Health- Oriented Lifestyle of cancer patients and the affecting factors in Iran: A case study of the cancer patients in Kerman city

Soodeh Maghsoodi[1]

20

1. Assistant Professor of Social Sciences Department, Faculty of Literature and Humanities , Shahid Bahonar University of Kerman, Kerman, Iran.

*Corresponding Author:

Soodeh Maghsoodi

Assistant Professor of Social science Department, Faculity of Literature and Humanities, Shahid Bahonar University of kerman, The End of 22 Bahman boulvard boulevard, Kerman, Iran.

Tel: 0989133975368

Email: smaghsoodi@uk.ac.ir

A B S T R A C T

Background: The present research aims to describe the status of a health-promoting lifestyle among people afflicted with different types of cancer.

Methods: The data of the present research were collected by (HPLPII) Health Promoting Lifestyle Profile questionnaire(1995) and the research sample size was 200 patients. The stratified random sampling method was used to select cancer patients in one private clinic and two governmental hospitals.

Results: The findings showed that the patients were quite far from a health-promoting lifestyle and none of the health- promoting lifestyle indicators (physical activity, nutrition , stress management, etc.) was at a reasonable level among them. According to Chi-square test, all aspects of health (health responsibility, physical activity, nutrition, stress management and interpersonal relations), except the spiritual growth, significantly correlated with health-promoting lifestyle among the cancer patients.

Conclusion: In accordance with the above-mentioned, a healthy nutrition was more associated with the health-promoting lifestyle for different cancer type among Iranian patients.

Keywords: Health- promoting , Kerman, Lifestyle, patients

INTRODUCTION:

Lifestyle is one of the social concepts. Although, it has been addressed during the past decades by scholars such as Weber, Simmel and Adler has given rise to sociology, at the beginning of the third millennium and with individualization of many objective aspects of life, it has attracted more serious attention. Lifestyle comprises the collection of objective and tangible elements of human life with its most important function being distinction.[1]

According to Leslie et al "lifestyle is not just what a person is endowed with in terms of standing and credibility, but also, the way they are displayed by the individual." Lifestyle includes both consumption patterns and the power that is gained through it. Taste, etiquette and fashion are deemed as securing a foothold on the social ladder.[2]

According to another definition, lifestyle fits into a behavioral category and when it becomes a mass phenomenon, it should be important to the sociologists. Lifestyle is a result of people's choice within their structural restrictions.[3]

Giddens holds that: "lifestyle is a relatively harmonious collection of all the behavior and activities of a given person in the course of daily life which requires a set of habits and orientations and thus, enjoys a kind of unity."[4] In general, this concept includes a number of patterns pertaining to social relations, consumption, entertainment, fashion and clothing and even reflects the attitudes, values and world view of the individual and the group that he/she belongs to.[5]

Every year, more than 10 million new cases of cancer are diagnosed and more than 20 million people in the world are living with cancer diagnosis.[6] The annual incidence of cancers in Iran is about 70 thousand cases with about 30 thousand deaths.[7]

Approximately 150 types of cancer have been recorded in humans and at least 500 different human carcinogenic factors have been identified. Researchers have stated that cancer is a result of several concurrent factors.[8] Only 5 to 10% of cancers are due to genetic problems and 90-95% have root in environmental factors and people's lifestyle.[9] Among the environmental factors, the most important cancer-causing risk factors are smoking, obesity, alcohol consumption, infectious agents, sunlight, psychological pressure, contaminated environment and foodstuff.[10]

Lifestyle is closely associated with people's economic and social status and also correlates with other factors, including roles and activities, work and study habits, relaxing and fun activities, type of residence, impact of cultural beliefs on nutrition and health, method of transportation and displacement, preventive treatment behaviors, health habits (such as consumption use of alcohol, nicotine, recreational drugs, medication and stress level).[11] For example, Goodman showed that nutrition can influence life style and incidence of cancer like breast cancer.[12]

A lot of health problems such as obesity, cardiovascular diseases and different types of cancer that are rampant in most countries, especially developing ones, are somehow associated with people's lifestyle.[13] Studies have shown that there is a direct relationship between the incidence of cancer and the people's way of life, and in the incidence of common cancers such as breast cancer and prostate cancer, the role of lifestyle is more marked than the other factors.[14] For example, Wang showed the effect of perceived stress on life style in patients with breast cancer; The patients had experienced high stress in some stage of their life.

Forthermore, cancer prevention includes primary prevention (of the disease incidence) and secondary prevention (early discovery of the disease). For the primary prevention of cancer, it is necessary to identify the cause and factors involved in the incidence of the disease. Therefore, it is possible to prevent cancer by modification of lifestyle.[15] Researchers have estimated that 25-30% of all cancer cases in the United States are caused by tobacco smoking, 30 to 35% are related to diet, [15]

to 20% are the result of infections, 10 to 20% are related to obesity, and 10 to 15% are related to other factors. Also, the most important cause of lung cancer (80%) is exposure to cigarette smoke (primary and secondary), and since 1990 lung cancer among the South Asian men has been on the rise because of the unprecedented cigarette consumption and smoking.[16]

Statistics show that between 2500 and 3000 persons suffer from various malignancies in Kerman Province that is located in East South of Iran . Some malignancies such as leukemia, liver cancer, lung cancer, breast cancer and prostate cancer in this province are above the average level of the country and every year, a significant number of people are afflicted with them.[17] Therefore, it is necessary to find the reasons for this increase.

METHODS:

The method used in the present study was a quantitative-statistical one, and the research technique was (HPLPII) Health Promoting Lifestyle Profile questionnaire, that is, the questionnaires were handed out to cancer patients to answer the questions on their own accord. Also, some questions were asked about age, gender, background of cancer, family background of cancer and type of cancer in another questionnaire.

The research questionnaire consisted of 2 parts. The first part contained questions on demographic characteristics such as age, education, type of cancer, family background of cancer and background of cancer. The second part contained questions which are in (HPLPII) questionnaire. It has Q1-Q52. Subscales in Health-Promoting life questionnaire are (1995): physical activity (Q4-10-16-22-28-34-40-46), health responsibility (Q3-9-15-21-27-33-3945-51), nutrition (Q2-8-14-20-26-32-38-44-50), spiritual growth

(Q6-12-18-24-30-36-42-48-48-52), interpersonal relations (Q1-7-13-1925-31-37-43-49)and stress management (Q5-11-17-23-29-35-41-47).

Therefore, the researcher incessantly visited the chemotherapy wards of Bahonar hospital and centers like the private office of Dr. kalantari throughout the weekdays, and after gaining the patients' trust on not disclosing the content of the information they would reveal in the questionnaires, they were persuaded to fill the questionnaires.

The questions were about age, education and gender of participants. Also included in the questionnaires were questions related to HPLP dimensions like interpersonal relations, nutrition, physical activity, health responsibility, stress management and spiritual growth.

HPLPII was evaluated for each participant by (Q1-Q52) subscales in Health-Promoting Life style Profile questionnaire(1995).

All the results from this study were shown as the average and standard deviation, Chi- square test for correlation between variables, T-Test for gender, One-way Anova for education and Pearson test for age and HPLP.

The statistical population in this research included people with cancer who had been referred to the chemotherapy department of two hopitals, shahid Bahonar and Javadolaemeh, and also kalantari center which was a private clinic like Dr kalantari office in Kerman city. Based on the statistics obtained from these two governmental hospitals and the private clinic, the total number of the filed cancer patients was 200 people who had been under chemotherapy for six months. The size of the research sample was calculated, using the Cochran's sample size formula. On this basis, the sample size of this research was 200 patients of

whom 104 were male and 96 female.

In the present research, the targeted sampling method available for the selection of cancer patients was used. The hospitals and clinics were selected based on the research objective and the questionnaires were distributed among patients who were willing to fill them.

RESULTS:

Demographic variables

As shown in **Table** 1, the mean respondents' age is 41.68 years, and the age range of respondents is between 15 and 65 years. Moreover, the standard deviation is 13.04.

According to the data in **Table 2**, the majority of the study participants had a low level of education; 55% of individuals had a level of education lower than the high school diploma, 19.5% (39 people) had high school diploma and only 1 person had a master's degree.

As shown in this table, the most common type of cancer among the respondents was breast cancer; 30 (15%) of the respondents were afflicted with it. The research results also indicated that for the majority of the subjects there was no history of cancer among their relatives, in other words, 61% of them had no history of cancer in their 1st degree relatives and 39% had some family background of developing cancer.

According to the data in **Table 3** show that the respondents in general, were rarely engaged in physical activities and did not follow a regular exercising schedule. Also, by taking a look at the status of healthy nutrition in the table, it can be seen that most of the respondents consumed a fair amount of dairy, but on the average, fish consumption was at the minimum level. Moreover, the maximum amount of narcotic drugs used was related to the hookah, and over 30% of individuals confessed to its consumption in frequent sessions. and, a small number of respondents consumed alcohol.

Testing of the hypotheses

Correlations: **Table 4** shows the health-promoting lifestyle hypothesis testing for cancer patients. As seen in the table, there is a significant correlation between nutrition, physical activity, health management, stress management, nutrition, interpersonal relations, education and the health-promoting lifestyle among the cancer patients. But there is no significant correlation between spiritual growth, gender, age and the health-promoting lifestyle.

Regression: the Logistic Regression Method was used to find out which of the studied components had a greater association with the health-promoting lifestyle and largely contributed to it. The logistic regression is used when

Table 1: Descriptive analysis of respondents based on age					
	frequency	Lowest age	Maximum age	Mean	S.D
Age	200	15	65	41/68	13/04

Table 2: Prevalence of some of the demographic variables			
Variable		frequency	Percent
Education	Lower diploma	110	55
	diploma	39	19/5
	upper diploma	22	11
	bachelor	28	14
	master of arts or science	1	0/5
Type of cancer	Leukemia	16	8
	Esophagus	22	11
	Breast	30	15
	Liver	8	4
	Skin	10	5
	Larynx	10	5
	Neck	10	5
	Brain Tumor	12	6
	Prostate	17	8/5
	Lung	17	8/5
	others	24	
Family background	Yes	78	39
	No	122	61

the dependent nominal variable has binary options such as healthy and unhealthy lifestyle. The results of the logistic regression analysis for the determination of the factors influencing the health-promoting lifestyle are shown in **Table 5**. To determine the type of influence according to the value of B, each of the aspects, i.e. physical activities, nutrition, responsibility and stress management were examined. The result showed a direct relationship with the health-promoting lifestyle, and nutrition played the most prominent role in the health-promoting lifestyle. In other words, a healthy diet increases the probability of realization of a health-promoting lifestyle.

DISCUSSION:

The results of this research showed that all aspects of health, except spiritual growth correlated with health-promoting lifestyle among cancer patients and this result is in conformation with the results of studies conducted by Zolfaghari et al. (2014), Park (2005), Van Berg (2008) and Martin (2008) Goodman & Maclaren(2009), kathleen etal (1993)[18],Wang & etal (2012), Weihofen(2010)[19] ,Yarnall etal (2013)[20] and kozier etal (2000)[21] who stated that modification of lifestyle is correlated with prevention of cancer .Goodman & Maclaren, Park, Martin, Kathleen etal , Wang etal, Weihofen and Yarnall

Table 3: Prevalence of some of the demographic variables			
Variable		Mean	SD
Physical activity	Sport in usual activities of life	3/42	1/04
	Regular sport	1/73	0/99
	Spending of leisure by sport	1/94	1
	Light sport	1/78	0
	Extreme sport	2/37	1/08
Nutrition	Vegetable	3/81	0/91
	Dairying	9/04	0/91
	Fish	2/86	0/79
	Cereals	3/52	0/61
	Nuts	2/98	0/78
	Fruit	4/18	0/86
Drug use	Drug	2/37	1/60
	Cigarette	1/97	1/31
	Alcohol	1/64	1/09
Physical awareness	Cholesterol	2/48	1/03
	Blood pressure	2/50	1/05
	Diabetes	2/61	1/12

showed that nutrition and health diet like consumption of seafood, vegetables and fruit in per week, use of green tea in per day and less consumption of meat and fried and stir fried food can With regard to the health-promoting lifestyle among the cancer patients, research findings confirmed that these individuals were far from a health-promoting lifestyle and did not take sports seriously. They had physical activity of less than 1000 k cal per week and the main reasons for their disease is probably lack of a regular physical activity schedule. The theoretical framework of the present study also indicates that, the more people engage in physical and sports activity, the less the likelihood of developing the disease. This result is similar to Wang etal (2012)and Goodman & Maclaren(2009).

Also, awareness of the physical condition is effective in preventing cancer, and the studied individuals stated that they had little knowledge of their health status (blood pressure, blood sugar and blood fat). In other words, they neglected their own self-care while taking care of health status, and also, regular checkup is a factor that helps in preventing the disease. More than 50% of people stated that they assumed little or very little accountability for their physical condition, health and disease. This finding

Table 4. The health-promoting lifestyle hypothesis testing in cancer patients

Health- Promoting life style	Test	significance	p-value
Hypothesis test			
Nutrition	Chi-square	0/000	0/65
phisical activity	Chi-square	0/000	0/43
Health responsibility	Chi-square	0/000	0/27
stress management	Chi-square	0/000	0/41
Interpersonal relations	Chi-square	0/000	0/15
Spiritual growth	Chi-square	0/323	0/007
Other variables			
gender	T-test	0.030	0/13
education	One-way Anova	0/36	0/019
age	Pearson	0/005	0/951

confirmed kathleen etal (1993)study which showed the effect of attitude concerning responsibility for health status like annual checkup.

Research findings indicate that smoking is one of the factors influencing the incidence of cancer. Drug use among the sample population suggests that the highest usage with the mean value of 2.37 is related to Neck cancer. Therefore, the high popularity of cigarettes and narcotics with prolonged and almost permanent contact of the overwhelming majority of the patients with cigarette smoke as an old tradition among men and women should raise alarm for health officials and others. This finding is similar to Yarnall (2013) and Wang (2012) studies .

This research confirmed Wang etal(2012), Zolfaghari et al (2014), kathleen et al (1993) and Goodman & Maclaren (2009) studies . They showed the effect of perceived stress on life style in patients for example Zolfaghari stated that people who usually were angry , were suffered to cancer more than people who could control their emotions and anger.

With regards to the relationship between the lifestyle of the patients and demographic characteristics, the current research findings showed that there is a significant statistical correlation between the education variable and the lifestyle, such that the lifestyle progressed towards recovery with higher education. In other words, low level of education of a large number of the patients, increased the probability of not being aware of their lifestyle, and this result is similar to last reserches.[17]

According to the logistic regression results, nutrition plays the most significant role in the health-promoting lifestyle. Therefore, to deal with incorrect food habits such as consumption of fatty, fried and canned foods, unhealthy snacks, low consumption of fruits and vegetables, high consumption of carbonated and sweet drinks, and low use of fish as

Table 5. Logistic regression of the main variables of the research in relation to lifestyle

Hypothesis test			
Health- Promoting life style	Test	significance	p-value
Nutrition	Chi-square	0/000	0/65
phisical activity	Chi-square	0/000	0/43
Health responsibility	Chi-square	0/000	0/27
stress management	Chi-square	0/000	0/41
Interpersonal relations	Chi-square	0/000	0/15
Spiritual growth	Chi-square	0/323	0/007
Other variables			
gender	T-test	0.030	0/13
education	One-way Anova	0/36	0/019
age	Pearson	0/005	0/951

cancer prevention factor, consumption of fast foods and wrong nutritional behaviors and habits, the health education must seek to create awareness and proper attitude with the consequence of establishing a correct dietary behavior.

In general, the research findings show misguided and inappropriate habitual behavior in the cancer patients, particularly in the aspects of stress management, accountability for one's health and physical mobility which besides bad dietary habits, etc. have provided an unhealthy lifestyle for a lot of people.

LIMITATIONS:

This paper has been done in kerman city, so that perhaps there are different results between cancer patients in other cities in Iran. One of other important limitations in this paper was that patients didn't collaborate for filling questionnaires because they were very tired after chemotherapy, so we did it very

longer.

STRENGTH:

There are restrict researches about health promoting lifestyle as literature in Iran. Thus, this paper is an introduction to this subject between cancer patients and by newer and complete researches , we can find factors of affecting on health promoting lifestyle and prevent cancer easily.

RECOMMENDATIONS:

It is recommended that further studies should be conducted on certain types of cancer or their treatments according to the personal characteristics of the people and understand the factors affecting the quality of life as well as the impact of each of the different supportive sources on the quality of life of the cancer patients.

Other suggestions include the control of the Ministry of Health on the health-promoting lifestyle of the Ira-

nian population, and offering a recommended package to households pertaining to healthy nutrition, exercise and physical mobility, control of stress and so on. In line with this, more proactive engagement of NGOs can be fruitful as well.

ACKNOWLEDGEMENT:

REFERENCES:

1. Mahdavi kani M. The concept of style of life and its field in social sciences: Iranian Journal of cultural Research. 2008; 1:23-99.

2. Garrousi S, Garrousi B, Amirheydari A. The study of Relationship between Gender Attitude and lifestyle among women in Kerman city: Journal of Social Sciences. 2011;12: 147-69.

3. Javadi Z. A survey about intergenerational life style of women(case study: Yazd city). A thesis in sociology ,Social science department: Tehran University. 2010;54.

4. Giddens A. Consequences of Modernity, translated by Mohsen Salasi. Tehran: Markaz Publications. 2001;33.

5. Abazari Y, Chavoshian H. Social class and life style: New approaches in the sociology of social identity. Journal of Social Sciences. 2002;20:3-27.

6. Zolfaghari M, Bahramnezhad F, Parsa Yekta Z, Kazemnejad A, Monjamed Z. The life style risk factors of tehran citizens associated with cancer prevention. Basic and Clinical Cancer Research. 2013;5(1&2):21-26.

7. Heydari S, Salahshourian-fard A, Rafii F, Hoseini F. Correlation of perceived social support from different supportive sources and the size of social network with quality of life in cancer patients. Iran Journal of Nursing. 2009;22(61):8-18.

8. Brunner LS. Brunner & Suddarth's textbook of medi-cal-surgical nursing: Lippincott Williams & Wilkins; 2010.

9. Chin T-M, Tan S-H, Lim S-E, Iau P, Yong W-P, Wong S-W, et al. Acceptance, motivators, and barriers in attending breast cancer genetic counseling in Asians. Cancer detection and prevention. 2005;29(5):412-8.

10. Anand P, Kunnumakara AB, Sundaram C, Harikumar KB, Tharakan ST, Lai OS, et al. Cancer is a preventable disease that requires major lifestyle changes. Pharmaceutical research. 2008;25(9):2097-116.

11. Black J, Hawaks J. Medical-surgical nursing. 8th ed. LONDON: Sanders Elsevier publishing. 2008;504.

12. Phd SG, MacLaren J, Phd WB. Nutrition and Life-style Guidelines for People with Cancer. Journal of Nutritional Medicine. 1994 1994/01/01;4(2):199-214.

13. Park E. Physician Prevention and Social Totality Social Services.Tehran, Samat. 2005;43.

14. Weinberg RA, Komaroff AL. Health for life. Your lifestyle, your genes, and cancer. Newsweek. 2008 Jun 23;151(25):40-3.

15. Wang L, Liao WC, Tsai CJ, Wang LR, Mao IF, Chen CC, et al. The effects of perceived stress and life style leading to breast cancer. Women Health. 2013;53(1):20-40.

16. Martin-Moreno M, Soerjomataram I, Magnusson G. Cancer causes and prevention: a condensed appraisalin Europe in 2008. Eur J Cancer. 2008;44(10):1390-403.

17. kathleen k, Reardon & Carolyn E. Aydin. Changes in Life Style Initiated by Breast Cancer Patients: Who Does and Who Doesn't. Health Communication.1993;5:263-82.

18.Weihofen D. Fighting cancer with food and nutrition. Society of Gunecologic Nurse Oncologists. 2010;20(1):22-35.

19.Yanall JM,Crouch DJ, Lewis CM. Incorporating non-genetic risk factors and behavioural modifications into risk prediction models for colorectal cancer. Cancer Epidemiol. 2013;29(12):29-33.

20. Kozier B, Erb. G, Berman A, Bake K. Fundamental of nursing: Concepts, process and practice.1st ed. New Jersey: practice Hall .Health. 2000;65-9.

21. Researchal Council of kerman Governor. Development Document of Health in kerman state. Kerman: Medical sciences University of Kerman. 2010;75.