

DOES NUTRITIONAL DIET HEAL LUNGS CANCER: A CROSS SECTIONAL ANALYSIS OF PEOPLE PERSPECTIVE?

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ABSTRACT

Introduction: A study was conducted with the sole purpose to assess the perceptions of lung cancer. patient with an association through application of chi-square test statistics with rehabilitation of lung cancer. Further the dependent variable *pulmonary rehabilitation of lungs cancer* was cross tabulated and indexed with independent variable *nutritional therapy* respectively; where the respondent of the present study was two hospitals. **Study design:** Cross Sectional Study. Shukat Khanam Memorial Hospital and Institute of Radiotherapy and Nuclear Medicine hospital, Peshawar, Khyber Pakhtunnkhawa was selected purposively along with structured interview schedule was used for data collection- where 152 respondents were reported from the aforementioned hospitals. **Method:** The study recommended that, **Period:** 2017, 2018 micro and macro level polices pertaining to nutritionist's appointment in cancer hospitals, creating social awareness programs regarding lungs cancer and an integrated drive for curative and preventive measure for controlling lung cancer diseases were the order of day.

Key words: *Pulmonary Rehabilitation, Lungs Cancer, Nutritional Therapy, Chi-square, Peshawar.*

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INTRODUCTION

Lung is the human breathing organ located in the chest; made up of two lobes i.e. right and left; during breathing process, air goes through nose, windpipe (trachea), and into the lungs where it spreads through tubes called bronchi. Most gaseous wastes are removed from blood in lungs whereas the blood is also oxygenated in this body part. Most lungs disease including lungs cancer starts in the cells that line bronchi. There are multiple disorders related to lungs, the most lethal of all this disorder is lung cancer.¹ Lungs cancer (LC) is also known as lung carcinoma, is the main reason of mortality and morbidity all over the world with a rate of 1.3 million cases each year. Most by far 85% of instances of lungs cancer are because of tobacco smoking while 10– 15% of cases happen in individuals who have never

smoked. Since the dominant part of LC is analyzed at a moderately late stage, just 10% of all LC patients are at last cured. Most lungs cancer are named either small cell or non-small cell LC.²

The main symptoms of LC are intense cough, cough with blood, chest torment, repetitive pneumonia and TB. There are chances of treatment of LC if diagnosed in early stage, before it spreads. LC is categorized into four stages. In the first stage cancer is found in the lungs, but it has not spread outside the lungs; in second stage cancer is found in the lungs and nearby lymph nodes; third stage cancer is in the lungs and lymph nodes in the middle of the chest and in the last stage cancer has spread to both lungs, into the area around the lungs, or to distant organs[3]. After the lung cancer is analyzed, the method of

treatment is chosen by patient's condition. Surgery is the best treatment choice, yet radiotherapy and chemotherapy can likewise be utilized relying upon the phase of the ailment.⁴

Lungs cancer in Pakistan

LC is the major cause of all deaths all over Pakistan where smoking habit is the major cause of LC in males, however non-smoker males and females also fall victim to LC. In changing social scenarios smoking by females once a social taboo, is diffusing in Pakistani females. Family history of LC and TB are causes of LC. Late diagnosis of LC makes it lethal disease in Pakistan. However there is still hope as renowned institution and hospitals are using the latest studies and advanced technical facilities to develop cures for these deadly daisies. With advancement in therapeutic sciences the survival rate for LC persistent has expanded for a long time.⁵ LC is increasing at alarming rate in Pakistan, and it is extremely heartbreaking that young people are experiencing this deadly disease. Smoking in Pakistan is unrestricted and legal. Cigarettes are openly sold in market and even children can purchase it from the shops. As per World Health Organization smoking in Pakistan has expanded by 30 percent in the course of the most recent decade. As per most recent research, more than 80 percent grown-up's smokers started smoking before they turn 18 years old. Kids younger than 18 years say that it's easy to purchase tobacco items, which is a reason for worries for guardians. Around 1,200 youngsters begin smoking every day which is likewise expanding the chances of lung cancer.⁶

Causes of lungs cancer

There are various causes of LC among them notable causative factor is smoking^{7,8,9,10,11} and¹² disclosed that the major contributing factor of LC is tobacco use generally while in Pakistani society particularly. In addition exposure to radon gas is another known reason for LC. Radon gas can go up through soil and enter homes through holes in the building, drains, pipes, or different openings.

Radon gas is invisible and scentless however can be recognized with basic test packs.⁷ Likewise, Smokes from vehicles, industry, and power plants, can raise the probability of creating lung disease in uncovered people.⁷ Family history of lung disease is a chance factor for LC¹³; High levels of arsenic in drinking water.¹⁴

Lung cancer in the Study Area

There were 40,000 instances of disease reported from Khyber Pakhtunkhwa territory in 2014. Just four healing centers exist in Khyber Pakhtunkhwa to provide treatment for a great many cancer patients from Khyber Pakhtunkhwa and neighboring Afghanistan. IRNUM is one of the four healing center treating disease in Khyber Pakhtunkhwa was set up by Zulfiqar Ali Bhutto in 1975 as a 75 bed hospital facility and with the ability to give treatment to 1,000 patient annually. However, the rate of increase in cancer patients is increasing. Be that as it may, the frequency rate of cancer is by all accounts increasing at a disturbing rate and the quantity of cancer patients enlisted with IRNUM right now has outperformed 6,000. 33% of these are patients from Afghanistan.¹⁵

Nutrition For Lung Cancer Patient

Sufficient food intake during, before, and after LC treatment as important contributor in cancer treatment. The cancer patients require the sufficient caloric intake to maintain their body weight. Alongside sufficient quantity of protein diet is required to maintain body strength. Sufficient food intake creates better feeling and high energy in the patients. Due to Psychological and physiological of lung cancer most of patients don't like to eat and stop to eat during and after treatment which makes the patients uncomfortable and tired. Such patients develop sense of tastelessness due to illness. Furthermore, low appropriate and blisters in mouth are the side effect of treatment that reduces the food intake by patients. At this situation the doctor, health practitioner or a dietitian can make such suggestions that are

helpful in maintaining food needs.¹⁶ Many hospitals employ specialist nurses or nurse consultants to take responsibility for ensuring that nutrition support is delivered as safely and effectively as possible. Such nurses will train other healthcare professionals and will monitor adherence to protocols nutrition and will usually coordinate the nutritional care of patients in hospitals and between hospitals and the community.¹⁷ A registered dietitian is a credentialed health professional who is an expert in diet and nutrition. People with lung cancer may consult with a dietitian to help them create a diet plan that includes proper nutrition helps them in maintaining weight, and helps manage side effects during treatments like chemotherapy.¹⁸ Keeping in view the above stock of literature this study is designed to find out the nutritional therapy and lungs cancer along with to find out the association whether nutritional diet healed the process of lungs cancer or not through application of chi square test statistics.

MATERIAL AND METHODS

A cross sectional and perceptual based research was designed to explore the nutritional domain and rehabilitations of lungs cancer patient was conducted in two hospital, IRNUM and Shukat Khanam Memorial hospitals, located in District Peshawar, Khyber Pakhtunkhawa. The lungs cancer patients admitted/visiting these hospitals were the respondents for this study. As per record of both hospitals, 252 patients were admitted or under treatment resultantly a sample size of 152 respondents was selected as per Sekaran¹⁹ sample size criteria; further the sample was proportionally allocated to each hospital by using proportional allocation formula given by Cochran.²⁰ Simple random sampling technique was used for selection of respondents. A conceptual framework comprised of dependent variable (*rehabilitation of lungs cancer patients*) which was indexed and cross tabulated through application of Chi square test statistics by showing their association with independent variable (*Food therapy*) attributes, as shown in

formula after table 1.

Table No. 1: Conceptual Framework	
Independent variables	Dependent variable
Food therapy	Rehabilitation of lungs cancer patients

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^c \frac{(O_{ij} - e_{ij})^2}{e_{ij}}$$

RESULTS AND DISCUSSIONS

Perceptions of the respondents regarding nutritional Therapy and Rehabilitation of LC

The cancer patient rapidly losses his/her weight due to the perpetuation of psychological and physiological effects. A patient with poor state of health takes longer time and high dose of medicine to recover. Thus the doctors suggest by providing food supplement to the patients for their early recovery. To ascertain the perception of the respondents on nutritional therapy the questions asked are given in Table-2 while their interpretations are disclosed as follow;

The result in table 2 shows that majority of the 63.2% respondents dismantled that, the diet intervention are proposed by the specialist dietitian. Moreover, 52.6% of the respondents agreed to the statement that, dietary interventions are helpful to decreasing the painful breathy process. These findings are similar with the findings [16]. The result, further show that majority of the respondents 64.5% accepted that, proper diet use helped in controlling weight loss. Similarly, 53.3% disclosed that, after proper diet use strength was regained, and (50%) reported that proper choice of food reduced chewing and swallowing difficulties associated with cancer. These findings are similar with the finding of Cereda et al.[21]. In addition, 32.8% respondent agreed that, nutritional therapy reduces expenses in medicine; as supported by [16] as well.

In a conclusive word, patients with cancer face the problems of drastic weight loss that result in

reduced resistance to cancer. To overcome these causes the doctors prescribe nutritional supplement to the patients. Provision of nutritional supplement improves the food intake and digestion process, enhance the body strength and develop the power to fight the disease. These supplements are also source of reducing medicinal costs incurred for cancer treatment.

other healthcare professionals and monitor the procedures for nutritional intake and will usually coordinate with the oncologist. Patients requiring nutrition support need help from a range of healthcare professionals and dietitians. These finding are in a line with National Collaborating Centre for Acute Care which reported that expert nutritionist availability for the patients to help them on dietary intake is mandatory[17].

Table No 2 Frequencies and Percentage Distribution of Respondents regarding Nutritional Therapy:

S.No	Statement	Agree	Disagree	Uncertain
1	Diet interventions are proposed by the specialist dietitian.	96 (63.2)	45 (29.6)	11 (7.2)
2	Diet interventions are helpful in reducing painful breathy process.	80 (52.6)	59 (38.8)	13 (8.6)
3	Proper diet use helped in controlling weight loss.	98 (64.5)	38 (25)	16 (10.5)
4	After proper diet use strength was regained.	81(53.3)	51 (33.6)	20 (13.2)
5	Proper choice of food reduced chewing & swallowing difficulties associated with cancer.	76 (50)	48 (31.6)	28 (18.4)
6	Nutritional therapy reduces expanses in medicine.	58 (38.2)	67 (44.1)	27 (17.8)
7	Expert nutritionists are available in hospital to help patient.	80 (52.6)	42 (27.6)	30 (19.7)

Note: Values in the table represents frequency & in parenthesis represent percentage of the respondents

Association between Pulmonary Rehabilitation and Nutritional Therapy:

Due to chronic disease like lungs cancer the patients feel it difficult to eat and hence losses weight rapidly. At this stage the nutrition therapist intervenes to rehabilitation the lung cancer patients in terms of their food requirements. Association between pulmonary rehabilitation and nutritional therapy are given in Table 3.

Results in Table 3 disclose the association between pulmonary rehabilitation and expert nutritionists are available in hospital to help patient was significant (p=0.002). Lung cancer patients require expert advice and guidance from the nutritionist to maintain their diet digest their food and control weight loss. Nutritionists train

However, a non-significant association were found between pulmonary rehabilitation and Diet interventions are proposed by the specialist dietitian (p=0.585), diet interventions are helpful in reducing painful breathy process (p=0.634) , proper diet use helped in controlling weight loss (p=0.478), after proper diet use strength regained (p=0.944), proper choice of food reduced chewing and swallowing difficulties associated with cancer (p=0.748), and nutritional therapy reduces expanses in medicine (p=0.604). Although it is important for rehabilitation of lung cancer patients that they should be provided with expert nutritionist at every hospital for their food related food therapy, however, this important facility was not available in hospital due to which patients suffered from additional problems.

CONCLUSIONS

The present study was cross sectional based designed to highlight the nutritional therapy with consideration of rehabilitation of lung cancer patient. The study concluded that, due to lung cancer, the patients lose their weight rapidly. They, due to physical and psychological stresses, become highly vulnerable to negative effects of cancer. An expert dietitian can help in providing such food supplements that are easy to ingest and digest and can overcome the weight loss problem. These supplements provide the required strength to resist the diseases and recover from it. However such important professionals for nutritional treatment of patients are missing in important teaching hospital of province. Thus, recruitment of qualified nutritionists that could suggest such dietary and

Table 3. Association between Pulmonary Rehabilitation & Nutritional Therapy

Statement	Attitude	Pulmonary Rehabilitation			Total	Statistics
		Agree	Disagree	Uncertain		
Diet interventions are proposed by the specialist dietitian	Agree	54(35.5)	37(24.3)	5(3.3)	96(63.2)	$X^2=2.842$ (p =0.585)
	Disagree	22(14.5)	20(13.2)	3(2)	45(29.6)	
	Uncertain	8(5.3)	2(1.3)	1(0.7)	11(7.2)	
Diet interventions are helpful in reducing painful breathy process.	Agree	46(30.3)	29(19.1)	5(3.3)	80(52.6)	$X^2=2.560$ (p =0.634)
	Disagree	29(19.1)	26(17.1)	4(2.6)	59(38.8)	
	Uncertain	9(5.9)	4(2.6)	0(0)	13(8.6)	
Proper diet use helped in controlling weight loss.	Agree	54(35.5)	37(24.3)	7(4.6)	98(64.5)	$X^2=1.933$ (p =0.478)
	Disagree	22(14.5)	14(9.2)	2(1.3)	38(25)	
	Uncertain	8(5.3)	8(5.3)	0(0)	16(10.5)	
After proper diet use strength was regained.	Agree	47(30.9)	29(19.1)	5(3.3)	81(53.3)	$X^2=0.759$ (p =0.944)
	Disagree	27(17.8)	21(13.8)	3(2)	51(33.6)	
	Uncertain	10(6.6)	9(5.9)	1(0.7)	20(13.2)	
Proper choice of food reduced chewing and swallowing difficulties associated with cancer.	Agree	46(30.3)	26(17.1)	4(2.6)	76(50)	$X^2=1.933$ (p =0.748)
	Disagree	25(16.4)	20(13.2)	3(2)	48(31.6)	
	Uncertain	13(8.6)	13(8.6)	2(1.3)	28(18.4)	
Nutritional therapy reduces expenses in medicine.	Agree	34(22.4)	19(12.5)	5(3.3)	58(38.2)	$X^2=2.732$ (p =0.604)
	Disagree	37(24.3)	27(17.8)	3(2)	67(44.1)	
	Uncertain	13(8.6)	13(8.6)	1(0.7)	27(17.8)	
Expert nutritionists are available in hospital to help patient.	Agree	39(25.7)	33(21.7)	8(5.3)	80(52.6)	$X^2=16.93$ (p =0.002)
	Disagree	33(21.7)	9(5.9)	0(0)	42(27.6)	
	Uncertain	12(7.9)	17(11.2)	1(0.7)	30(19.7)	

Source: Field Survey, 2018. Note: Values in Parentheses are Percentages.

food habits to the lung cancer patients that are helpful in smooth ingestion and digestion of food and provision of required dietary components to the patients for maintaining their body weight and getting strength to resist the disease is the order of the day were put forwarded some future policy recommendations in the light of present study.

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