome a traumatic event in their lives. In our view, the religiousness seems to be an important aspect in cognitive processing of and coping with a negative event, which cancer definitely is.

Our goal was to explore the differences in posttraumatic growth between the cancer patients undergoing treatment and cancer survivors. Our findings show that cancer survivors achieved more positive changes in the domains of relationships with others, new opportunities, personal development, and spiritual change as opposed to the cancer patients who were undergoing treatment at the time. We believe that the reason might be the fact that many patients undergoing treatment are not able to transform their negative emotions to positive ones yet. On the contrary, cancer survivors may see their experience with the benefit of hindsight and rise above it to a certain extent.

Being a traumatic event, cancer represents a set of bio-psycho-social and existential-spiritual changes that affect one's life. However, apart from a negative impact, this illness also has a positive impact on further life of an individual.

5 Conclusion

It can be concluded that there is a medium-strong relationship between the posttraumatic growth and practicing of faith in cancer patients and cancer survivors. It can mean that practicing of spirituality can help patients to cope with the disease better because religious patients achieved higher level of posttraumatic growth to compared to nonreligious patients. And one aspect of posttraumatic growth is also spiritual change. We believe it is necessary to study this topic further, since the number of cancer diagnoses is on the increase. And therefore, we can assert that spirituality and practicing the faith can be very useful to cope with the cancer disease because cancer survivors achieved higher level of spiritual change compared to treated patients.

The study was limited by an uneven number of male and female participants, which might be related to the impact of the diagnosis on patient's experience. In further research in this area, we also recommend focusing on the stage of cancer, manner of its treatment as well as on the influence of psycho-social-spiritual support of cancer patients.

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