## **Research Paper**

The Effect of a Death Anxiety Therapeutic Package Based on Acceptance and Commitment Therapy on Death Avoidance, Mental Health and Quality of Life of Cancer Patients



Seyed Ali Kolahdouzan<sup>1</sup>, \*Mohammad Bagher Kajbaf<sup>1</sup>, Hamid Reza Oreyzi<sup>1</sup>, Mohammad Reza Abedi<sup>1</sup>, Fariborz Mokarian<sup>2</sup>

1. Department of Psychology, Faculty of Education and Psychology, University of Isfahan, Isfahan, Iran.

2. Department of Internal Medicine, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran.



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#### Key words:

Acceptance and commitment therapy, Death anxiety, Death avoidance, Mental health, Quality of life, Cancer

# ABSTRACT

Objectives The purpose of this study was to evaluate the effect of a death anxiety therapeutic package designed based on Acceptance and Commitment Therapy (ACT) on death avoidance, mental health, and quality of life of cancer patients.

Methods This parallel-experimental study was conducted on 28 cancer patients (19 females and 9 males aged 26-71 years) referred to Seyedoshohada Hospital in Isfahan, Iran. They were randomly assigned into two groups of intervention (n=14) and control (n=14). The death anxiety package was designed in the University of Nevada and Lawshe's method was used for examining its content validity ratio. The intervention group received therapy at seven sessions, once a week, while the control group received simple writing exercises with no intervention. Participants completed World Health Organization Quality of Life-BREF ( $\alpha$ =0.91), Death Attitude Profile-Revised ( $\alpha$ =0.88), and Acceptance and Action Questionnaire ( $\alpha$ =0.87) three times as pretest, posttest, and follow-up assessments. Data were analyzed by AN-COVA in SPSS V. 21 software.

**Results** The intervention group showed a significant decrease in death attitude dimensions of "fear of death" and "death avoidance" and a significant increase in the quality of life dimension of "mental health" compared to the control group.

Conclusion The designed package based on ACT seems to reduce the death anxiety and death avoidance, and any change in attitude towards death in cancer patients may be related to their mental health.

## **Extended Abstract**



### 1. Introduction

ccording to the International Agency for Research on Cancer report in 2018, it is predict-

ed that the rate of increase in the number of cancer patients in Iran will reach 35% until 2025 [1]. One of psychological problems that the cancer patients have to deal with, particularly during metastasis, is death anxiety. The purpose of Acceptance and Commitment Therapy (ACT) is to help patients replace the constructive behaviors with dysfunctional and problematic behaviors with no goal to change the intensity or frequency of negative emotions [10].

Studies conducted in foreign countries have reported the positive impact of acceptance strategies [13-15], living a value-based life [16], and psychological flexibility [17-

\* Corresponding Author:
Mohammad Bagher Kajbaf, PhD.
Address: Department of Psychology, Faculty of Education and Psychology, University of Isfahan, Isfahan, Iran.
Tel: +98 (31) 37935465
E-mail: m.b.kaj@edu.ui.ac.ir

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20] on mental health and quality of life of cancer patients. Similar studies in Iran have also reported the significant effect of ACT therapy on decreasing death anxiety (in HIV samples) [21], anxiety symptoms [26-29], depression [30-33], stress [34], anxiety-related pain [35], and quality of life [22-25] of cancer patients.

### 2. Method

### Package design

This package is designed based on ACT and mainly focuses on dealing with 'death anxiety' in cancer patients. This package was prepared by the researcher (a PhD. candidate from Isfahan University) and under the supervision of Dr. Steven Hayes in the department of psychology at the University of Nevada. The researcher participated in several seminars, workshops, and projects in Iran and United States to learn ACT theory and practice. He interviewed 12 psychologists and psychiatrists at the University of Nevada discussing the package design and possible paragraphs. The initial design of package was developed with 77 written paragraphs. Dr. Hayes and seven PhD students at the University of Nevada examined and confirmed the consistency of paragraphs with the main ACT paragraphs. In the end, the paragraphs with a Content Validity Ratio (CVR) of less than 0.62 were removed and 60 approved paragraphs were remained.

#### Package implementation

The study was implemented on 28 cancer patients (19 females and 9 males aged 26-71 years). The inclusion criteria were: having at least 18 years old, not being under any other psychological treatments, having reading and writing ability, ability to be present physically in the sessions, having consent for participating in the sessions, and having an introduction letter from Seyedoshohada Hospital in Isfahan. After selecting participants based on their medical records, they were randomly assigned to intervention (n=14) and control (n=14) groups. It should be mentioned that two participants were excluded from the study due to hospitalization and traveling, and the final sample size was then reduced to 26.

The intervention group received therapy at 7 sessions, once a week, based on the designed ACT package with a focus on attitude towards death, while the control group received some writing exercises as placebo. World Health Organization Quality of Life-BREF, Death Attitude Profile-Revised, and Acceptance and Action Questionnaire were used as data collection tools before intervention, after intervention, and in a two-month follow-up period. MANOVA was used for data analysis in SPSS V. 21 software.

### 3. Results

The MANOVA results showed that the intervention and control groups were meaningfully different in terms of fear of death, death avoidance and mental health (P<0.001), but

Table 1. Mean scores at three time intervals in experimental and control groups

Variabels	Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Powerb
Avoidance of death	Group	18.971	1	18.971				
	Error	41.367	23	1.799	10.548	0.004	0.314	0.875
	Total	531.920	26					
Quality of life	Group	31.669	1	31.669				
	Error	3054.567	23	132.807	0.238	0.630	0.010	0.075
	Total	95468.750	26					
Mental health	Group	666.054	1	666.054				
	Error	1358.577	23	59.069	11.276	0.003	0.329	0.895
	Total	82465.278	26					
Fear of death	Group	2.585	1	2.585				
	Error	8.090	23	0.352	7.350	0.012	0.242	0.738
	Total	413.367	26					
Accept and action	Group	.033	1	0.033				
	Error	23.104	23	1.005	0.033	0.858	0.001	0.053
	Total	375.602	26					

Iranian Journal of PSYCHIATRY AND CLINICAL PSYCHOLOGY not in other dimensions of quality of life and psychological flexibility variable (P>0.001) at pretest, posttest, and followup stages (Table 1). In overall, the ACT significantly increased the mental health (P<0.001) and decreased the death avoidance and fear of death (P<0.001). It could 32.9% of variance in mental health, 20.9% in avoidance of death, and 28% in fear of death was due to the ACT-based intervention.

### 4. Discussion

ACT-based intervention could significantly decrease the fear of death and avoidance of death and improve the mental health of cancer patients. The main therapeutic goal of ACT is to decrease avoidance behaviors and increase the tendency towards experiencing disturbing feelings and thoughts. The results showed that the designed ACT package can meet this therapeutic goal.

### **Ethical Considerations**

#### Compliance with ethical guidelines

This study obtained its ethical approval from the University of Isfahan (Code: IR.UI.REC.1396.047) and was conducted in cooperation with the Cancer Prevention Research Center of Isfahan University of Medical Sciences. Participants were assured of the confidentiality of their information. The purpose of study was explained to them and signed a written consent form. They were free to leave the study at anytime.

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#### Authors contributions

Conceptualization: Mohammad Bagher Kajbaf & Seyed Ali Kolahdouzan; Methodology: Mohammad Bagher Kajbaf; validation, data analysis, editing, project administration: All authors; Investigation & resources: Seyed Ali Kolahdouzan; Draft preparation, writing & review: Seyed Ali Kolahdouzan.

#### **Conflicts of interest**

The author declared no conflict of interest

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