Comparison of emotional extroversion, personality traits of women and men with cancer

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ABSTRACT

Background and purpose: Cancer is one of the major causes of death in the world and millions of people die from cancer every year. The present study was conducted to compare emotional extroversion and personality traits of women and men with cancer.

Research method: The research method was of comparative causal type. The statistical population of the study was all cancer patients referred to Al-Ghadir, Arash and Labafinejad hospitals in the 4th district of Tehran in 2019, which according to the statistics was 420 people. The statistical sample of the research was based on Morgan's table of 130 people, of which 64 were women and 66 were men. The sampling method of the research was available in the form of sampling. The research tools were Neo's personality questionnaire (1989) and King and Emmons' emotional projection questionnaire (1990) (EEQ). The method of data analysis was multivariate variance analysis using SPSS software.

Findings: The research results showed that there is a significant difference between the personality traits of women and men with cancer at the level of 0.001. Also, there is a significant difference between the emotional extroversion of women and men with cancer at the level of 0.001.

Conclusion: It can be concluded that gender can play a role in the type of personality traits and emotional projection in women and men with cancer.

1.Introduction

Cancer is one of the major causes of death in the world and millions of people die from cancer every year. Therefore, the need to investigate the cause of these diseases, the course of the disease and its treatment is felt. Although the causes of cancer diseases are many, some factors are more important and are known as the main risk factors, among which smoking, alcohol consumption and mental disorders can be mentioned (Walidi Pak, Khodayi, 2015). The final stage of cancer is a debilitating disease that can be accompanied by changes in various aspects of general and mental health of patients (Klan Farmanfarma, Dharban, 2013).

Many psychosocial factors such as personality variables, social isolation, lack of social support and emotional drain have been proposed in relation to cancer, which increase the risk of contracting it either independently or in combination (Taylor, 2003). Emotions have been the focus and study of psychological researchers for various reasons, including their evolutionary functions, decision-making and their influential role in health and social-communicative illness (Basharat and Mohammadi Mehr, 2008). Emotions are multidimensional responses consisting of experiential, behavioral and physiological components (Long, 1994). For example, the emotion of fear consists of feeling discomfort, trying to escape and heart palpitations. Emotional projection includes the use of behavioral and cognitive strategies to change the duration or intensity of the experience of an emotion. Also, when faced with stressful events, people use different emotion regulation strategies to correct or modify their emotional experience. (Gross and Thompson, 2007). Expressing strong emotions or reliving childhood emotional experiences in a safe therapeutic environment often relieves the client. Of course, emotional projection does not eliminate the causes of conflicts but opens the way to explore repressed feelings and experiences.

Three styles have been introduced for how to project emotion. Emotional projection style, is the external display of emotion regardless of value (positive or negative) or method (facial, verbal, and body posture) (Kring et al., 2014). Emotional control style, which is a tendency to inhibit the projection of emotional responses. Usually, for this style, there are four independent structures in the form of emotional inhibition (or the tendency to inhibit and suppress the experienced emotion), rumination (or mental repetition of unpleasant emotional events), control of aggression and benign control (control of disturbing impulses during work).) is called (Roger and Najarian, 2009). Finally, the ambivalence style in emotional expression is defined as having a tendency to project emotion but being unable to express it, expressing emotion without a real desire, or expressing it and then regretting it (King and Emmons, 2010). Ambivalence in emotion projection may be used as an emotional trait that affects the experience of emotion in addition to global trends or rules of cultural representation (King, 2008). Ambivalence in emotion projection is the best sign of low projection and high conflict. The experience of conflict, in addition to biological and psychological consequences, also has significant interpersonal consequences, of course, all these consequences are interrelated (King and Emmons, 2010).

When a person finds out the roots of his conflicts, we say that he has gained insight. Although sometimes recalling a repressed experience can lead to insight, the popular belief that most of the therapeutic effects of psychoanalysis are due to the sudden recall of an exciting event is not true. It is rare that human sufferings have only one origin; And insight is also obtained due to the gradual increase in self-awareness. In addition, insight and emotional discharge must work together: that is, the patient must recognize his feelings and at the same time feel this recognition. New human orientation is never a pure cognitive process. When people use emotion projection, they also

control how they experience and express their emotions. The study of human behavior shows that each person regulates emotional responses. This regulation may be done automatically or voluntarily and be conscious or unconscious (Gross et al., 2007). Many of the emotion projection processes are common among humans, but it seems that each person tends to use some specific patterns. These patterns are called emotion projection (Rafie Nia, 2010). Cognitions or cognitive processes help people to regulate their emotions and feelings and not be overcome by the intensity of emotions (Hosni, 2010).

Personality is stable tendencies and characteristics that determine similarities and differences in psychological behaviors (thoughts, emotions and actions) and such behaviors continue over time and cannot easily be considered as the result of social and biological pressures of a moment. . From an evolutionary point of view, personality traits are an evolved strategy for solving a wide range of social problems. Today, the five-factor model in personality assessment is one of the dominant approaches in the field of personality. McGarry and Costa's five-factor model includes five main personality dimensions. These factors include: extroversion, agreeableness, conscientiousness, modernity and experienceability (Kerimi and Yousefi, 2016).

The personality characteristics of people can provide models for predicting their behavior and mental states, and individual differences of people are an important factor that show why some people cope better than others with environmental conditions and variables and different levels of motivation, satisfaction and have mental health (Yarmohammadi, 2014). In the context of the relationship between personality and indirect risk factors for cancer, they showed that personality factors of neuroticism cause symptoms. Also, they showed that the personality factors of harmony and conscientiousness hurt cancer symptoms (Markey, 2012). In today's life, the increase in pressures and tensions on the one hand and the more complex understanding of human behaviours and motivations, on the other hand, have led to the recognition of personality traits and how people are motivated in adverse situations, among the topics and projects in psychology. Researchers believe that personality factors determine how people adapt to the pressures caused by stressful situations and also influence the continuation of pressure in their lives (Roberti, 2012). Undoubtedly, there are considerable differences between individual differences and personality traits in the physiological response to psychological stress, which may be related to genetic readiness and the ability of a person to cope with or overcome harmful situations, which are the cause of competitiveness. be related (Yarmohamedian, 2014). According to the material that was raised in this research, we are looking for an answer to this question, is there a difference between emotional extroversion, and personality traits of women and men with cancer?

2. Analysis method

The research method is causal-comparative. The statistical population of the study was all cancer patients referred to Al-Ghadir, Arash and Labafinejad hospitals in the 4th district of Tehran in 2019, which according to the statistics was 420 people. The statistical sample of the research was based on Morgan's table of 130 people, of which 64 were women and 66 were men. The sampling method of the research was available in the form of sampling. In this way, the patients who were referred to Al-Ghadir, Arash and Labafinejad hospitals in Region Four had the chance to be included in the research sample.

Sample entry and exit criteria

1. Not having marital problems and mental disorders

2.Age range from 20 to 50

3.Literacy level of the minimum cycle

4. They are in the chemotherapy stage and surgery has not been done on them

5. Being married

Research tool

NEO Personality Questionnaire (1989): The NEO-FFI personality questionnaire known as NEO was designed by Costa and McCree (1989) and was translated and used in Iran by Haqshenaz (2013). The 60-item NEO-FFI questionnaire was designed to briefly and quickly evaluate 5 main personality factors (emotional instability or neuroticism, extroversion, openness to experiences, agreeableness, and conscientiousness) and each factor consists of 12 items. The grading is based on the Likert interval scale as follows: I strongly disagree 1, I disagree 2, I have no opinion 3, I agree 4, and I strongly agree 5. If the subject answers 150 or more questions with "I agree" and "I completely agree", the answer sheet is invalid. If the answer sheet contains 50 I agree and completely agree or less than that, that answer sheet is considered invalid. If the answer is completely disagree in more than six consecutive questions, agree in more than nine consecutive questions, have no opinion in more than ten consecutive questions, And I completely agree, if more than 9 consecutive questions are given, the scoring of the answer sheet is considered invalid. . The scale scores are obtained by summing the items of each dimension and after reverse scoring some items according to the instructions.

The validity and reliability of this questionnaire is divided into two internal and external parts. In Iran, Haqshanas (1387) reached the following results on a sample of 502 people from the population of Shiraz: Cronbach's alpha coefficients equal to C=0.83, A=0.71, O=0.57, E=0.71, N=0.81 and retest validity at the interval of 6 month equal to N=0.53, A=0.6, O=0.76, E=0.74 have been obtained. Abroad, this questionnaire was originally prepared by McCrae and Costa for the general population, and during the last decade, it has been most widely used in has had research and clinical Its original version was established in 1992 by Costa and McCrae to measure the five-factor model of personality (neuroticism, extroversion, openness, agreeableness, and conscientiousness). The alpha coefficient reported by them varied from 0.74 to 0.89 with an average of 0.81. While in the research of Benchard et al., 1999, this coefficient was 0.85 for neuroticism, 0.72 for extroversion, 0.68 for openness, 0.69 for agreeableness, and 0.79 for conscientiousness. Recently, a research on personality and eating disorders has reported an internal consistency of 0.69 to 0.90 for the scales of the test (Egert, Landoski, and Clamp, 2007). Mehriyar and Ghazi Tabatabai, (2008) was standardized, which obtained good reliability and validity. In the research of Rasouli and Dehghan (2016), the Cronbach's alpha coefficient of five factors of this scale was obtained in the range of 0.65 to 0.78.. .

King and Emmons Emotional Extraversion Questionnaire (1990) (EEQ): King and Emmons (1990) designed this questionnaire in order to investigate the importance of the role of emotional extraversion in health. Emotional expressiveness questionnaire has 12 items and three subscales. Items 1 to 4 are related to the positive emotion expression subscale, items 5 to 8 are related to the intimacy expression subscale, and items 9 to 12 are related to the negative emotion expression subscale. This questionnaire is a 5-point Likert-style questionnaire, which is scored from 1 to 5. Rafiinia (2010) investigated the validity of this scale using the internal consistency method and

Cronbach's alpha coefficient for the whole scale and the subscales of projecting positive emotion, expressing intimacy and expressing negative emotion were 0.68, 0.65, and 59, respectively. 0.0 and 0.68 have been obtained. King and Emmons stated the Cronbach's alpha coefficient for the whole scale and the mentioned subscales as 0.70, 0.74, 0.63 and 0.67, respectively, and to check the convergent validity, between the scores of the emotional projection questionnaire and the questionnaire Multidimensional personality and Broadburn positive affect scale were positively correlated.

data analysis method

The statistical method used in this research included descriptive statistics (prevalence, percentage, mean, standard deviation) and inferential statistics including multiple variance analysis, all analyses were performed using SPSS version 22 software.

3. Findings

In this part, the descriptive findings of the mean and standard deviation of the scores of the variables of personality traits and emotional projection in two groups of men and women are presented.

Table 1. Mean and standard deviation of the variable of personality traits in two groups of men and women

group of men		Women's group		Variable
standard deviation	Average	standard deviation	Average	
3/68	13/75	4/13	17/11	neurosis
3/81	13/90	4/37	15/90	extroversion
3/62	12/81	3/98	16/53	Openness to experiences
3/59	14/59	63/81	18/17	Agreement
3/54	13/06	3/65	17/68	being conscientious

The results of Table 1 show that the mean of the variable of personality characteristics is different in the two groups of men and women, and the mean of this variable is higher in the group of women.

Table 2. The mean and standard deviation of emotional extraversion variable in two groups of men and women

group of men		Women's group		Variable
standard deviation	Average	standard deviation	Average	
8/49	15/34	7/90	17/23	Expressing positive emotion
6/38	14/02	5/85	16/48	express sincerity
2/51	15/04	2/09	13/29	Expressing negative emotions

| 14/91 | 44/04 | 14/34 | 47/00 | Emotional projection |

The results of Table 2 show that the average of the variable of emotional extraversion in the two groups of women and men is different, and the average of this variable is higher in the group related to women.

Table. The results of the Kolmogorov-Smirnov test under the assumption of normal distribution of the statistical population

The significance level	statistics	Variable
0/32	0/95	Emotional projection
0/33	0/84	Expressing positive emotion
0/27	0/70	express sincerity
0/36	0/82	Expressing negative emotions
0/23	1/22	neurosis
0/25	0/56	extroversion
0/28	0/74	Openness to experiences
0/35	0/68	Agreement
0/31	1/31	being conscientious

As can be seen in Table 3, considering that the value of the Kolmogorov-Smironov test in the scores of emotional extraversion and personality traits is between +1.96 and -1.96, and the statistic is not significant, therefore, the confidence coefficient is 95%. It is possible to accept the assumption of normal distribution of the statistical population.

Assumption 2: It should be mentioned that one of the assumptions of using the statistical test of analysis of variance is the assumption of homogeneity of variances. Levine's test is used to check this assumption. If this test is not statistically significant, the assumption of homogeneity of variances has been fulfilled. The results of this test for hypothesis 2 are listed in Table 4.

Table 4. Results of Levin's test, assumption of homogeneity of variance

Significance level	Degree of freedom 2	Degree of freedom 1	The value of F	Variable
0/064	129	1	3/47	Emotional projection
0/057	129	1	3/65	Expressing positive emotion
0/094	129	1	2/82	express sincerity
0/63	129	1	0/22	Expressing negative emotions
0/74	129	1	0/10	neurosis
0/71	129	1	0/13	extroversion
0/50	129	1	0/43	Openness to experiences
0/061	129	1	3/54	Agreement
0/028	129	1	4/88	being conscientious

According to the findings of Table 4 and according to the F value obtained from Levin's test, there is no significant difference at the α=0.05 level, so the null hypothesis, that is, the assumption of homogeneity of variances, is accepted. Considering the confirmation of the presuppositions necessary to use the analysis of variance test, in this section the tables and results obtained for the research assumptions will be presented.

There is a difference between the personality traits of women and men with cancer.

Table 5. Multivariate effects test

Ita squared	meaning. sig	Error degree of freedom	The degree of freedom of the hypothesis	F value	Value	Effect	
0/71	0/001	125	5	41/03	0/71	Pillai effect	
0/71	0/001	125	5	41/03	0/28	Lambda Wilkes	group
0/71	0/001	125	5	41/03	2/52	Hotelling's work	
0/71	0/001	125	5	41/03	2/52	The effect of the largest zinc root	

According to the data in Tables No. 5, the value of the Wilkes Lambda value of the group variable has a significant effect on the dependent variable.

Table 6. Results of multivariate variance analysis of variable scores of personality traits

Somewhat	Significance level	The value of F	mean square	Degrees of freedom	sum of squares	The dependent variable
0/15	0/001	47/90	734/49	1	734/49	Neurosis
0/11	0/001	34/77	585	1	585/35	Extroversion
0/11	0/001	33/02	479/26	1	479/26	Openness to experiences
0/10	0/001	31/59	434/21	1	434/21	Agreement
0/11	0/001	34/31	444/61	1	444/61	being conscientious

According to the results of Table 6, the significance level is less than 0.05 and the null hypothesis is rejected, as a result, there is a significant difference in the mean of the variable of personality traits in both groups of women and men.

There is a difference between the emotional extroversion of women and men with cancer.

Table 7 Multivariate effects test

Ita squared	meaning sig	Error degree of freedom	The degree of freedom of the hypothesis	F value	Value	Effect	
0/41	0/001	126	4	35/29	0/41	Pillai effect	group
0/41	0/001	126	4	35/29	0/59	Lambda Wilkes	
0/41	0/001	126	4	35/29	0/69	Hotelling's work	
0/41	0/001	126	4	35/29	0/69	The effect of the largest zinc root	

According to the data in Table No. 7, the value of the Wilkes Lambda value of the group variable had a significant effect on the dependent variable

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Table 8. Results of multivariate variance analysis of emotional extraversion variable scores

Somewhat	Significance level	The value of F	mean square	Degrees of freedom	sum of squares	The dependent variable
0/12	0/001	37/35	2517/23	1	2517/23	Emotional projection
0/12	0/001	35/66	1338/84	1	1338/84	Expressing positive emotion
0/12	0/001	37/30	199/93	1	199/93	express sincerity
0/10	0/001	36/29	867/78	1	882/78	Expressing negative emotions

According to the results of Table 8, the significance level is less than 0.05 and the null hypothesis is rejected, as a result, there is a significant difference in the mean variable and emotional extraversion in both groups of women and men.

4. Discussion and conclusion

The present study was conducted with the aim of comparing emotional extroversion, personality traits of women and men with cancer. There is a difference between the personality traits of women and men with cancer. The results of the present study have shown that there is a significant difference in the average variable of personality traits in both groups of women and men. And women have obtained higher scores than men in all variables of personality traits. This finding is in line with the research results of Hosseinzadeh and Alizadeh (2014), Faeghi and Jahanbakht (2014). Research shows that emotional disorders are high in cancer patients and it has been reported that there is a high level of stress, depression, anxiety and as a result, neurosis in these patients. In his studies, Cloninger (2013) has proposed some characteristics for the 3 personality dimensions of innovation, vulnerability, and cooperation, and some of these characteristics are highly prevalent in cancer patients. He believes that people who score high in harm avoidance are usually timid, nervous, anxious, shy, hesitant, hopeless, passive, negative,

pessimistic and insecure. People with high cooperation; They are empathetic, kind, tolerant, supportive and hard-working, and those who have low cooperation are self-centered, bigoted, blaming and spiteful. People are known for being high-spirited, impulsive and quick-reacting. It seems that these personality traits, i.e. vulnerability, worry, anger, passivity and stillness, low cooperation with the social environment in cancer patients have a high prevalence. Research shows that emotional disorders are high in cancer patients, and these patients report high levels of stress, depression, anxiety, and as a result, neurosis. In general, people who are diagnosed with cancer have differences in some personality traits with healthy people, these people tend to be hurt, have more discomfort and worry and feel more mental fatigue. Due to accompanying emotional disorders, these people may lose their cheerfulness and become less interested in environmental stimuli and become more immersed in their own thoughts and inner world. The explanation that can be given about more introversion in cancer patients than normal people can be related to the fact that introverts are not social seekers and do not establish strong social relationships, they often prefer solitude to communication with others. They say that extroversion is an aspect of personality that is associated with characteristics such as sociability, initiative and cheerfulness.

Neuroticism predisposes people to experience negative emotions and helplessness, and according to the mechanism of emotional weakening, it increases a person's readiness to experience stressful events. It seems that people with high neuroticism suffer more damage in stressful situations and report a higher amount of acute and chronic anxiety. They are more vulnerable to clinical emotional disorders. Also, people with neuroticism tend to evaluate themselves and the world pessimistically. Cognitive styles suggest that these individuals are (at least weakly) associated with ineffective coping; Emotion-focused coping is strongly associated with neuroticism. Due to the above reasons and because of loneliness, introverts feel more stress, which itself can be the cause of cancer. It is also possible to point out the multidimensional nature of personality and the overlap between some of its components. It is even possible that the occurrence or reporting of neuroticism in cancer patients depends on factors such as quality of life and demographic characteristics, which were not investigated in this study.

There is a difference between the emotional projection of women and men with cancer. The results of the present study showed that there is a significant difference in the variable mean and emotional extraversion in the two groups of women and men, and women scored higher in emotional extraversion. This finding is in line with the research results of Henry and Hekmaran (2015) and Stanton et al. (2014). The study of Hanri and his colleagues (2015) showed that the intervention of emotional projection at home was possible for women with breast cancer and had caused significant improvements in their physical and mental health compared to the control group in three months after the intervention. . Meanwhile, no difference in the effect of the intervention was found between women living in urban areas. Stanton et al. (2014) in a controlled and randomized trial showed that the emotional release intervention in cancer patients in the early stages of cancer has benefits including: The reduction of medical visits is especially for cancer-related diseases. The results of these studies were consistent with the present study. Also, Schlatter and Cameron (2009) examined the emotion projection of breast cancer patients and evaluated the role of emotional suppression in the symptoms experienced by these patients using daily reports of symptoms, mood, adaptive coping strategies and came to the conclusion that The tendency to suppress anxiety, anger, depression, and each of the distinct patterns in one's relationships with symptoms, mood, and the projection of emotion is related; So that cancer patients used non-adaptive strategies (self-blame, blame others, rumination and catastrophizing) more than normal people. A group of cancer patients may be subject to change in emotional expression and

regulation. In another randomized controlled trial, Lu and his colleagues concluded that although emotional draining does not have a significant effect on the health of patients with cancer metastasis, this intervention can be beneficial for some of these patients with low levels of social support and patients with recent illness. They have been found to be useful. In Jensen-Johnson et al.'s study, the intervention of writing feelings had no effect on cancer-related anxiety. Also, in another study, Dickler and colleagues concluded that positive emotion writing improved the use of mental health services among women with metastatic cancer, but it was not effective as a psychotherapy intervention in general. The results of these three studies were inconsistent with the findings of the present study. The findings of the present study showed that the discharge of emotions and emotions (emotional release) improves the depression of cancer patients. This intervention causes a significant improvement in depression symptoms of cancer patients.

Limitations of the research: This research, like other researches, had limitations, and one of these limitations was the mental and emotional state of the participants when answering the questions, which may affect the accuracy and accuracy of their answers, and this limitation was uncontrollable .

Conflict of interest: The authors hereby declare that this work is the result of an independent research and does not have any conflict of interest with other organizations and persons.

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