



Scholars Research Library

Der Pharmacia Lettre, 2017, 9 (1):43-49
(<http://scholarsresearchlibrary.com/archive.html>)



The Comparison of Depression, Anxiety and Coping Styles in children and adolescents with cancer and normal

Elham Fakhri¹, Fateme Dehghan², Faeze Tatari³, Vahid Farnia³, Mostafa Alikhani^{3*}

¹Department of Psychology, University of Mohaghegh Ardabili, Ardabil, Iran.

²Department of Nursing, School of Nursing and Midwifery, Kermanshah University of Medical Sciences, Kermanshah, Iran.

³Department of Psychiatry, Substance abuse prevention research center, Farabi hospital, Kermanshah University of medical sciences, Kermanshah, Iran

ABSTRACT

In recent years, the incidence of cancer in the world has been unprecedented. As a common debilitating disease, cancer is one of the main causes of death in children and adolescents, in both developed and developing countries. This study aimed to compare depression, anxiety and coping styles in normal children and adolescents and those with cancer. This research is descriptive and causal-comparative. The population consisted of patients with cancer admitted to three hospitals of Mohammad Kermanshahi, Taleghani and Imam Reza in the spring and summer of 2014 and normal students in Kermanshah who were 60 persons (30 patients and 30 normal) using available sampling. For data collection, the subjects responded to the questionnaires of coping responses, depression, and anxiety. The data were analyzed by descriptive statistics and inferential statistics including multivariate analysis of variance (MANOVA) with the aid of SPSS 19 software. The results indicated that a difference exists between the mean scores of the variables of dysfunctional coping styles, depression and anxiety in children and adolescents with cancer. According to the research findings, to develop treatment goals and improve quality of life in children and adolescents with cancer, they need psychological interventions.

KEYWORDS: critical thinking, nursing education, students

INTRODUCTION

Cancer is a major public health problem in many parts of the world [11]. According to the World Health Organization on cancer in 2014, the number of cancer patients in the next 20 years reaches 22 million [2]. In recent years, the incidence of cancer in the world has been unprecedented. With regard to the prevalence of the disease and its negative impact on individuals' psychological, physical, and social lives, it is introduced as one of the main

health problems in the twenty-first century [3]. Cancer targets more than 7 million people annually. Cancer is one of the most important health problems in developed and developing countries. The number of children and adults with cancer is gradually increasing in the world population. However, the 0.5/1% of all cancers is associated with childhood cancers. This rate is different depending on the age period. According to the new cases, among children aged 0-14 years in the United States, it is estimated 11.630 [4]. Cancer as a common debilitating disease is one of the main causes of death in children in both developed and developing countries. Cancer is the cause of mortality in approximately 4 and 13 percent of children under 5 and children aged between 5 and 15 years in the Iranian population, respectively [5]. The prevalence of cancer in both sexes in pre-pubertal period is equal and in adolescence, the female to male ratio increases from 1 and 2 [6].

Among the raised issues of psychological problems along with cancer in children and adolescents, depression is known as one of the most common psychiatric disorders [7]. Although depression has long been recognized as one of the major mental disorders, the importance of this disease in the last two decades both in terms of suffering that people have endured and heavy pressure of this inconvenience on nations' medical resources, it is considered more than before [8]. Researches have shown that 50 to 80 percent of cancer patients simultaneously suffer from a psychiatric disorder. The most common psychiatric disorder in the researches is adjustment disorder and depressive disorder is the second most common psychiatric diagnosis [9,10].

Depression coincided with cancer is a risk factor for shorter survival in cancer patients and an important factor in the rejection of treatment by the patients [6]. Depression affects the components of the immune system function and consequently influences the treatment of cancer so that predicts cancer progression and its mortality (Spiegel & Giese-Davis, 2003). In general, the simultaneous occurrence of depression with cancer has multiple and negative effects on individuals' personal and social life, mental and physical health, treatment, and disease progression in different areas. In addition, timely prevention, diagnosis, and intervention in the field of depression in cancer patients, is extremely important. Adolescents with cancer experience multiple stressors that may also be derived from the patients and their normal developmental tasks [12]. Therefore, considering the characteristics of depressed people, it can be assumed that this factor can be a major factor causing the difference between cancerous and non-cancerous individuals.

Anxiety disorders are the most common among psychiatric disorders of childhood. Symptoms associated with anxiety in childhood may be viewed in different ways. The best example is a kind of behavioral inhibition is defined as a characteristic mood where children response with fear and avoidance to new and unfamiliar people, situations and events so that they are shy [13]. Some of the causes of anxiety in cancer patients are in the implications of this diagnosis in patients and their families' mind that possibly include deformity, pain, lack of financial and social things as well as dependence and death [10]. Given these facts, it can be concluded that one of the factors that can make a difference between cancerous and non-cancerous individuals is anxiety.

Coping styles are an attempt to deal with various life situations that people make so that using it, they remove or reduce stressful stimuli [14]. In patients with chronic physical problems such as cancer, the role of coping processes is crucial their health status and adaptability in children and adolescents aged 4-16 years old with problems mentioned above, the risk of behavioral disorders including anxiety, and depression and social isolation is reported 2.4 times more than other age groups [15]. Gradually, with the development of science, cancer in children and adolescents is converted from a severe and fatal disease into a chronic disease that indicates finding suitable strategies against this disease in children and adolescents. Today, more than 50 percent of children with cancer can survive 5 years more [16].

The research and theoretical evidence relatively suggests that emotional and behavioral variables and quality of life are among the most powerful and stable factors that make a difference to cancerous and noncancerous individuals [17-20]. It is known that adolescents with cancer are more likely to experience important psychological problems (Zembrak, Gurney & Ofinger, 2004). Thus, adolescents with cancer are in need of special care and attention compared to other age groups. Bektas and Demir (2016) in their study, examined anxiety, depression level and quality of life for patients with gastrointestinal cancer that their study results showed that male patients with poor economic condition experienced more symptoms. The patient's general health decreases by increasing the duration of the disease. Anxiety scores increased as age decreased and both anxiety and depression scores increased with the increase of duration of disease [21]. To advance therapeutic goals and enhance the quality of life in children and adolescents with cancer, their paying attention to psychological status and coping styles against events is required. Therefore, this study aimed to compare the depression, anxiety and coping styles in normal children and adolescents and those with cancer.

METHODOLOGY

The present study is descriptive of the causal-comparative types. The study population included all female patients with cancer including all patients referred to medical centers and hospitals in Kermanshah city who had been diagnosed with cancer by the medical staff. In addition, for the general individuals, the population consisted of female students in regular schools of Kermanshah. The sample consisted of two groups of children and adolescents aged 18-10 years old who were normal and diagnosed with cancer attending at elementary schools to high schools of Kermanshah. The sample was comprised of 60 patients, including 30 patients in each group. The sampling method was available in both groups. In relation to the criteria for individuals to be included or not included in this study, it should be noted that in the first place, the study was conducted on volunteer individuals who participated in the study and answered the questionnaire questions. In the case of cancer patients, the diagnosis of cancer was necessary and the subjects were hospitalized in oncology ward. Both groups answered the questionnaire of coping responses, depression (CDS) and anxiety.

Tool

Coping Response Inventory (CRY): Seeking an easy and reliable method to assess coping responses, Bilinger and Moose prepared a questionnaire with 32 questions. The questionnaire consists of five sub-scales including problem-solving-based coping, cognitive assessment-based coping, emotion-based coping, physical-based coping, and social

support attraction-based coping. The final score of this questionnaire is obtained in the form of problem-oriented coping (adding the first two subscales) and emotion-based coping (adding the last three subscales). The reliability coefficient 0.79 was obtained through the retesting the general score of the questionnaire. Furthermore, the validity values for the subscales of, cognitive assessment-based coping, emotion-based coping, social support attraction-based coping and physical-based coping were calculated 0.688, 0.65, 0.903 and 0.90, respectively. The reliability coefficient of the questionnaire in the study was obtained 0.76 using half method [22].

Children Depression Scale (CDS): In this study, the CDS was used to collect information. This questionnaire was created by Janbozorgi, which is the only Iranian questionnaire based on DSM in accordance with children and adolescents of Iran. Janbozorgi and Mostakhdemin Hosseini (2006) obtained 0.84 as the Cronbach's alpha coefficient of the questionnaire [23]. The Cronbach's alpha coefficient of the questionnaire was obtained in the mentioned study was obtained 0.80.

Anxiety: Beck et al. (1990) introduced Beck Anxiety Inventory (BAI) that measures the intensity of clinical anxiety symptoms in individuals exclusively. The BAI is a self-report questionnaire to measure the intensity of anxiety in adolescents and adults. This questionnaire is a 21-point scale that Choice 1 is zero, Choice 2 is one and Choice 3 is two and Choice 4 is three score. Kaviani and Mousavi (2008) obtained 72% and 92% as the reliability and validity of this questionnaire, respectively [24]. To analyze the data collected, the multivariate analysis of variance (MANOVA) was used and data analysis was performed using the statistical software SPSS 19.

FINDINGS

The research sample consisted of 60 persons (30 patients and 30 normal persons). MANOVA was used for the comparison of depression, anxiety and coping styles of female children and adolescents who were diagnosed with cancer and normal. The results of the analysis of variance indicated that a significant difference ($P \leq 0.01$) existed in the values of depression ($F=479/02$), anxiety ($F=677/91$) and coping styles ($F=70/77$) in groups of normal female children and adolescents and those diagnosed with cancer.

Table-1: Analysis of variance between groups for Mean differences in groups children and adolescents with cancer and normal

Dependent variable	group	Mean (SD)	Sum of squares	df	Mean Square	F	Sig	Eta
Depression	Children and adolescents with cancer	37(4.53)	11398.81	1	11398.81	497.02	0.001	0.89
	Normal people	9.60(5.06)						
Anxiety	Children and adolescents with cancer	46.53(4.42)	21206.40	1	21206.40	677.91	0.001	0.92
	Normal people	8.27(5.67)						
Coping Styles	Children and adolescents with cancer	55.73(4.84)	3081.66	1	3081.66	70.77	0.001	0.55

	Normal people	38.47(4.38)						
--	---------------	-------------	--	--	--	--	--	--

CONCLUSION

The present study aimed to compare depression, anxiety and coping styles between female children and adolescents with cancer and normal ones. Results indicate significant differences in these variables between the two groups. The results showed that the mean of the scores of inefficient coping styles and depression and anxiety in children and adolescents with cancer is higher than normal ones.

Researches have shown that 50 to 80 percent of cancer patients simultaneously suffer from a psychiatric disorder. The most common psychiatric disorder in the researches is adjustment disorder and depressive disorder is the second most common psychiatric diagnosis [9,10]. In the present study, this result was confirmed. In addition, the research and theoretical evidence relatively suggests that emotional and behavioral variables and quality of life are among the most powerful and stable factors that make a difference to cancerous and noncancerous individuals. Therefore, the research results are explainable.

The results showed that there is a significant difference in all coping styles among children and adolescents with cancer. These results with the findings of Sanjari et al. (2005), Ahadi et al. (2011), and Velon (2006) are consistent [22,25-26]. The rate of depression in normal children and adolescents and those with cancer varies that according to the results, it was confirmed. The results are also consistent with the results obtained by Banki et al.[12]. Kamangar [27], and Zhao et al. [28]. There was no direct research to compare these variables simultaneously in children and adolescents diagnosed with cancer, but similar studies can be noted in accordance with the present study. The study by Banki et al. (2011), which examines the role of cognitive variables in the depression of adolescents with cancer [12]. The results showed that depression is positively correlated with chance health locus of control, emotion-focused coping and perception of disease and is inversely and significantly correlated with problem-solving-oriented coping and avoidance coping. Furthermore, the emotion-focused coping strategies, problem-focused coping strategies and perception of the disease predict depression in adolescents more likely.

Kamangar (2012) conducted the study "Analysis of the relationship between coping styles and mental stress and quality of life in cancer patients". The study results showed that by increasing the problem-oriented coping style increases quality of life in cancer patients [27]. Velon (2006) in his study on people with cancer and analysing their coping styles found that hope is regarded as a core element of coping among cancer patients to combat and control the disease control in the direction of psychological adaptation to the disease. In other words, patients who kept hope alive within their lives and had more positive and hopeful view to life were better able to cope with problems of the disease so that kept their morale [26]. Clarke et al. (2006) suggested that cancer patients' self-esteem is hurt due to feelings of rejection and failure by others to meet their needs and they are exposed to disappointment, anxiety, and depression due to various problems and psychological pressures caused by heavy cost of treatment and a sense of lack of control over life as well as an uncertain future. Their results found that rates of depression in cancer patients with more emotion-focused coping styles are higher than the patients with problem-oriented coping style [29].

According to the fact that being inflicted with cancer, hospitalization and long-term treatment make children and adolescents prone to depression and anxiety and increase of the inefficient coping styles, as a result, to further treatment goals and improve the mental health and quality of life, these individuals need psychological interventions by counsellors and psychologists. Since the study was limited to normal female children and adolescents and those with cancer, it is suggested to conduct a research with male samples and other samples with chronic diseases. In this study, depression, anxiety and coping responses in normal female children and adolescents and those with cancer were compared, thus, it is suggested to study other psychological components in future studies. Since the research sample is an available sample, generalizing its results to other populations should be conducted with caution.

ACKNOWLEDGEMENTS

The researcher would like to thank all the Patients and staff of the Imam Ali, Taleghani and Imam Reza Hospitals of Kermanshah for their cooperation in data collection. They are also grateful to the Substance abuse prevention research center, Kermanshah University of Medical Sciences, Kermanshah.

REFERENCES

1. Segal R, Ma J, Zou Z, *CA Cancer J Clin*, **2014**, 64, 9-29.
2. Stewart CW, Wild CP, World Health Organization, **2014**.
3. Pourkiani M, et al. *Payesh*, **2010**, 9(1), 61-68.
4. Bektas M, Kudubes AA, *Asian Pac J Cancer Prev*, **2014**, 15 (22), 9891-9898.
5. Mehranfar M, Younesi J, Banihashem A, *Iran J Cancer prev*, **2012**, 5(1), 1-90.
6. Hasanzadeh L, Faculty of Education, and psychology. Allameh Tabatabaei University, Master's thesis **2008**.
7. Matziou V, et al. *Journal of International Nursing Review*, **2008**, 55, 314-319.
8. Saatchi M, et al. Tehran: Frouzesh, **2011**.
9. Massi MJ. *J Nath Cancer Inst Monographs*, **2004**, 32, 57- 71.
10. Arkechi T, Nakano T, Okamura H, *Jpn Chinocol*, **2001**, 31, 188- 194.
11. Bowers L, Boyle DA. *Clinical Journal of OncolNurs.*,**2003**, 7(3), 281-288.
12. Banki Y, Abedin AR, Monirpour N, *Health and psychology*, **2011**,1(1), 111-134.
13. Ghanbari S, et al. *Developmental Psychology Journal: Iranian psychologists*, **2013**, 10(37), 29-37.
14. Bassak-Nejad S, Boostani F, *Jentashapir Journal. Autumn*, **2009**, 3(3): 399-407.
15. Lavigne J, Faier-Routman J, *Journal of Pediatric Psychology*, **1992**, 17,133-158.
16. Rahimi S, et al. *Holist Nurs Midwifery*, **2014**, 24 (1), 30-39.
17. Mardani Hamoleh M, et al. *Fasa Univ. Med. Sci*, **2011**, 1 (1), 53-58.
18. Kahrazei F, Danesh E, Azadfallah, *Journal of Applied Psychology*, **2011**, 2(18), 7-23.
19. Safarzadeh A, Roshan R, Shams J, *Journal of Clinical Psychology Studies*, **2012**, 2(6), 1-23.
20. Haghighi F, Khodaei S, Sharifzadeh G, *Mod Care J*, **2009**, 9 (3), 165-172.

21. Bektas, DK, Demir S, *Asian Pac J Cancer Prev*, **2016**, 17 (2), 723-731.
22. Ahadi H, et al. *Thought and Behaviour in Clinical Psychology*, **2011**, 6(21), 35-41.
23. Hoseini M, et al. *Scientific research Journal of Health system research (HSR)*, **2012**, 7(6), 746- 762.
24. Fathi Ashtiani A, Dastani M, Tehran: Besat, **2009**.
25. Sanjari M, et al. *IJN*, **2005**, 18 (41 and 42):111-122.
26. Vellone E. *Cancer Nursing*, **2006**, 29(5), 356- 366.
27. Kamangar S, medical professional's doctoral thesis, Kermanshah University of Medical Sciences, **2012**.
28. Zhao L, et al. *General Hospital Psychiatry*, **2014**, 36(5), 477-482.
29. Clarke DM, et al. *Psychopathology*, **2006**, 39, 303-307.