

The Relationship between Self-Compassion and the Experience of Memorial Symptoms in Patients with Gastrointestinal Cancer

Abstract

Background: Patients with Gastrointestinal (GI) cancer experience a range of physical and psychological memorial symptoms after developing cancer and beginning to receive medical care. The present study was conducted to investigate the relationship between self-compassion and the experience of memorial symptoms in patients with GI cancer. **Materials and Methods:** This descriptive-correlational study was conducted in July to August 2019. The study sample included 190 patients admitted to Seyed Al-Shohada Hospital, with GI cancer who entered the study by convenience sampling. Data were collected using a patient demographic information form, Neff's Self-Compassion Scale (SCS), and the Memorial Symptoms Assessment Scale (MSAS) and then analyzed by Pearson correlation coefficient in SPSS-20. **Results:** The mean (SD) total score of self-compassion was 86.67 (16.65) out of 130, and the mean (SD) total score of memorial symptoms was 1.40 (0.64) out of 4 in patients with GI cancer. The most frequently reported physical symptom was lack of energy, with an 86.84% prevalence, and the most frequently reported psychological symptoms included worrying and feeling nervous, with 70.52% prevalence rates. The total score of self-compassion was inversely correlated with the total score of memorial symptoms, the score of psychological symptoms, and the score of physical symptoms. Furthermore, the total score of the memorial symptoms was inversely correlated with the scores of all the self-compassion components ($p < 0.001$). **Conclusions:** Cancer patients had memorial symptoms in both physical and psychological domains. These symptoms decrease with an increase in self-compassion, so compassion-based educational interventions by nurses can be used to reduce these symptoms.

Keywords: Compassion, gastrointestinal neoplasms, signs and symptoms

Introduction

Cancer is one of the most common health problems in the world.^[1] Gastrointestinal (GI) cancers are among the most common cancers in the world, killing many people each year, with a reported 5-year survival rate of 29% for gastric cancer, 69% for colon cancer, and 8.7% for pancreatic cancer. In 2018, an estimated 13,809 people and above died of GI cancer.^[2] There were an estimated 4.8 million new cases of GI cancers and 3.4 million related deaths, worldwide, in 2018. GI cancers account for 26% of the global cancer incidence and 35% of all cancer-related deaths.^[3] Although the exact number is not known, about 8000 carcinoid tumors and cancers that start in the GI tract are diagnosed each year in the United States.^[4] In this regard, in Iran GI cancer accounts for about 25% of all

cancers and is responsible for approximately half (44.4%) of cancer deaths in Iran.^[5]

Due to its life-threatening nature, this disease has serious and destructive effects on the physical and psychological states of patients.^[6,7] About one-third of patients experience unpleasant cancer-related symptoms (e.g., pain, nausea, and fatigue), worries about the relapse or progression of the disease, the physical effects of certain treatments (radiotherapy and chemotherapy), and emotional manifestations.^[8,9] These patients thus experience a range of memorial symptoms after developing cancer and beginning to receive medical care. Memorial symptoms are the range of physical and psychological symptoms experienced after a threatening event such as cancer. In fact, memorial symptom is a wide range of symptoms such as lack of energy, worrying, feeling sad, pain, feeling nervous, feeling drowsy, dry mouth,

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difficulty sleeping, feeling irritable, nausea, lack of appetite, difficulty concentrating, and so on, which is experienced by cancer and non-cancer patients.^[10] Studies have reported the emergence of the memorial and psychological symptoms in patients with cancer after their diagnosis and during the process of treatment.^[11,12]

In fact, the diagnosis of cancer leads to stress and this stress leads to psychological responses (such as depression, anger, and isolation), behavioral responses (such as lack of adherence to treatment), and biological responses (such as weakening the patient's immune system).^[13] In this regard, studies have noted self-compassion as one of the variables contributing to improved performance in stressful situations and psychological crises. Self-compassion has three mutually interacting components, namely, self-kindness against self-judgment, common humanity against isolation, and mindfulness against over-identification.^[14] Some studies suggest that self-compassion is positively associated with mental health and a source of internal resistance that reduces the negative effects of stress and prevents the incidence of physical and mental disorders. The distinctive feature of self-compassion is that it guides the individual's suffering and pain and is thereby an important part of a positive psychology approach. Self-compassion is a positive attitude toward oneself that helps predict, maintain, and promote mental health,^[15] such that higher self-compassion is associated with lower anxiety, stress, and depression^[16] and is one of the major factors in mental health.^[17] In contrast, a low self-compassion is associated with psychological traumas such as anxiety, stress, and depression.^[18] Dunne *et al.* stated that people with a higher self-compassion show less physical illness.^[19] Beaumont *et al.* also showed that cognitive therapies based on a compassionate mind reduce negative emotions in patients.^[20]

Nonetheless, people's perceptions of self-compassion are not always positive. The participants in a study by Lopez *et al.* regarded self-compassion as a negative trait but viewed compassion for others as a positive trait.^[21] Schellekens *et al.* found no link between emotional distress and self-compassion in patients with lung cancer.^[22] In this regard, Salarhaji *et al.* showed that self-compassion alone does not act as a mediator in reducing anxiety and stress in women with breast cancer and found such outcomes to be influenced by other factors as well, such as connection to God.^[23] Nursing has a holistic nature, so paying attention to the pain and suffering of patients has always been considered, and this issue is precisely emphasized by the concept of compassion.^[24] Because nurses spend more time with patients than other healthcare providers, nurses can be more efficient in areas such as developing a sense of kindness in patients, sharing emotions, and bringing patients to mindfulness.^[25] Nurses specialize in paying attention to the needs of their patients, and carefully responding with kindness.^[26] Nurses can use self-care strategies such as self-compassion to lessen patients' distress and to improve

their wellbeing and resilience. In fact, to care for others with compassion is why we became nurses.^[27]

Therefore, due to issues such as the high prevalence and mortality of GI cancers, the chronic course of the disease and its impact on all aspects of life, especially the psychological dimension, and the undeniable importance of psychological factors in the prognosis of this disease, a study was conducted to examine mean score of self-compassion and the experience of memorial symptoms and the relationship between these variables in patients with GI cancer.

Materials and Methods

This descriptive-correlational study was conducted at one of the professional oncology hospitals in Iran from July to August 2019. The study sample consisted of 190 patients with GI cancer diagnosed at least 6 months ago, aged 18-60 years, undergoing common cancer treatments such as chemotherapy and radiotherapy, willing to participate in the study and selected by convenience sampling. Sample with a significance level of 5%, test power of 80%, and precision of 0.2 was calculated using a formula. Data were collected through questionnaires that were filled out in written format by the subjects themselves in the presence of the researcher.

The data collection tools were as follows: (i) a patient demographic information questionnaire (age, gender, marital status, occupation, education, and place of residence). (ii) Neff's 26-item Self-Compassion Scale (SCS), consisting of six subscales, including self-kindness (items 5, 12, 19, 23, and 26), self-judgment (items 1, 8, 11, 16, and 21), common humanity (items 3, 7, 10, and 15), isolation (items 4, 13, 18, and 25), mindfulness (items 9, 14, 17, and 22), and over-identification (items 2, 6, 20, and 24). The SCS items are scored based on a 5-point Likert scale (never = 1, almost never = 2, no idea = 3, almost always = 4, always = 5). The items in the self-judgment, isolation, and over-identification subscales are scored in reverse. The total score ranges from 26 to 130. Higher scores indicate higher self-compassion and lower scores indicate lower self-compassion.^[28-31] (iii) The Memorial Symptoms Assessment Scale (MSAS), which consists of two subscales, namely, physical symptoms, including 28 prevalent symptoms and psychological symptoms, including four common psychological symptoms. The MSAS items are scored based on a 4-point Likert scale (rarely = 1, occasionally = 2, frequently = 3, almost constantly = 4). The minimum score for each item is 1 and the maximum is 4. The test-retest reliability of the SCS was evaluated by Neff and its Cronbach's coefficient alpha was obtained as 0.92.^[26] Odou *et al.* reported, the internal consistency is 0.92.^[29] Shahbazi *et al.* reported the internal consistency of 0.91 for the entire scale and 0.77, 0.83, 0.92, 0.88, 0.91, and 0.87 for over-identification, self-kindness, mindfulness, isolation, common humanity,

and self-judgment, respectively.^[30] Rajabi *et al.* reported the internal consistency of 0.65 for the entire scale.^[31] The MSAS was validated by Chang *et al.* The Cronbach's alpha coefficient of its subscales ranged from 0.76 to 0.87, and its test-retest reliability coefficient with a 1-day to 1-week interval ranged from 0.84 to 0.96.^[32]

For the purpose of data collection, the researcher visited the selected treatment center. The eligible candidates were then selected based on the inclusion criteria. After the candidates declared their willingness to participate in the study and submitted a written consent, questionnaires were distributed among them to be filled out. In addition, if the candidates were not able to complete the questionnaires due to illiteracy or illness yet still wanted to participate in the study, the researcher personally explained each item to them and recorded their answers in relevant sheets. To determine the distribution of the frequency of demographic characteristics, descriptive statistics such as number, percentage, mean, and SD were used. In order to determine the relationship of self-compassion and memorial symptoms, Pearson correlation coefficient was used. The data obtained were analyzed in SPSS-22 software (SPSS Inc., Chicago, IL, USA).

Ethical considerations

This study was approved by the Ethics Committee of Isfahan University of Medical Sciences, Isfahan, Iran (IR.MUI.RESEARCH.REC.1398.389). Subjects were explained and informed that participation was voluntary and anonymous. Participants gave their consent by returning the completed questionnaires.

Results

A total of 190 patients with GI cancer with a mean (SD) duration of treatment of 1.40 (1.14) years participated in this study, including 110 (57.90%) male and 80 (42.10%) female patients. Most of the subjects (94.70%) were over age 35 years. Most of them (84.20%) were married and had less than high school diploma (41.60%). In determining the frequency distribution and percentage of the physical and psychological memorial symptoms, the most frequent physical symptom was lack of energy with a frequency of 86.84% and the most frequent psychological symptoms were worrying and feeling nervous, with frequencies of 70.52% [Table 1].

Table 2 presents the mean total score of memorial symptoms, the components of the MSAS, the mean total score of self-compassion, and the components of the SCS. Pearson's correlation coefficient showed that the total score of self-compassion was inversely correlated with the total score of memorial symptoms, the score of psychological symptoms, and the score of physical symptoms ($p < 0.001$). The total score of memorial symptoms was inversely correlated with the scores of all the self-compassion components ($p < 0.001$) [Table 3].

Table 1: Frequency distribution and percentage of memorial symptoms in patients with GI cancer

Symptom	n (%)
Difficulty concentrating	41 (21.57)
Pain	145 (76.31)
Lack of energy	165 (86.84)
Cough	87 (45.78)
Changes in skin	85 (44.73)
Dry mouth	146 (76.84)
Nausea	96 (50.52)
Feeling drowsy	131 (68.94)
Numbness/tingling in hands/feet	108 (56.84)
Difficulty sleeping	123 (64.73)
Feeling bloated	99 (52.10)
Problems with urination	75 (39.47)
Vomiting	64 (33.68)
Shortness of breath	102 (53.68)
Diarrhea	68 (35.78)
Sweats	78 (41.05)
Mouth sores	72 (37.89)
Problems with sexual interest	86 (45.26)
Itching	62 (32.63)
Lack of appetite	128 (67.36)
Dizziness	99 (52.10)
Difficulty swallowing	93 (48.94)
Change in the way food tastes	127 (66.84)
Weight loss	127 (66.84)
Hair loss	109 (57.36)
Constipation	82 (43.15)
Swelling of arms or legs	60 (31.57)
I don't look like myself	55 (28.94)
Feeling sad	131 (68.94)
Worrying	134 (70.52)
Feeling irritable	112 (58.94)
Feeling nervous	134 (70.52)

GI: Gastrointestinal

Table 2: Mean (SD) total score of memorial symptoms, self-compassion, and subscales

Total and Subscales	Mean (SD)
Total scores of memorial symptoms	1.40 (0.64)
Physical symptom	1.30 (0.64)
Psychological symptoms	1.73 (1.15)
Total scores of self-compassion	86.67 (16.58)
Self-kindness versus self-judgment	34.08 (8.50)
Suffering as common humanity versus isolation	26.91 (5.60)
Mindfulness versus over-identification	25.66 (5.27)

The total score of self-compassion had no significant relationship with age ($r = 0.08$, $p = 0.27$) but was directly related to education ($r = 0.18$, $p = 0.01$); the total score of memorial symptoms had no significant relationship with age ($p = 0.99$) or education ($p = 0.06$). The total score of self-compassion was directly related to the duration of treatment ($r = 0.16$, $p = 0.03$), but the score of memorial

Table 3: Pearson's correlation coefficient between the total score of self-compassion and subscales with memorial symptoms and subscales

Variable	Total self-compassion score and total memorial symptoms score	
	r	p
Total memorial symptoms score	-0.39	<0.001
Physical symptom	-0.31	<0.001
Psychological symptoms	-0.54	<0.001
Self-Kindness versus self-judgment	-0.34	<0.001
Suffering as common humanity versus Isolation	-0.27	<0.001
Mindfulness versus over-identification	-0.39	<0.001

symptoms was not related to this variable ($p = 0.81$). The independent t-test showed that the mean total score of memorial symptoms did not differ significantly between the genders ($p = 0.20$), but the mean total score of self-compassion was significantly higher in men than in women ($p < 0.001$, $t_{187} = 4.52$). The one-way ANOVA showed that the mean total scores of self-compassion ($p = 0.49$) and memorial symptoms ($p = 0.52$) did not differ significantly between individuals with different marital statuses. The independent t-test showed that the mean total score of self-compassion ($p = 0.75$) and memorial symptoms ($p = 0.28$) did not differ significantly between the residents of cities and villages. The one-way ANOVA also showed that the subjects' occupation did not have a significant relationship with the total score of memorial symptoms ($p = 0.87$) but did have a significant relationship with the total score of self-compassion ($p < 0.001$, $F_5 = 4.94$), and the lowest score of self-compassion pertained to the housewives.

Discussion

Most patients with GI cancer have memorial symptoms in both physical and psychological domains that are consistent with previous studies.^[11,32] The most common physical symptoms were lack of energy (86.84%), dry mouth (76.84%), pain (76.31%), feeling drowsy (68.94%), change in the way food tastes (66.84%), weight loss (66.84%) and difficulty sleeping (64.73%), respectively. In terms of psychological symptoms worrying (75.52%) and feeling nervous (70.52%) were the most frequently reported symptoms in our study, Tantoy et al. reported that 83.30% of patients with GI cancer suffer from lack of energy and physical impairments such as numbness or tingling (68.10%), difficulty sleeping (63.20%), nausea (60.40%), pain (55.20%), and change in the way food tastes (50.30%). As for the frequency of the psychological symptoms, worrying (39.90%) was the most frequently-reported symptoms, followed by, irritability (37.50%), feeling sad (34.40%) and feeling nervous (24.70%) as the

least frequently-reported symptom.^[33,34] Sullivan *et al.*, also reported that patients with breast cancer suffer from lack of energy (90.30%), difficulty sleeping (72%), pain (69.70%), feeling drowsy (65.60%), difficulty concentrating (61%), change in the way food tastes (60.80%), nausea (57.90%) and hair loss (57.30%), "I don't look like myself" (50.50%), and feeling sad (50.50%).^[35] Our findings are consistent with the previous studies in the physical symptoms. Overall, in our study inconsistent to previous studies^[33-35] the mean score of psychological symptoms was higher than the mean score of physical symptoms this may be due to a lack of psychological support for these patients.

The mean total score of self-compassion was 86.67 out of 126. Overall, the subjects did not have a high mean score of self-compassion. This finding is consistent to one study,^[36] but in patient with skin cancer, the mean score of self-compassion was lower.^[37] This indicates that the mean score of self-compassion varies based on patient's cancer type. Nevertheless, there was a significant and inverse relationship between the mean total score of self-compassion and the total score of memorial symptoms as well as between the total score of self-compassion and the incidence of physical and psychological symptoms; that is, physical and psychological symptoms decreased as the self-compassion score increased. In addition, this relationship was stronger in the area of psychological symptoms; in other words, as the self-compassion score increased, there was a greater decrease in the incidence of psychological symptoms.

There was also a significant and inverse relationship between the total score of memorial symptoms and the self-compassion components, and this relationship was stronger in terms of mindfulness against over-identification. This finding is consistent to previous reports that mindfulness self-compassion was effective in reducing depressive and anxiety symptoms.^[38,39] That is to say, as the mean score increased in each self-compassion component, the mean total score of memorial symptoms decreased. In one study, Bender and Ingram showed that self-compassion contributes to the promotion of general self-efficacy and resilience.^[39] Gilbert *et al.* acknowledged that self-compassion reduces depression, anxiety, self-criticism, and the inferiority complex.^[16] In contrast, a low self-compassion was associated with psychological traumas such as anxiety, stress, and depression.^[17] Other studies have noted a significant relationship between self-compassion and well-being.^[40] Self-compassion has been reported as a protective factor for mental health and quality of life in the caregivers of patients with cancer^[41] and an effective factor for adaptive behaviors during severe illness.^[40] Zhu *et al.* also found that self-compassion plays a preventive role in the development of depression, anxiety, and fatigue symptoms in patients with cancer.^[42] In another study, Brown *et al.* reported a significant inverse relationship between the self-compassion score and the

incidence of depression and anxiety in patients with breast cancer, so that an increased self-compassion reduced mental rumination and worrying and thus also decreased anxiety and depression.^[43] Arambasic *et al.* also admitted that self-compassion contributes to the psychological adaptation of patients with breast cancer.^[44] In general, the results of the present study and previous studies indicate a significant inverse relationship between self-compassion and memorial symptoms in patients with cancer. This finding is recommended to be recognized in the prevention and treatment of physical and psychological symptoms in these patients. So, educational interventions by nurses to increase self-compassion of patients with cancer appear necessary.

One of the limitations of this study was the data collection tools, which were self-report questionnaires, as the physical and psychological states of the subjects when completing the questionnaire could have affected the answers. Furthermore, our results indicated that there is correlation between self-compassion and memorial symptoms in patients with cancer, however, correlation detection in which cause and effect relationship is not clear was among the limitations of the present study. It is suggested to conduct longitudinal studies to determine the effect of self-compassion on memorial symptoms in patients with cancer. Notwithstanding its limitations, this study is the first investigation of association between self-compassion and memorial symptoms in patients with cancer in Iran.

Conclusion

The findings showed that patients with cancer have memorial symptoms in both physical and psychological domains. The mean score of psychological symptoms was higher than that of physical symptoms. The mean total score of self-compassion had a significant and inverse relationship with the total score of memorial symptoms, which means that the incidence of physical and psychological symptoms decreases with an increase in the self-compassion score. In addition, this relationship was stronger between the self-compassion score and psychological symptoms; that is to say, with any increase in self-compassion, there was a greater decrease in the incidence of psychological symptoms. Due to the protective role of self-compassion in the incidence of memorial symptoms, educational interventions by nurses to increase self-compassion and thus reduce the physical and psychological symptoms of patients with cancer appear necessary.

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Conflicts of interest

Nothing to declare.

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