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Effectiveness of Health Promotion Package based on Flourishing on Perceived Stress and Self-Care of Kidney Cancer Patients

Nasrin Mojabi,[1] Nasrin Bagheri*,[2] Simin Bashardoust[3]

Abstract

Introduction: Human flourishing can be a new goal of health care that nurses can apply to people with cancer. The purpose of this study was to investigate the effectiveness of the health promotion package based on flourishing on perceived stress and self-care of kidney cancer patients**.**

Research Methods: The research method was a semi-experimental type with a pre-test, post-test and follow-up plan with a control group. The statistical population was all people with kidney cancer who were members of the Tehran Kidney Cancer Society in 2001-2001, and 30 people were selected in a targeted way and randomly assigned to the experimental group and the control group. The health promotion package based on prosperity was implemented on the experimental group. Perceived stress (Cohen, 1983) and self-care (Han et al., 2014) questionnaires were used to collect information. The data were checked with SPSS 22 software and using variance analysis or repeated measurement.

Findings: The results indicate that between the average scores of positive stresses (η^2=0.56), negative stress (η^2=0.28), diet (η^2=0.18), drug regimen (η^2=0.22) A significant difference was observed between the experimental and control groups. However, no significant difference was observed between the average food label and disease management between the experimental group and the control group. The health promotion package based on flourishing has reduced the perceived stress in kidney cancer patients in a stable manner and has increased the diet and drug regimen in a stable manner.

Conclusion: The health promotion package based on flourishing on perceived stress and self-care behaviors such as diet and medication compliance are beneficial for kidney cancer patients.

Keywords: Health Promotion, Perceived Stress, Self-Care, Kidney Cancer, Prosperity

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[1] - PhD student Health Psychology, Department of Psychology, Roudehen Branch, Islamic Azad University, Roudehen, Iran. mojabinasrin83@gmail.com

[2] - Corresponding Author: Assistant Professor, Department of Psychology, Roudehen Branch, Islamic Azad University, Roudehen, Iran. Email: bagheri@riau.ac.ir, tell: 091185410219

[3] - Assistant Professor, Department of Psychology, Roudehen Branch, Islamic Azad University, Roudehen, Iran

Introduction:

Kidney cancer affects 30 thousand people in the world every year. Of these, 40% die due to the complications of this cancer (1). Although today, the diagnosis of cancer is no longer considered as certain and imminent death, but many studies have shown that such a diagnosis causes deep emotional and emotional problems in the patient and his family (2). Studies have shown that between 50 and 85% of cancer patients simultaneously suffer from a psychiatric disorder (3). According to the report, 80% of cancer patients suffer from extreme stress and anxiety in the early stages of their treatments, although cancer affects mental health, but it seems that the biggest problem at this time for the patient is the feeling of hopelessness and despair (4).

As mentioned, the most obvious psychological factors identified in the field of cancer are emotional distress such as anxiety, stress and depression, which are as debilitating as cancer itself, hinder recovery and ultimately increase pain in cancer (5). In addition, many patients who suffered from pain, when faced with stressful situations, the perception of pain intensity increases, so it must be said that what causes emotional distress in cancer patients, followed by the perception of pain, is the negative thoughts and beliefs of those suffering from this disease. (6), in confirmation of this point, we should refer to Linton and George's research (7), in which the cause of distress and perception of pain are destructive cognitive factors, that is, irrational and negative beliefs such as catastrophizing and panic movement, as well as the use of resources They know a passive coping such as avoiding pain, these factors start a vicious cycle of negative emotions towards pain, feeling of failure, increasing psychological distress and pain perception.

Stress is a serious threat that leads to mental or physical diseases (8). The construct of perceived stress is considered as a person's overall assessment, especially the recognition of the importance and difficulty of environmental and personal challenges or of negative life events (9). Considering the difference of people in the perception and interpretation of a similar stressful factor, the perceived stress refers to the general perception and interpretation of the person, which shows the degree of effectiveness against stressors (10). According to the definition provided, events only affect people who evaluate them as stressful, and these evaluations are not the product of stimulus conditions or response variables, but rather the product of people's interpretations of their relationships with their surrounding environment (11). According to researches, although a certain amount of stress is suitable for solving monotonous conditions and low motivation, but the continuation of stress-related symptoms may lead to the weakening of mental and physical health, as well as to the reduction of efficiency in work and learning (12). Self-management or disease management is a category that has played an important role in creating the power of people to manage their behavior and performance in the individual and organizational fields and to improve productivity.(١٣)

Disease management refers to the control of lifestyle changes, as well as providing a method of health care in which the patient plays a central role in promoting health, preventing disease,

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and successfully controlling his disease (14). Self-management of various factors such as well-being, quality of life and physical-psychological-social status of the patient is affected, it leads to improvement or disability of the patients and affects the treatment results, and it is considered an important component of care in chronic diseases and for Convincing patients to change their behavior or lifestyle is effective (15). Considering the urgent need of patients with chronic diseases for self-care to control this disease, the patient's participation and cooperation in self-care is one of the improvement methods (14). Self-care includes prevention, health maintenance and treatment of diseases by the person himself, which includes healthy lifestyle, treatment of diseases, and disease management (16). In another definition, self-care behaviors include activities such as mental health promotion, lifestyle modification, disease prevention, symptom assessment, disease treatment, and disease rehabilitation (17). Although the benefits of self-care are evident in the recovery of any disease, most people do not follow self-care behaviors (2). Following self-care guidelines such as weight loss, physical activity, smoking cessation, eating healthy foods and in accordance with the diet can play an important role in regulating and controlling the disease (18).

Human flourishing is a subject that has occupied the minds of thinkers for centuries and has recently been the focus of a branch of psychology called positive psychology (19). Thriving refers to having a good experience in life and is a combination of feeling good and functioning effectively. Flourishing is synonymous with a high level of mental well-being and optimal mental health, which is different from the absence of mental illness (20). Prosperity also refers to being good, growing, succeeding and outstanding (21) and leads to happiness and a good life (22). When people can use their real power and capacity, they experience pleasure and want to increase this pleasure by increasing their power and capacity (23). Prosperity is much related to happiness because success in life makes a person happy and happy and leads to more successes (2). Prosperity in humans is formed through the use of capacity and talent. All humans have physical, psychological and cognitive needs. Fulfilling these needs leads to prosperity and happiness. Flourishing describes a high level of mental health through social, psychological and emotional well-being (24).

According to the recent definitions and viewpoints of positive psychology that have been presented about flourishing, the recent viewpoints of positive psychology have generally approved general flourishing models (25). These views have emphasized both the psychological need for satisfaction and mental health in order to provide comprehensive models of the optimal performance of the individual, and flourishing people are considered to be those who, in addition to feeling good, perform well, they they regularly experience positive emotions, excel in their daily lives, and engage constructively with their surroundings (2). With this explanation, it is expected that educational programs in order to nurture and promote prosperity, promote positive feelings and positive individual and social performance of people. Few researches have been done on the effectiveness of the prosperity

promotion program. In research titled the effect of seven weeks of web-based happiness training on psychological well-being, reducing stress, and increasing mindfulness and prosperity (17), they concluded that this intervention has a positive effect on people's prosperity. In another research titled, emotion regulation strategies improve the emotional health of flourishing people.

Buller (26) reached the conclusion that in order to achieve prosperity, people should use emotion regulation strategies instead of avoiding emotional experience, and emotional regulation strategies are effective in cultivating people's prosperity.

In examining the research background on the relationship between perceived stress and flourishing, Harris et al. (27) in research reached the conclusion that there is a negative relationship between perceived stress and flourishing, no matter how low levels of perceived stress a person experiences. It will show more prosperity at the same rate.

In a research, Chu and Dougherty (28) in a review study entitled Conceptual analysis of human flourishing in teenagers and young adults with cancer, using Rogers' evolutionary conceptual analysis method, examined the concept of human flourishing in the context of teenagers and young adults with cancer. Blooming in adolescents and young adults with cancer is described as a continuous and dynamic process of growth and maturation among intrapersonal, interpersonal, and person-environment dimensions. Adolescents and young adults with Cancer are flourishing, achieving inner integration, creating positive changes in their environment, and ultimately creating a harmonious and balanced existence with the outside world. They concluded that human flourishing could be a new health care goal that nurses could apply to people with cancer. According to the limited studies conducted on flourishing in people with chronic diseases and according to the stated content, the purpose of the present study is to investigate the health promotion package based on flourishing on perceived stress and self-care of patients with kidney cancer.

Research Methods:

The research method is a semi-experimental type that was carried out using a pre-test, post-test and follow-up plan with a control group. The statistical population of all people with kidney cancer were members of Tehran Kidney Cancer Association in 1400-1401. The sampling method was voluntary. In order to select the number of samples with an effect size of 0.50 and a test power of 0.80, 15 people were estimated in each group. In this way, among the people with kidney cancer referred to the kidney cancer association, 30 people who were willing to participate in the research were randomly assigned to the experimental and control groups. Intervention and flourishing training were done on the experimental group. At this stage, the control group did not receive any experimental intervention. Inclusion criteria included willingness to cooperate. Exclusion criteria included suffering from various psychotic disorders, experiencing stroke and heart attack, participating in counseling and psychotherapy sessions during the last six months. Research tools**:**

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(1) **Cohen's Perceived Stress Questionnaire**: It was prepared by Cohen et al. in 1983 and has 3 versions, 4, 10 and 14 items, which are used to measure general perceived stress in the past month. In this research, the 10-question version of this questionnaire is used, which has three subscales of uncontrollability, unpredictability and arduousness of one's life. The scoring method of the questionnaire is based on a 5-point Likert scale of never (0), almost never (1), sometimes (2), often (3) and many times (4). The lowest score is zero and the highest score is 40. A higher score indicates greater perceived stress. In this version, questions 4, 5, 12, and 13 of the original versions have been removed, and statements 4, 5, 7, and 8 of these versions are scored in reverse. Cohen et al. (29) conducted research to investigate the psychometric characteristics of all three versions of this scale. The results show adequate reliability (Cronbach's alpha: 0.78) of the 10-item version of this scale. Javar, Rafiei and Thabit (1401) during research on this scale reported Cronbach's alpha coefficient of 81%, which is acceptable (30).

(2) **Questionnaire of Self-care Behaviors**: The questionnaire of self-care behaviors was designed and psychometrically evaluated by Han et al. (3), sometimes (2) and very little/never (1). The scoring of questions 12 and 13 is reversed so that the always option is given a score of 1 and the very little/never option is given a score of 4. 31) Qanei Qeshlaq, Parizad et al. (32) have implemented this tool on 325 patients, and based on the results of exploratory factor analysis, they extracted four factors: diet, drug regimen, food label, and disease management, which were 51/39 explain the % variance of the total self-care variables. Also, the results of the confirmatory factor analysis of this questionnaire indicated its good fit. The internal consistency of the whole instrument was 0.865 based on Cronbach's alpha coefficient.

(3) Native prosperity training program was used using the models developed by resilience program, personality strengths and prosperity (33) and Compton and Hoffman's (17) positive psychology book on happiness and prosperity. The summary of the structure and content of the therapy sessions was in the five main areas of intervention, i.e. positive emotions, relationships, fascination, meaning and progress, which will be implemented in 8 2-hour sessions. In addition, the meetings were held in groups and in the form of lectures, group discussions, questions and answers, and activities in the class. The content of the meetings in the form; the first session) Introduction and familiarization, the implementation of the pre-test, an introduction about the course, expectations from the course. An overview of the elements of flourishing including positive emotions, attraction, relationships, meaning and progress (PERMA) with an emphasis on positive emotions, activities in the classroom to experience positive and negative emotions, express feelings and thoughts. The fourth session) a review of the topics of the previous session, a lecture about being fascinated and letting go in an enjoyable activity, a group exercise, questions and answers about being fascinated in a specific activity and examining the obstacles to fascination, etc., the fifth session) lecture About relationships, relationships and well-being, trust building activity,

what do you know about trust and how do you build your relationships? Session 6) Lecture on purpose and meaning in life selected from Viktor Frankl's book, how to give more meaning to your life. Seventh session) Introducing the concept of success and progress, characteristics of successful people, factors of progress, questions and answers. The eighth session) is a review of the topics raised in the entire course, the implementation of the post-examination and the conclusion of the course.

Findings:

In this research, the data of 30 patients with kidney cancer in the experimental and control groups were analyzed. The mean and standard deviation of the age of the experimental group participants was 43.25±4.46 and the control group was 45.06±4.35. There were also 11 women and 5 men in the experimental group and 9 women and 7 men in the control group. Before performing the statistical analysis, the data was screened and univariate outliers were identified with a box plot. The results showed that there is no univariate outlier. Multivariate outliers were also identified with Mahalanobis statistic.

Table 1 Mean and standard deviation of perceived stress dimensions (positive and negative) and self-care behaviors (diet, drug regimen, food label and disease management) in the participants of the experimental and control groups, in the three stages of pre-test, post-test and follow-up is showing.

Table 1: Mean and standard deviation of research variables

Variable	group	pretest	posttest	Follow up
Positive perceived stress	Experiment	6.75 ± 3.56	3.31 ± 1.40	2.06 ± 1.12
	Control	5.62 ± 2.57	5.93 ± 2.74	5.87 ± 2.39
Negative perceived stress	Experiment	8.86 ± 5.68	2.74 ± 5.06	4.81 ± 2.37
	Control	7.75 ± 3.39	7.87 ± 3.94	7.56 ± 3.91
diet	Experiment	48.00 ±3.18	59.87 ± 3.20	58.31 ± 3.20
	Control	31.56 ± 5.16	38.56 ± 4.16	35.31± 4.16
Drug regimen	Experiment	41.17 ± 3.10	45.00 ± 3.12	46.11± 3.68
	Control	46.19 ± 3.93	45.10 ± 3.10	46.10± 3.06
Food label	Experiment	12.37 ± 2.41	15.55 ± 2.81	16.60± 2.62
	Control	12.41 ± 3.18	12.79 ± 2.99	12.99± 2.68
Disease management	Experiment	17.62 ± 2.62	21.17 ± 2.81	20.18± 2.31
	Control	18.16 ± 2.37	19.50 ± 2.18	118.90 ± 2.93

With the aim of evaluating the assumptions of normal distribution and homogeneity of variances of perceived stress error and self-care behaviors, the Shapiro-Wilk index and the Lone test of each variable were examined, the results of which showed that the data were from normal distribution in two groups and three stages. Is. The result of Lon's test showed that the difference in the variance of perceived stress error and self-care behaviors in the

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experimental and control groups and in the three stages of pre-test, post-test and follow-up is insignificant at the 0.05 level. This finding shows that the assumption of homogeneity of variances between the data related to perceived stress and self-care behaviors is maintained. The assumption of independence of dependent variables was compared in the pre-test stage using multivariate analysis of variance. The results showed that the value for perceived stress and self-care behaviors is not significant at the 0.05 level. Based on this, it was concluded that there is no significant difference between the pre-test scores in the experimental and control groups in terms of perceived stress and self-care behaviors, and therefore, the assumption of independence of the pre-test variable from group membership for the data of perceived stress and self-care behaviors was established. .

Table 2: Delay test for equality of covariance error matrix

Dimensions of perceived stress	Mauchly's Sphericity Test	X^2	sig
Positive perceived stress	0.509	29.68	0.150
Negative perceived stress	0.154	348.82	0.110
diet	0.345	67.36	0.069
Drug regimen	0.517	0.29	0.089
Food label	0.858	757.6	0.034
Disease management	0.835	926.7	0.019

According to the results of Table 2, Moheli's test showed that the chi-square value related to both dimensions of perceived stress and the components of self-care behaviors is insignificant at the 0.05 level. This finding indicates that the assumption of sphericity is valid for both positive and negative perceived stress and the components of self-care behaviors. Table 3 shows the results of mixed variance analysis with repeated measures in explaining the interactive effect of time*group on perceived positive and negative stress and the components of self-care behaviors.

Table 3 shows that the interaction effect of group × time on positive perceived stress and negative perceived stress (P=0.001, P=0.001, F=665.7) is significant at the 0.001 level. This article shows that the implementation of the health promotion package based on flourishing has significantly affected the perceived stress. The interaction effect of group × time on food diet, food label and food label disease management are not significant at the 0.01 level. The interaction effect of group × time on drug regimen is significant at the 0.01 level. This article shows that the implementation of the health promotion package based on prosperity has significantly affected the drug regimen.

Table 3: Results of mixed variance analysis with repeated measurements in explaining the effect of independent variables on perceived stress and self-care

		sum squares	sum of squared error	F	Sig	η^2
Positive perceived stress	Time	78.458	50.452	10.741	0.001	0.328
	group	97.516	76.219	38.38	0.001	0.561
	interaction of time and group	98.688	49.344	2.749	0.001	0.524
Negative perceived stress	Time	45.800	44.706	4.177	0.004	0.160
	group	54.391	139.094	11.816	0.002	0.283
	interaction of time and group	73.771	36.885	7.665	0.001	0.254
diet	Time	146.168	99.396	12.965	0.001	0.371
	group	504.167	187.125	8.070	0.008	0.212
	interaction of time and group	553.556	2392.938	5.017	0.071	0.182
Drug regimen	Time	289.145	124.346	15.416	0.001	0.412
	group	348.844	812.979	12.873	0.001	0.300
	interaction of time and group	357.597	1236.229	6.527	0.003	0.225
Food label	Time	129.741	81.661	15.058	0.001	0.187
	group	232.667	241.833	4.052	0.053	0.119
	interaction of time and group	33.347	442.313	1.696	0.195	0.070
Disease management	Time	45.249	224.571	7.126	0.001	0.245
	group	55.510	264.313	6.30	0.018	0.174
	interaction of time and group	69.292	319.313	3.984	0.056	0.150

Discussion and conclusion:

The purpose of this research was to investigate the effectiveness of the health promotion package on perceived stress and self-care of kidney cancer patients. The findings show that the health promotion package based on prosperity has reduced the perceived stress in kidney cancer patients in a stable manner. This finding is consistent with the researches of Opriman et al. (17), Chu and Daugherty (34) and Sha (33). This finding can be explained in the way that flourishing-based interventions emphasize people's capabilities according to the theoretical background (33) and this emphasis on capabilities and abilities has been able to

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reduce the perceived stress of patients because a major part One of Seligman's (33) prosperity and happiness solutions is to discover individual capabilities and find ways to cultivate them. With this method, a person gets passion for life and thus becomes happier and happier in life. Also, in the discussion of fascination (33), moment-to-moment awareness without judgment is emphasized, according to the special method of being present in the moment, acceptance, desensitizing, increasing awareness and observation without judgment, which can reduce the symptoms and consequences of stress. In prosperity-based interventions, the techniques of non-prejudice, patience, initiatory mind (initiator state of mind), trust, not struggling, acceptance and release (let it pass) are used, and all these techniques are effective in dealing with stress (33).

Also, according to the perspective of positive emotions of flourishing, three models of enjoyment that increase the effect of positive emotions are mentioned: (1) Anticipation, (2) Being in the moment, (3) Memory. That is, we can enjoy a positive event before it happens, by getting excited in preparation for experiencing it. Also, we can enjoy that event while it is happening and we can enjoy it by remembering the memory of that positive event and through experiencing these positive emotions, it reduces stress in patients.

Also, in addition to the techniques used, since the treatment was in a group, the patients talked about each other's experiences and talked about the disease and self-care methods, and for this reason, this experience can be used as a factor that leads to stress reduction in has been patients, pointed out.

The findings showed that the health promotion package has increased the diet and drug regimen in patients with chronic diseases (kidney cancer) in a stable manner and has not had a significant impact on disease management and food labels. This finding is consistent with the researches of Marquez et al. (36), Bloom et al (27).

This finding can be explained in the way that the health promotion package based on flourishing refers to the capabilities and through emphasizing the capabilities, it leads to an increase in self-care in patients. According to the capability's perspective, there are two benefits of focusing on capabilities:

1. Abilities can be a shield against the stress of injury.
2. Capabilities can increase well-being (37).

Abilities such as hope, kindness, social intelligence, self-control, and insight can serve as a shield against negative influences and damage, and prevent or alleviate diseases and disorders (19). Building capabilities such as social intelligence can also prevent or at least reduce aggression and antisocial behavior including school misbehavior and fighting (11). In a correlation study between various capabilities and life satisfaction, it was found that the capabilities of heart desire, gratitude, hope and love have a stronger relationship with life satisfaction than brain capabilities such as love of learning (33).

Also, in the health promotion package based on flourishing, commitment is emphasized, and according to the type of illness of the participants in the current research, who need

special self-care for treatment, this commitment and teaching it to these people increases self-care. Because the health promotion package is based on flourishing on psychological acceptance, psychological awareness, cognitive separation, reducing excessive focus on oneself, recognizing personal values, creating motivation to act according to motivation, that is, activity aimed at specified goals and values along with acceptance Mental experiences (22) are emphasized and these steps increase self-care in patients with chronic diseases.

Among the limitations of the current research, we can refer to the selection of sample people, which limits the generalizability of the results. The lack of control of important and influential variables in chronic diseases such as social and emotional support received from parents, family and friends and resilience was mentioned. The follow-up of the present study was done only in one measurement and in a period of 2 months. Conducting longer studies with long-term and multi-stage follow-up will provide researchers with more complete results regarding the stability of this treatment model. Considering the effectiveness of the health promotion package based on flourishing on the perceived stress and self-care of patients with kidney cancer, it is suggested that in addition to drug treatments, the health promotion package based on flourishing can be used to reduce perceived stress and increase self-care behaviors, especially the issue of compliance Diet and drug regimen should be used. Health promotion package based on flourishing on perceived stress and self-care behaviors such as adherence to diet and medication is beneficial for kidney cancer patients.

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Conflict of interest

The authors declare that they have no conflict of interest.

Ethical Considerations

The ethical considerations of this article are taken from the treatise. Obtaining ethical permits and code of ethics IR.IAU.R.REC.1401.067 Obtaining informed consent from all participants in the study, explaining the implementation method and purpose of the research and answering the questions of the participants were among the ethical considerations in this research.

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