Cognitive Emotion Regulation, Optimism and Quality of Life in Blood Cancer Patients

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The current study investigates that how patients with blood cancer regulate their cognitive emotions regulations (CER), optimism towards life and quality of life regarding their illness. It was hypothesized that patients with blood cancer are likely to have problems in their cognitive emotions and that also effects their quality of life regarding the illness. The sample consisted of 70 blood cancer patients (men=48, women=22), with age ranges from 20-51 (M=33, SD= 13.2) using purposive sampling technique. Cognitive Emotional Regulation Questionnaire (CERQ), Life Orientation Test – Revised and EORTC-QLQ C-30 were administered. Pearson Product Moment Correlation and Regression analysis was conducted to analyze the results using SPSS version 20. The correlation showed that Cognitive emotion regulation (CER) had a significant positive correlation with optimism and quality of life and optimism also had a significant positive correlation with cognitive emotion regulation and quality of life. The results of regression analysis indicated that CER and optimism were significant predictors of quality of life of patients with blood cancer. It is inferred that patients of blood cancer improve their health and quality by cognitively regulating emotions and being optimistic.

Keywords:Cognitive emotion regulation, optimism, quality of life.

Cancer is an renowned threat to mankind, because nearly one in the five persons in the world dies due to this disease (Saif &Yousaf., 2011). In Pakistan chance of getting cancer before age 75 years is 11.8% and more than 80,000 people died each year due to this illness (Saif &Yousaf, 2011).Cancer is described as a pathological health condition when cells of the body begin uncontrolled development (Andersen, Golden-Kreutz, & Dilillo, 2000).

A research was conducted by Meyers, Albitar and Estey, 2005 to assess psychological and physical effects of blood cancer. Fifty four patients with myelo dysplastic syndrome (MDS) were selected as a sample of this research. 27 patients werere-checked one month later to assess the effect of chemotherapy. Patients with myelo dysplastic syndrome (MDS) experience impairment in executive functioning before the treatment. While during the treatment, patients experience stress,

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fatigue, and difficulty retaining and learning new information (Meyers, Albitar & Estey, 2005).

Cancer not only affected patient's physical health, but also psychological health.Cancer patients become anxious, depressed and stressed due to the side effects of their treatment. They become irritable to the people around them. Fear of death is biggest fear for cancer patients. Patients, who were not capable to cope with these stressors, become upset and thought about suicide such people immediately need psychological help (Artherholt & Fann, 2012).

The ability of emotional regulation is used for increasing the rate of positive emotions and decreasing the rate of negative emotions. When a person is showing positive emotions it means that he is thinking and feeling positive, he is being optimistic. Optimistic people comprehend situations of their lives in a positive manner (Garnefski & Kraaij, 2007). Actually, optimism does not change the challenging situations, but it changes the perspective of particular situations. The emotions and their regulations influence interpretation of the world. The negative effect increases negative interpretations of stimuli and positive affect increases positive interpretations of stimuli (Garnefski et al., 2009).

Yamada (2011) conducted a research on the effects of cognition, social support and optimism of patients who were survived from breast cancer and non-Hodgkin's lymphoma. It was proved from this research that chemotherapy did not affect the cognition of patients who were survived from breast cancer and non-Hodgkin's lymphoma. Social support is very essential for the cancer survivors; it was found in this research that optimism and social support reduces the stress. But in this research it is not found that cognition of the cancer survivors was not affected by optimism and social support (Yamada, 2011).

A positive approach can motivate cancer patients to take good care of them. So, optimist seems more likely to exercise regularly, stop smoking, eat well and practice other behaviors those are productive. Length of life does not effect by being optimistic (Mazanec, Daly, Douglas, & Lipson, 2010).

Moor (2006) conducted a research on ovarian cancer patients to investigate the impact of stress and optimism on their quality of life. Ninety ovarian cancer pstients were selected for his study. They were assessed before and after the course of chemotherapy treatment. According to the results of this study show that optimists are less distresd and has good quality of life. Mazanec et al., (2010) also conducted research to assess the effect of optimism on cancer patient's quality of

life, who were recently diagnosed. 163 patients of different stages of each type of cancer were selected for sample. It was assessed that at the beginning of the diagnosis optimism did not affect quality of life, but with the time optimist patient become spiritual and due to this reason his anxiety, depression subsides and gradually their well-being and quality of life also enhances. The literature suggests that women usually verbalize their emotions and use non adaptive cognitive reappraisal strategies to regulate their emotions, while men usually use adaptive cognitive reappraisal strategies. Literature revealed that patients experience better health related quality of life, when they cognitively regulate their emotions. This literature review revealed that optimists usually think positively, experience less stress; they effectively solve their problems and have a better quality of life (Mazanec et al.,2010).

Rationale of Research

Current research inspects different aspects of the cognitive emotion regulation (CER) along with the optimism in the quality of life in patients with blood cancer. This research can explain the effect of cognitive emotions regulation (CER) and optimism on quality of life among blood cancer patients. Literature revealed that the blood cancer patients had negative emotions; it is difficult for them to regulate these emotions. Due to these negative emotions, they become depressed and anxious. So this research is conducted to assess the effect of cognitive emotions regulation (CER) and optimism on the quality of life of blood cancer patients. The motive of this research is to interpret that if blood cancer patients regulate their negative emotions with cognitive emotions regulation strategies, it will affect their quality of life. It also manifested from the literature that optimistic people think less negatively

Objectives

- To evaluate the influence of cognitive emotional regulation (CER) on the quality of life of blood cancer patients.
- To ascertain the relationship of optimism on the quality of life of the patients suffering from blood cancer.

Hypotheses

- There would be a positive relationship between cognitive emotion regulation and quality of life of blood cancer patients.
- Optimism and quality of Life would be positively related in blood cancer patients.
- Cognitive emotion regulation and optimism are likely to predict quality of life in blood cancer patients.

Method

Research design and participants

The study employed cross sectional design to assess the relationship between cognitive emotions regulations (CER); optimism and quality of life among blood cancer patients. The sample consist of 70 blood cancer patients (men=48, women=22), with age ranges from 20-51 years (M=33, SD= 13.2) using purposive sampling technique.

The data were gathered from the leukemia ward of Institute of Nuclear Medicine and Oncology Lahore (INMOL) Hospital, Aga Khan University Hospital (AKUH) Karachi and from the oncology ward of Jinnah Hospital Lahore. 37 blood cancer patients were selected from INMOL, 29 patients were selected from AKUH and 4 patients were selected from Jinnah hospital.

The inclusion and exclusion criteria is given below:

Inclusion criteria.All patients of blood cancer, who was admitted to hospital with the age, above of 19 years were included in the present research.

Exclusion criteria.Patients of lymph node cancer who was admitted in hospital were excluded in this research.

Measures

Cognitive Emotional Regulation Questionnaire (CERQ). Urdu translated version of the Cognitive Emotion Regulation Questionnaire (CERQ) of Garnefski, Kraaij and Spinhoven, (2001) was used to compute the cognitive emotion regulation approach participants used to cope with disturbing life events. Butt, Sanam, Gulzar and Yahya translated Cognitive Emotion Regulation Questionnaire (CERQ) into Urdu language. Cronbach's alpha α value of translated version of the cognitive emotion regulation questionnaire was 83.

Life Orientation Test-Revised (LOT-R). Translated version of the Life Orientation Test – Revised (LOT-R) was used in current research. Scheier, Carver, & Bridges developed LOT-R, while Kausar and Noor-ul-Huda translated this scale into Urdu language. Life Orientation Test – Revised was used to compute individual divergence in optimism and pessimism. 10 itemed LOT-R has 5-point Likert scale scoring criteria, which measures 0 on strongly disagree, 1on disagree, 2 on natural, 3 on agree and 4 on strongly agree. LOT-R

has optimism and pessimism as two subscales. Cronbach alpha value of LOT-R has 0.78.

EORTC QLQ-C30 version 3.0. In this research urdu translated multi-dimensional version of Quality of Life Questionnaire for Cancer Patients - C30 (EORTC QLQ-C30) was used to quantify health related quality of life of cancer patients. EORTC QLQ-C30 consisted on 30 items. EORTC QLQ-C30 has 4 points scoring criteria; as it measures 1for not a problem, to 4 for very much problem. The Cronbach'salpha value of Urdu translated EORTC QLQ-C30 is 0.82, which shows that EORTC QLQ-C30 is highly reliable.

Procedure

First of all INMOL, Jinnah Hospital, Lahore and AKUH Karachi were contacted and consent letter was given to the head of the leukemia ward. The data was collected from the patients who fit into the inclusion criteria. A meeting was conducted with the nurses on the ward and suitable day of the week was selected to visit the ward. Consent was taken from them patients before administering the research. When patients give consent they were briefed about the purpose of the research and they were also guaranteed about the confidentiality of their responses. Researcher filled the Questionnaires by narrating each item and putting marks on the scale as patient responded. Scales were not given to the patients for administration because patients were under treatment; they had branula on their right hand. After the administration of the scale, researcher pay thanks to the patient for their cooperation.

Ethical considerations

Approvals was taken from the authors before using their questionnaires in research. The inform consent was taken from the INMOL, AKUH Karachi and Jinnah Hospital Lahore for data collection. At the start of data collection participants were briefed about the privacy, confidentialty, objectives and aims of the research. Informed consent was taken and participants were also well informed about their right of discontinuation from the research at any time they want to. Research participants were provided counseling services according to their needs.

Results

Results of present research infers the cognitive, emotional regulation, optimism and health related quality of life. The data was nterpreted through ione SPSS 21. Descriptive analysis was done at the first stage, at the second stage Pearson Product moment correlation coefficient was analyzed and at the third stage Regression analysis was used.

Table 1

Demographic Characteristics of Blood Cancer Patients (N = 70).

Demographics Characteristics	*f*(%)	M (SD)
Gender		
Men	48 (68.6)	
Women	22 (31.4)	
Age in Years		33(13.2)
20 – 35	45 (64.3)	
36 – 50	19 (27.1)	
51 – above	6 (8.6)	
Education		3.3(1.3)
Illiterate	8 (11.4)	
Under Matriculation	13 (18.6)	
Matriculation	17 (24.3)	
Intermediate	11 (15.7)	
Graduates	21 (30.0)	
Hospital Name		
INMOL	37 (52.9)	
AKUH Karachi	29 (41.4)	
Jinnah Hospital Lahore	4 (5.7)	
Marital Status		
Single	29 (41.4)	
Married	41 (58.6)	
Employment Status		
Un-employed	41 (58.6)	
Laborer	8 (11.4)	
Employed	21 (30.0)	
Duration of Diagnosis		
1 Month	29 (41.4)	
6 Month	21 (30.0)	
1 Year	7 (10.0)	
More Than 1 Year	13 (18.6)	

Table 1 shows the demographic characteristics of blood cancer patients. The table indicates that there were 48 (68.6%) male and 22 (41.4%) female patients. The mean age of the patients was 33 years. Most of the patients lie in the age range 20 – 35years (f=45) while some of them were in the age range of 36 – 50years (f=19) and only 6 patients (8.6%) were above 50 years of age.

Table 2

Relationship among Cognitive Emotional Regulation, Optimism and Quality of Life in Blood Cancer Patients (N = 70).

	Blood Cancer Patients				
Variables	CER	Optimism	HRQOL	M	SD
Cognitive Emotional Regulation	1	.446**	.578**	72.54	21.35
Optimism	-	1	.713**	22.23	4.25
Health Related Quality of life	-	-	1	61.47	14.59

Note. M=mean; SD= standard deviation; CER="cognitive emotion regulation"; HRQOL=" health related quality of life"**p<.01.

Table 2 shows the inter-correlation of Cognitive emotions regulation, Optimism and Quality of Life among blood cancer patients. There is a significant positive relationship in scores of Cognitive Emotion regulation and scores of Optimism (r= .446, p<.01), which means that blood cancer patients who cognitively regulate their emotions are more optimistic. The scores of Cognitive emotion regulation (CER) have a significant positive relationship in scores of Quality of life (r=.57, p<.01), which infers that regulation of emotions influence their quality of life. While there is a significant positive relationship in scores of Optimism and scores of Quality of Life (r= .71, p<.01), which means that optimists experience better quality of life.

Table 3

Multiple Linear Regression Analysis of Cognitive Emotion Regulation and Optimism along with Quality of Life in Blood Cancer Patients (N=70)

Variables		Quality of life			
		B	SE	B	95% CI
Constant		1.99	6.2		[-10.32 14.34]
Cognitive Regulation	Emotional	.222	.060	.32**	[.10 .34]
Optimism		1.95	.29	.56**	[1.35 2.54]
R^2		.593			
F		48.80			
ΔR^2		.581			

Note. B=unstandardized coefficients; SE=standard error of unstandardized coefficient; β=standardized coefficient; CI=confidence interval

Table 3 shows the multiple linear regression analysis between Cognitive emotion regulation and optimism along with the Quality of Life among blood cancer patients. This model significantly predicts the quality of life among blood cancer patients, (F = 48.80). The Cognitive emotion regulation (CER) is a significant predictor of the Quality of life (t=3.72, p<.001) in the blood cancer patients. Optimism is a significant predictor of the Quality of Life (t=6.53, p<.001) among the blood cancer patients. There is 59% variance in the quality of life among patients suffering from blood cancer due to this model.

Discussion

Blood cancer is rising abruptly in Pakistan, patients not only physically get affected with this illness, but they are also get affected by emotional and social domains too due to this blood cancer disease (Artherholt & Fann, 2012). The objective to conduct this research is to understand the influence on the quality of life regarding health concerns, optimism and cognitive emotion regulation of blood cancer patients in our culture, because a lot of researches were conducted in western culture about the quality of life of cancer patients, but people, their behavior and emotion regulation strategies are different for each culture. So, this research is to provide indigenous perspective of quality of life of patients with blood cancer.

Literature revealed that the blood cancer patients had negative emotions; it is difficult for them to regulate these emotions. Due to these negative emotions, they become depressed and anxious. So this research is conducted to assess the effect of cognitive emotion regulation (CER) and optimism on the quality of life of patients suffering from blood cancer. The objective of this research is to evaluate that if blood cancer

patients regulate their negative emotions with cognitive emotions regulation strategies, it will effect on their quality of life. It also demonstrated from the literature that optimistic people think less negatively, so in this research it will be found out that optimism will effect on their thinking pattern and it has any effect on their quality of life.

Formerly in literature review, different strands of cognitive, emotional regulation (CER), optimism and quality of life of patients with blood cancer was presented, and considering this literature, it was hypothesized in the first hypothesis that there will be a correlation between cognitive emotional regulation (CER), optimism and quality of life of patients with blood cancer. Results showed a significant positive relationship between cognitive emotion regulation (CER), optimism and quality of life among blood cancer patients and proved this hypothesis. It is also previously presented in the literature review that cognitive, emotion regulation strategies are correlated with the optimism of the students. It also showed that optimism became the reason to use emotion regulation strategies in students (Jenaabadi, Ahani, & Sabaghi, 2015). Furthermore, literature also proved that cognitive emotion regulation (CER) is significantly correlated with the quality of life of cancer patients (Li et al., 2015). Results of a research article showed that optimism correlates with the quality of life of cancer patients (Moor, 2006).

The second hypothesis stated that cognitive, emotion regulation (CER) and optimism will predict quality of life regarding illness in blood cancer patients. Results proved this hypothesis; that cognitive, emotional regulation and optimism significantly predict the quality of life among blood cancer patients. A study also proved this hypothesis that cognitive, emotiol regulation predicts the quality of life (Polonsky, 1995). As revealed in the literature review that optimism significantly predicts the quality of life (Mazanec et al., 2010). It has been observed through literature and the results findings that patient with blood cancer often experience changes in their cogntive emotions and later in their emotional regulations, similarly their perspective towards health related optimism may interfere due to this illness The findings of this research showed that patients of blood cancer improve their health and quality by cognitively regulating emotions and being optimistic.

Practical Implications

This research will give better place to formulate a treatment plan both medically and psychologically for patients who are suffering from

blood cancer. It will also be used to devise a policy to conduct the solution focused psychological groups to treat the psychological distress of the blood cancer patients.

Recommendations and Suggestions

It is recommended to the other researchers who want to conduct research on the blood cancer patients that sample size should be large, and should be taken from the different hospitals of different cities. It is also recommended that blood cancer patients who are experiencing emotional and mental distress should be given the counseling sessions.

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