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Investigating the Impact of Consultation Based on Acceptance and Commitment to Reduce Anger in Children and Adolescents with Cancer

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Abstract

Non-pharmacological approaches such as the cognitive-behavioral strategies and pathological information do not treat the underlying pain and do not change pain perception but somehow reduce the emotional responses to the pain. In this regard, the study has examined the effect of consulting to reduce the anger based on acceptance and commitment between children and adolescents with cancer. This study is a semi-experimental and research project, pre-test and post-test with control and follow-up period. The study sample was included all 242 children with cancer admitted in Seydoshohada Hospital of Isfahan province in 2014. The number of 30 subjects is selected among the population including 15 experimental and 15 control groups. To collect information a demographic questionnaire is used and the Nilsson anger questionnaire (2000) is used to analyze the data by the SPSS Software. The results show that the effect of counseling on anger component changes in children with cancer is statistically significant. This means that the consulting in the form of acceptance and commitment leads to reduce the signs of anger in children with cancer (0.01> P). For this reason and given the results of the study the hypothesis was proved.

Keywords: anger, cancer, children, counseling, acceptance and commitment thrapy

1. Introduction

No doubt children are the greatest human capital that accurate hygienic and medical policy making is essential based on providing mental and physical health. One of the issues that threaten children's physical and mental health is to suffer long and difficult diseases such as a cancer. Among the most important psychological disorders that affect children is anger. In general anger is a disorder that increases by the anxiety. It should be noted that this situation is more severe in children and adolescents and the reactions are presenting through the anxiety, fear, anger and avoidance of treatment in a hospital environment. Anger is one of the most common emotions that everyone experiences (Arvil, 1982). In other words, the anger is understood as an emotional state of mind being associated with physiological-arousal and aggressive thoughts (Noako, 1994). Considering that children with occurring a cancer suffer the psychological disorders that in turn affect their health and personality structure, we have to seek non-medicinal ways to reduce these disorders and their complications and using new therapies that can be effective in enhancing the quality of life of these patients. Usually non-drug approaches such as cognitive and behavioral strategies and pathological information do not treat the underlying pain and do not change the perception of pain but somehow it reduces the emotional responses to pain. The main objective of cognitive strategies for pain therapy is that patients learn the ways to control the pain of life. Therefore, behavioral and cognitive therapy was carried out to take the responsibility for the health (Abolhassani, 2007).

In general, helping the patient for positive thinking and eliminating negative thoughts such the suffering of sickness, eliminating the negative feelings and beliefs avoids the problems' magnification and changes their maladaptive behaviors (such as avoiding activities because of fear). It helps the patient to have an active participation in therapy and the rate of his progress in improving performance and learning mental relaxation training including psychological interventions cancer (Sheikhnezhad, 2010).

This treatment based on the commitment and acceptance is one of the modern therapies that can help the patients to accept suffering the disease (Lassen, 2010). The treatment is the third wave behavioral therapy approaches for treating the processes of acceptance and mindfulness and commitment to conduct the psychological flexibility. An intervention based on acceptance and commitment is including the different techniques in the areas of adoption, faulting, creating a sense of transcendent self, and at the present time mind, knowledge, values and operating states are committed to those values (Hayez, 2010). In this regard, the fundamental question of this study suggests that what is the effect of this consultation based on acceptance and commitment on reducing anger children and adolescents with cancer?

2. Importance and Value of Research

Anger in children and adolescents is accompanied by the problems in the area of physical health such as blood pressure, the psychosomatic symptoms, asthma and cancer. Occurring these mental problems with disease leads to reduce the patient's sense of well-being and the effectiveness of people's active participation in the treatment process, so their ability to coordinate with the stress of ordinary life become very limited. For this reason, people with chronic disease are injured by the quality of life and social functions because of the social implications of the disease and all of these factors are increasing the burden of mental illness and economic difficulties prolonging the disease for the family and society. On the other hand, the chronic anxiety and anger over years of growth and continuous identification of children and adolescents result in the formation of personality and behavioral disorders. It also affected the community. For this reason, according to the psychological factors associated with the disease found many studies will provide psychological intervention strategies to prevent long-term consequences. Cognitive techniques through thinking processes such as distraction, illustration, peace and understanding the situation by own built statements and detrimental responses help to pain reduction or pain relief (Noroozi, 2011).

3. Hypothesis

It seems that consulting based on acceptance and commitment on reducing anger affect children and adolescents with cancer.

The purpose of the study: The main goal of this study is to determine the impact of consulting based on acceptance and commitment on reducing anger among children and adolescents with cancer.

History of Research: Given the importance of the issue and the impact of counseling and psychological approaches in the treatment of various chronic diseases, several studies are as follows:

Izadi (2012) examined the treatment effectiveness based on acceptance and commitment on the frequency and severity of symptoms of obsessive-compulsive disorder. The results showed a significant reduction in the frequency and intensity of obsessive-compulsive symptoms, the belief in obsessive thoughts, distress creation and the need to respond to them as well as the scores of depression and anxiety after treatment and this reduction lasted up to a month after the treatment. Treatment process and the results of this study suggest that treatment based on acceptance and commitment can be treated for their thoughts, feelings and difficult behavior in obsession, anxiety and depression. Furthermore, the results of Mehrdost's study also (2011) focused on the effective acceptance and the commitment to reduce the self-attention, improvement of social self-efficacy and reduce the symptoms of social anxiety disorder. As well as anger management training and expression of the emotions and behavioral disorders are effective on reducing the aggression of children. Shokouhi Yekta and Parand (2008) have conducted a research about the impact of education on controlling anger of the parents of mentally-retarded and unapt students. In this quasi-experimental study, 46 mothers were selected by an accessibility sampling of two special schools for intellectual disabled and unapt students in Tehran. They were homogeneous in terms of demographic characteristics and were divided into control and experimental groups. Data were analyzed using analysis of covariance and indicated that anger management training has a positive impact on anger reduction and increases the use of anger control strategies. Also Ashoori et al. (2008) have performed a study to evaluate the effectiveness of therapy group in reducing aggression and assertiveness focused on improving the academic achievement of high school students in Shiraz. The results showed that there was a significant relationship between the aggression and achievement. In another study, King et al. (1999) studied the effect of cognitive - behavioral education on anger control of the adults with mild capabilities. Their findings using self-report measures of anger and self-esteem were obtained in the study and represented an increase ability to control anger as well as caregivers report showed a general improvement in the consistency of the behavior and emotion. Whittle et al. (2009) designed a aggression management training for young people in schools on the basis of cognitive - behavioral therapy in a semi-instructional study. The results have been mixed with some improvements in passive behavior, the suspensions and withdrawals over the course and revealed that

research results in the field of anger management skills training for adolescents with severe emotional and behavioral disorder showed that after 10 sessions of intervention programs implemented the participants conflict with the peers and talk with the counselors about issues when the anger is increasing (Kellner et al., 2002).

4. Methodology

Recent study is a semi-experimental, research projects, pre-test and post-test with control and follow-up period. Table 1 indicates the research plan.

Table 1. Research project

Steps of Groups	Random assignment	Pre-test	independent variable	Post-test	Follow-up
Experimental	R	$_1$ T	X	$_2$ T	T
Control	R	$_1$ T	-	$_2$ T	T

In this study, the effect of medical consulting based on acceptance and commitment as an independent variable and anger as a dependent variable was compared with a control group who were not under such circumstances. In the experimental group interviews were done with children and their parents at the meeting. The experimental group is exposed to the independent variable (as a group manner) including 5 children and 3 sessions, each session 2 hours. The plan, hold a meeting was conducted without offering a solution for the control group. Performing post-test for the experimental and the control group and the implementing of follow-up test was performed one month after the last treatment session. During this period from the last session a phone call with counselor was done once a week to taper the treatment and maintain a contact with the patient for further collaboration to follow-up session.

Population: The population of this study were included all 242 children and adolescents with cancer from Seydolshohada Hospital in Isfahan province (2014).

The sample size: The number of 30 subjects among the population including 15 patients in the control group and 15 in experimental group was selected and the study is performed in the form of an accessible sampling. Criteria for participating into this study were as follows: a condition for ages 9 to 14, cancer suffered, monitored or treated in phase 4 of the treatment, awareness and consent to participate in research as well as the criteria for exclusion from the study were including absence of more than three days, not completing the questionnaire.

Research Instrument: In the study, the Nilsson Demographic and Children's Anger Inventory questionnaire (1990) was used for the data collection as well as SPSS software for data analysis.

4.1 Validity and Reliability of Study Instrument

To investigate the validity and reliability of the Nilsson et al. anger questionnaire, the test was conducted on 1604 students, the results of test-retest coefficient are obtained at 65% to 75%, internal consistency 85% to 86% and validity of 93% (Nielsen, 2000, 1999, 1986). In this study, the reliability of the questionnaire was calculated using Cronbach's alpha. Questionnaires were administered over 30 samples and the Cronbach's alpha coefficient is 0.865 for the variable of anger.

Research Findings: Before examining the research hypotheses, assuming normal distribution of variables were studied and the results were as follows:

Table 2. Results of Kolmogorov - Smirnoff test (normally distributed variables) for research variables

Component examined	Study time	Kolmogorov - Smirnoff Test		Shapiro–Wilk test	
		Z-test statistics	P	Statistic test	P
Anger	Pre-test	0.522	0.948	0.977	0.753
	Post-test	1.548	0.017	0.760	<0.0001
	Follow-up	1.526	0.019	0.719	<0.0001

As shown in Table 2, the results of Kolmogorov test for the pre-test variable of anger is assumed to be a normal variable. As the components of the P-value is greater than 0.01, but for the variables at the time of follow-up and post-test of anger, the normality assumption is not established. But Shapiro Wilk test for variables in the post-test and follow-up of anger is not supposed to be a normal. However, due to the strong parametric test against failure to set the default, using parametric tests for the present data is permitted.

For examining the equilibrium of variances, Levin test is also used and test results in Table 3 are as follows:

Table 3. Levin test results (equal variance) for variables

Component examined	Study time	Levin Test	
		F Statistic test	P
Anger	Pre-test	1.137	0.295
	Post-test	0.809	0.376
	Follow-up	0.237	0.630

As can be seen in Table 3, almost in all the studied components the assumption of equal variance of variables set because the values were greater than 01. The assumption of variance groups was established in each study period (pre-test, post-test and follow-up). It also was used to check Mauchly's Sphericity test and results were reported in Table 4.

Table 4. Results of testing sphericity hypothesis for the variables

Components evaluated	Mauchly's test	Approximately Chi	df	P
General anger	0.770	7.047	2	0.029

Table 4 shows the results of testing Sphericity hypothesis. The default is checked before testing frequent measurements in absence of the assumption of Greenhouse-Geisser model's results, but if the assumption is confirmed, it will use in repeated measurements (Sphericity Assumed).

The second main hypothesis of the study was to evaluate the effect of consulting based on the acceptance and commitment on variable of anger, which descriptive statistics related to this hypothesis are presented in Table 5.

Table 5. Descriptive statistics of anger component

Variables studied	Study time	Group	Average	Middle	Standard deviation	Minimum	Maximum
Component anger	Pre-test	Control	138.13	139	7.44	127	153
		Experimental	119.60	121	9.43	105	136
	Post-test	Control	139.80	139	7.30	129	154
		Experimental	27.80	25	12. 74	13	66
	Follow-up	Control	134.27	135	5.55	120	144
		Experimental	24	23	5.87	16	37

Table 6 show hypothesis using analysis of the variance with repeated measurements

Table 6. Test results of repeated measurements on the effect of counseling based on commitment and acceptance on the component of anger in children with cancer

Variable	Mean square	df	F	P	Eta	power
Time	17829. 767	1.626	403/399	<0.0001	0.934	1.00
consultation	144961. 600	1	096/1461	<0.0001	0.981	1.00
consultation *times	26368. 365	1.626	429/378	<0.0001	0.931	1.00

As can be seen the effect of counseling on the changes of anger component in children is statistically significant at p-value of less than 0.01. Also interaction between time and consulting is significant at 0.01. The trend of

these changes in component between the groups over time is generally different as a sign of the effect of counseling on anger component. According to the average of the component groups, it follows that the anger has changed over time so that it in children is decreased very high in the experimental group than the control. So it follows that counseling based on acceptance and commitment on the anger in the children with cancer. In the following, average anger component in three times was studied and indicated in both experimental and control groups.

5. Discussion and Conclusion

As observed in the study population according to the results tables (5) and (6) the effect of changing anger in children with cancer is statistically significant by counseling based on acceptance and commitment to reduce the signs of anger in children with cancer (0.01> P). For this reason and given results of the study the hypothesis was confirmed.

The results of the present study were similar to the efficacy of psychological interventions to reduce anger by acceptance and commitment therapy (Nasaj, 2014, Rajabi, 2014; Mehrdost, 2011). On the implementation of other cognitive interventions, similar results were obtained for anger management (Ahmadi & Abedi, 2002, Shakibayi et al., 2004; Ashoori et al., 2008; Akton, 2000; Kellner et al., 2002, Lindsay et al., 2004). Yekta Shokouhi et al. (2008) also showed that anger management training on anger reduction and increased use of anger control strategies have a positive impact. To explain the findings of this study it can be said that using coping strategies of alienating and discharging the emotions such as anger and aggression against the stress caused by the disease, hating to treatment and its consequences in everyday life such as being far away recreation and education spaces, the restrictions on communication with peers, too much control of parents are thereby increasing the patient's anger. Because one's negative emotions may increase his hate of treatment and separate him from others and therapeutic procedures due to attribute the problems into external issues and these activities lead more anger.

Group meetings with children in addition to a useful place to respond and respect the child's personality, in fact, was to understand the wishes of children with cancer to release their mental pressure caused by the disease and its associated pain and stressful care authorities. In this study population were forgotten and the anger of children with cancer was compared to others. So the main theoretical constructs of admission are based on behavioral therapies such as acceptance and commitment therapy, psychological flexibility, the ability to take effective actions in line with personal values despite the presence of pain. Acceptance and commitment therapy approach rather than focusing on relief and removing harmful factors helps the patients for controlling their cognition and emotions and releases him or her from verbal control laws that have been causing the problems and teaches to get rid of tension and conflict with abandon and reduces his anger about the disease and its surroundings. The treatment through cognitive faulting reference teaches internal events as they really are not their own events. This ultimately makes the process of reception easier, since the fault of ideas, evaluation and feelings leads to reduce the functioning of the internal events as psychological barriers.

6. Suggestions

1. Given the present study was performed to clients of a medical center; it is recommended that present study was implemented in various centers of accepting children with cancer in the province and the country.

2. Training the parents of sick children with disorders of anger on the course of the disease and methods to prevent and reduce the disorder.

3. The results of this study concerning the effects of counseling based on acceptance and commitment in reducing the signs of anger in children are recommended to all the psychologists, psychiatrists and related experts to use the program as a treatment in mental health centers.

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