

Self-Compassion and Adherence to Treatment in Patients with Cancer

Abstract

Background: Emotional disorders and depression make cancer patients reluctant about adherence to their treatment. The present study was conducted to determine the relationship between self-compassion and adherence to treatment in cancer patients. **Materials and Methods:** This cross-sectional study was conducted on 214 patients with cancer in 2019. They were inpatients aged over 18 years. Two months had passed since their cancer was diagnosed, and they had undergone a course of chemotherapy. Data were collected using a personal details form, Neff's Self-Compassion Scale and the Modanloo Adherence to Treatment Questionnaire and were then analyzed using the mean, frequency, Pearson's correlation coefficient and linear regression analysis. **Results:** The mean (SD) total score of self-compassion was 80.07 (15.68), and the mean (SD) total score of adherence to treatment was 134.44 (38.37). Pearson's correlation coefficient showed a direct relationship between the total score of self-compassion and the total score of adherence to treatment ($p < 0.05$). The linear regression analysis showed that the score of suffering as a common humanity ($\beta = 0.47, p \leq 0.001$) and the variable of education ($\beta = 0.27, p \leq 0.001$) were significant predictors of the total score of adherence to treatment ($R^2 = 0.33$). **Conclusions:** According to the results, suffering as a common humanity and education were significant predictors of adherence to treatment. Oncology nurses are therefore recommended to get further educated about self-compassion, so that they take this concept more seriously in providing patient care. Nurses should also educate the patients with low levels of education about the consequences of not adhering to their treatment.

Keywords: Compassion, neoplasms, patients, treatment adherence and compliance

Introduction

Cancer is one of the main global health problems that takes many lives every year.^[1] Adherence to treatment is vital for cancer patients^[2] to achieve optimal health outcomes, such as recovery or improved quality of life.^[3] Adherence to treatment is defined as the patient's acceptance of health-related recommendations and his adherence to them. This adherence encompasses routine clinical examinations to complete the treatment program and the regular and proper consumption of the prescribed medicines.^[4] Non-adherence to medication regimen can exacerbate the disease, cause mortality, and impose additional health care costs.^[5]

Due to the importance of adherence to treatment for the management of cancer, it is essential to first gain a full understanding of the factors associated with treatment adherence in cancer patients. Adherence is a multidimensional phenomenon influenced by

many factors. Previous studies have focused on various factors, including demographic characteristics, as the variables predicting adherence to treatment.^[6-9] Cancer patients experience stress and discomfort^[10] and psycho-social problems^[11] as a result of the complexity of medical services they have to receive, including chemotherapy and radiotherapy. These issues, along with emotional disorders and depression, can make cancer patients reluctant about adherence to their treatment. Self-compassion is one of the factors that could contribute to the mitigation of depression in these patients.^[12-15]

Neff (2003) attributed three components to the construct of self-compassion: "Self-kindness –being kind and understanding toward oneself in instances of failure rather than being harshly self-critical, common humanity—perceiving one's experiences as part of the larger human experience rather than seeing them as separating and isolating, and mindfulness –holding painful thoughts and feelings in balanced awareness rather

Neda Khalili¹,
Masoud Bahrami²,
Elaheh Ashouri²

¹School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran,
²Nursing and Midwifery Care Research Center, Faculty of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran

Address for correspondence:

Dr. Elaheh Ashouri,
Nursing and Midwifery Care Research Center, Faculty of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran.
E-mail: ashori@nm.mui.ac.ir

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than over-identifying with them” [p.224;13]. Self-compassion denotes having a positive attitude toward oneself when everything is going wrong^[16] and requires acceptance of the fact that one’s experiences are part of common human experiences, and suffering, failure and inadequacies are part of the human circumstances.^[17] In fact, the self-compassionate approach helps patients better cope with uncontrolled chronic stress^[18] and leads to a sense of self-care and awareness and creates a non-judgmental attitude toward one’s failures.^[15,19] Research in health fields have noted the mediating and supporting role of self-compassion in relation to psychological distress.^[20]

Given that non-adherence to treatment in cancer patients leads to a poor prognosis, lower quality of life, increased hospitalization rates and higher morbidity and mortality rates, it is important to identify the factors affecting adherence to treatment in these patients. Psychological distress is one of the factors that can lead to non-adherence to treatment in cancer patients. Meanwhile, the results of studies have shown that self-compassion might reduce this distress.^[21] The present study was thus conducted to determine the relationship between self-compassion and adherence to treatment in cancer patients, and then, based on the findings, interventions will be designed to help increase adherence in these patients.

Materials and Methods

The present cross-sectional study was conducted in 2019 in a cancer treatment center affiliated with Isfahan University of Medical Sciences in Iran. The study subjects included 214 patients with cancer. The sample size was calculated based on a test power of 80%, type-I error of 5%, confidence interval of 95%, and z score of 1.96. The eligible cancer patients were selected by convenience sampling. They were inpatients aged over 18 years. Two months had passed since their cancer was diagnosed, and they had undergone a course of chemotherapy. They had no mental illness or cognitive impairment.

The tool used in the study was a three-part questionnaire. The first part inquired about personal details, including age, gender, marital status, occupation, duration of treatment, place of residence and education. The second part consisted of Neff’s Self-Compassion Scale with 26 items and three subscales, including self-kindness and self-judgement (ten items), common humanity and isolation (eight items) and mindfulness and over-identification (eight items). The scale was scored based on a 5-point Likert scale from 1 (‘almost never’) to 5 (‘almost always’), where the lowest score was 26 and the highest 130. The questionnaire was standardized and had acceptable psychometric properties.^[13] The test-retest reliability of the Self-Compassion Scale was evaluated by Neff, and its Cronbach’s coefficient alpha was calculated as 0.92.^[22] Odou *et al.*^[23] reported the internal consistency of the scale as 0.92. The scale has also been confirmed for

application in Iran by Azizi *et al.*^[24] in 2013.

The third part of the study tool included Modanloo’s Adherence to Treatment Questionnaire, which has 40 items in the following domains: Treatment efforts (nine items), participation in treatment (seven items), adaptability (seven items), integration of treatment and life (five items), adherence to treatment (four items), commitment to treatment (five items) and managing the implementation of treatment (three items). This scale is scored based on a 6-point Likert scale, from ‘completely’ (5 points) to ‘not at all’ (0 points). The reliability of this tool was confirmed through the test-retest method with a correlation coefficient of $r = 0.275$.^[25] The validity of the questionnaire has been confirmed for application in Iran by Seyed Fatemi *et al.*^[26]

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 informed consent, questionnaires were distributed among them to be filled out. In addition, the researcher read the sentences out loud and helped in completing the questionnaires for the illiterate patients and those who needed help due to their condition. Data were analyzed in SPSS (version 20; SPSS Inc., Chicago, Illinois, USA) using mean, frequency, Pearson’s correlation coefficient and linear regression analysis.

Ethical considerations

First, permission was obtained from the authorities and the ethics committee of Isfahan University of Medical Sciences (IR.MUI.RESEARCH.REC.1397.217) to carry out the study. Then, the researchers visited the research setting and introduced themselves to the hospital authorities, and the eligible cancer patients were selected and briefed on the study objectives before giving their informed consent for participation in the research. Next, the questionnaires were distributed among the candidates to be filled out. Also, the patients were ensured of the confidentiality of the data.

Results

The present study was conducted on 214 cancer patients. Participants’ mean (SD) age was 44.71 (11.55) years. A total of 133 patients (62.06%) were female and 81 (37.94%) were male. Table 1 presents their demographic characteristics. The mean (SD) total score of self-compassion was 80.07 (15.68) out of 130, and the mean (SD) total score of adherence to treatment was 134.44 (38.37) out of 200 [Table 2].

The total score of adherence to treatment had an inverse relationship with the patients’ age ($r = -0.139$, $p < 0.05$), but no significant relationship with the duration of treatment ($r = 0.108$, $p > 0.05$). According to Pearson’s correlation coefficient, the patient’s education had a direct relationship with the total score of adherence

Table 1: Demographic Characteristics of the sample (n=214 Cancer Patient)

Characteristic	Mean (SD)	n (%)
Age	44.71 (11.55)	
Duration of treatment (months)	12.65 (15.26)	
Gender		
Female		133 (62.06%)
Male		81 (37.94%)
Marital status		
Single		30 (14%)
Married		167 (78%)
Widow		10 (4.70%)
Divorced		7 (3/30%)
Job		
Employee		37 (17.30%)
Worker		16 (7.50%)
Freelance job		26 (12.10%)
Retired		10 (4.70%)
Housewife		102 (47.70%)
Unemployed		21 (9.80%)
Student		2 (0.90%)
Educational level		
Illiterate		9 (4.20%)
Elementary		50 (23.40%)
Guidance		56 (26.20%)
Diploma		38 (17.79%)
Associate		21 (9.80%)
Bachelor		31 (14.50%)
Master's degree		9 (4.20%)
Address		
City		176 (82.10%)
Urban		38 (17.90%)
Cancer Type		
Brain		2 (0.94%)
Eye		3 (1.40%)
Larynx		4 (1.87%)
Mouth		1 (0.47%)
Thyroid		5 (2.33%)
Skin		6 (2.80%)
Colon		38 (17.75%)
Ovaries		6 (2.80%)
Testicles		5 (2.34%)
Bladder		11 (5.14%)
prostate		19 (8.87%)
Uterus		15 (7.02%)
Pancreas		8 (3.74%)
Stomach		12 (5.62%)
Breast		41 (19.16%)
Lungs		18 (8.41%)
Blood		14 (6.54%)
Bone		6 (2.80%)

Table 2: Mean total score of self-compassion; Mean total score of adherence to treatment and Subscales

Subscales	Mean (SD)
Total scores of Self-Compassion	80.07 (15.68)
Self-kindness	28.10 (6.35)
Suffering as common humanity	24.94 (5.70)
Mindfulness	27.03 (5.26)
Total scores of adherence to treatment	134.44 (38.37)
Treatment efforts	30.41 (10.08)
Participation in treatment	24.36 (8.26)
Adaptability	23.08 (7.36)
Integration of treatment and life	17.19 (5.19)
Adherence to treatment	12.90 (5.31)
Commitment to treatment	16.15 (5.69)
Managing the implementation of treatment	10.45 (3.90)

to treatment ($r = 0.296$, $p < 0.05$). The independent *t*-test showed that the mean total score of adherence to treatment was significantly higher in women compared to men ($r = 2.17$, $p < 0.05$). Moreover, the mean total scores of adherence to treatment were significantly higher in the patients residing in urban areas compared to those residing in rural areas ($r = 3.03$, $p < 0.05$).

The linear regression analysis showed that, among the variables presented in Table 3, the score of suffering as a common humanity ($\beta = 0.47$, $p \leq 0.001$) and the variable of education ($\beta = 0.27$, $p \leq 0.001$) were significant predictors of the total score of adherence to treatment. The higher were suffering as a common humanity and the level of education, the higher was adherence to treatment in the patient. Suffering as a common humanity explained 13% of the variance in adherence to treatment while education explained 10.1% of this variance ($R^2 = 0.33$).

Discussion

According to the results, 67% of the cancer patients were in the good category in terms of adherence to treatment, which agrees with the results of previous studies.^[27,28] Meanwhile, the results of other studies have demonstrated that adherence to treatment is poor among patients and is affected by many personal, economic, and social factors.^[29,30] All the cited studies have addressed the issue of adherence to treatment in non-cancer chronic patients, especially diabetic patients, and have produced contradictory results. According to the results, cancer patients appear to adhere to treatment better than other patients due to the poor prognosis of their disease and fear of complications caused by non-adherence, such as deteriorating conditions and imminent death. In fact, the nature of cancer and the symptoms of the disease encourage the patient to further continue the treatment.

Patients had a mean average self-compassion score. In addition, the score of suffering as a common humanity was a significant predictor of the total score of adherence to treatment. Suffering as common humanity explained

Table 3: Linear regression analysis to predict the total score of adherence to treatment

Independent variable	Unstandardized B	SE*	Standardized Beta	t	p
(Constant)	4.92	24.04		0.20	0.84
Self-kindness	0.31	0.66	0.05	0.47	0.64
Suffering as common humanity	3.17	0.67	0.47	4.76	<0.001
Mindfulness	-0.25	0.71	-0.03	0.35	0.73
Age	0.21	0.24	0.06	0.89	0.37
Gender	7.70	4.72	0.10	1.63	0.10
Area of residence	2.56	6.56	0.03	0.40	0.69
Level of education	6.41	1.73	0.27	3.71	<0.001

*SE: Standard error. $R^2=0.33$

13% of the variance in adherence to treatment. Similarly, the results obtained by previous studies have shown that self-compassion affects the total score of adherence to treatment.^[16,31] It seems that self-compassion is an important human force that helps individuals find hope and meaning in life in the face of hardship.^[32] Self-compassion has been proposed as a potential mediator against negative emotions in stressful situations that leads to a welcoming attitude toward personal suffering, feelings of self-care and self-kindness, non-critical attitude toward failures and difficulties and considering personal experiences as part of common human experiences.^[33,34] In fact, perceiving suffering as a common humanity, which is a subscale of self-compassion, helps patients with cancer have common senses with other people, be alert about their living conditions, and face problems without negative judgement.^[21] Under stressful life circumstances, such as when diagnosed with cancer, this quality leads to a proper understanding of the situation and the use of appropriate and rational strategies and may thus increase adherence to treatment by positively affecting emotion control. Many studies have shown higher mental well-being and more resilience against stress in people during challenging social situations.^[35,36]

Although many factors were proposed as contributing to patients' health motivations and efforts for improving their adherence to treatment,^[37] in the present study, education was the most important demographic variable related to adherence to treatment. In fact, the level of education was a predictor of adherence to treatment and explained 10.1% of the variance in adherence to treatment. In contrast with our findings, the results of previous studies have shown that adherence to medication regimen and education are inversely correlated, as most patients with a college degree or postgraduate education did not adhere to their chemotherapy regimen, whereas the percentage of adherence was higher in those who had only completed primary school.^[38] According to the present findings, however, it seems that higher education is associated with the patients' greater understanding of their treatment process and more rational decision-making about their treatment, as people with higher levels of education have better knowledge about the importance of adherence to treatment.

The limitations of this study included the use of a self-reporting questionnaire, which might have been associated with the patients' less careful responding to the questions, given their physical and mental health conditions. Another limitation was the study design, although the findings suggest a relationship between the study variables that could be important for designing interventions; the researchers thus recommend further studies on this subject.

Conclusion

The present study showed that suffering as a common humanity is the most important predictor of adherence to treatment. In fact, suffering as a common humanity, which is a subscale of self-compassion, helps patients with cancer share a common sense with others, consider illness part of human life and be more resilient to disease and more adherent to treatment regimens. Self-compassion-promoting interventions can therefore be used to increase adherence to treatment in cancer patients. In addition, education was the most important demographic variable contributing to adherence to treatment, and it seems that people with higher levels of education are more informed about the importance of adherence to treatment and tend to continue their therapy for longer durations.

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Conflicts of interest

Nothing to declare.

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