

Physical And Mental Health Adaptability Of Lung Cancer Patients: A Qualitative Study In Lahore Pakistan

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Abstract

Background: Lung Cancer is a deadly disease which has negative outcomes affecting physical and mental health of the patient in different perspectives. It is the leading cause of death among males. Lung Cancer is commonly associated with smoking. Patient experience different events during the disease and treatment phase which not only disturb the patient but also affect the family members in the same way.

Objective: This study aims to explore the challenges of Lung Cancer patients and strategies to cope up with the disease process.

Design: Exploratory phenomenological descriptive study design

Setting: Two major Public Sector Hospitals of Lahore; 1) Mayo Hospital 2) Jinnah Hospital

Participants: Total 12 participants of Lung Cancer Diseases getting treatment since last 6 months were included in the study.

Method: One to one in depth interviews were conducted with 12 participants, including males and females both, using purposive sampling technique. Self-structured Interview guide was used for the interviews leading with probing questions from the responses. Interviews were recorded and field notes were maintained to keep a record of the data for thematic analysis.

Results: Stressors and Coping Strategies were the major themes emerged from the thematic analysis. To overcome the stressors, patients reported, they use belief system to cope up.

Conclusion: Adaptability with the situation is a difficult task. Lung Cancer patients have many stressors which can only be overcome using confidence in inner self and having belief in Allah. Family members do play an important part to overcome the situation.

Key Terms: Lung Cancer, Adaptability, Experience, Prognosis.

I. Introduction: Cancer is a lethal disease and its diagnosis is considered frightening in every culture (WHO, 2022). Uncontrolled division of abnormal cells in a part of the body is called cancer (NIH, 2022). Among all the cancers, lung cancers are the second most deadly cancer.

Worldwide, fatality rate of lung cancer is highest with poor prognosis (Codina & Taboada, 2020).

Smoking is directly associated with the lung cancer. Tobacco smoke has almost 4000 different chemicals which affects the lining of respiratory system leading it to the replacement of normal cells with cancerous cells (Li et al.,

2018). Moreover, the prevalence of lung cancer is higher among males probably due to more exposure to tobacco smoke. Similarly, females also suffered from lung cancer because of active or passive smoking (Liu, 2019).

Adaptability denotes the capacity and willingness to adjust with changing circumstances and to remain fit for purpose (Anih et al., 2019). Stress especially physical stress and psychological stress, is the major factor affecting the adaptability because of burden of treatment and outcome of the disease. Stress due to any reason can negatively affect quality of patients' life with NSCLC (Lee & Jeong, 2019).

There is a relatively poor survival rate for lung cancer patients. The patient is not the only one affected by the condition but the family suffers too. This causes more psychological distress to the patient and their quality of life becomes more troubling than the cancer itself (Cochrane et al., 2021).

According to qualitative focus group research study conducted in United States of America stated that patients' physical and mental health adaptability improves when they come to terms with the fact that they have a critical disease. So, patient must be aware of their prognosis (Islam et al., 2016).

A study was conducted in China revealed that there are three stages of coping with lung cancer: early stress, adaptation to the condition, and finally personal growth. According to the research, it may take between one to two years to adapt to the disease (Li et al., 2021). In China, researchers examined the association between resilience, social support, and anxiety/depression. The findings revealed a negative association between anxiety and socioeconomic position (Hu et al., 2018)

Pakistan is among those countries where people especially youth is highly indulged in the habit of tobacco smoking. This might be the reason that lung cancer is the third main cause of death among general population in Pakistan.

According to a study survey done in 2012, it was found that 6800 new cases and 6013 deaths were reported in Pakistan due to lung cancer. Similar to other areas of world, males are more prone to lung cancer disease as they are more exposed to external pollution and highly involved in tobacco smoking indicating male to female incidence ratio of 5.6:1 (Abbas et al., 2020). GLOBOCON mentioned it as the third most lethal cancer in Pakistan. Tobacco consumption and its related complication are at increase in Pakistan (Majeed et al., 2019).

Mostly, families are dependent on single bread earner and that person is usually male. In this situation, diagnosis of a disease like cancer is a nightmare for any individual but people still bears and absorbs this news with immense temperament. However, some people cannot bear this news because every individual is unique in its level of resilience (Abbas et al., 2020).

In health care facilities available in Pakistan, patient is treated physically but social and psychological aspects of health, which get disturb due to the disease, are ignored. Furthermore, side effects of chemotherapy and radiotherapy are so debilitating that patients isolate themselves and avoid socialization for reducing the capability to adaptation (Chagani et al., 2017).

Experiences of patients suffering from lung cancer and their physical and psychological adaptability after being diagnosed with such life threatening illness can be explored in qualitative study with phenomenological approach. As, this kind of study on this sensitive topic has not been done previously in Pakistan, so this study was conducted with the purpose to highlight the issues of physical and psychological adaptation of patients with lung cancer.

2. METHODOLOGY

2.1 Study Design: This study was done using qualitative approach in which exploratory phenomenology descriptive study design was

used to explore the challenges, behaviors of adaptability and social support for lung cancer patients via face to face interviews.

2.2 Study population: Lung cancer patients who were diagnosed at least 6 months back were included in the study.

2.3 Study Setting: This study was conducted in collaboration with the University of Health Sciences at the following tertiary care public hospital setups in Lahore where lung cancer patients are being treated.

- Mayo Hospital
- Jinnah Hospital

2.4 Duration: This study took 09 months (June 2021- February 2022) after the approval of synopsis.

2.5 Sample size: A total of 12 patients were included in the study.

2.6 Sampling Technique: In this study researcher used purposive sampling to collect data.

2.7 Data Collection Procedure: After the approval of the proposal by the Ethical Review Committee of University of Health Sciences (UHS/REG-21/ERC//6095) and administrative permission by Medical and Nursing Superintendent of both Jinnah (UHS/ION/10610) and Mayo Hospital (UHS/ION/10609) was granted to collect data from the hospital, Lung Cancer Patients who were eligible according to inclusion criteria were selected and interviewed. The transcription and field notes collected from the patients were given an anonymous identity and kept in lock and key for the confidentiality purpose. The audio recordings were kept in laptop saved with the password. Interview guide was used for the in depth interview of all participants.

2.8 Data Analysis: In the current study the demographic data including numerical as well categorical data was collected. The percentage of the categorical data was calculated by the researcher to present the data in presentable form.

The qualitative data was gathered in audio format. Then the data was transformed into the written form through transcription process. Transcription and translation process of data from audio form to written one were the challenging parts of the study (Mihas, 2019). Thematic analysis is process of “identifying, analyzing and reporting patterns (themes) with data” (Castleberry & Nolen, 2018). The content in the data was converted into codes. These codes are categorized into subthemes and themes in order to present them in simplified and a meaningful way (Castleberry & Nolen, 2018).

Thematic analysis was done based on two major approaches: inductive and deductive approach. In inductive approach, themes are generated from the codes and categories extracted from the collected data by the researcher (Varpio et al., 2019). However, deductive approach is based on already preexisting theory or framework which may work as baseline to develop themes of the collected data. In the current study, researcher used inductive approach guided by Braun and Clarke (2006). Finally, results of the study were analyzed in context of Roy’s adaptation model using deductive thematic analysis approach.

2.9 Ethical consideration: Ethical Consideration was followed according to the ethical principles of Helsinki declaration of World Medical Association (Shrestha & Dunn, 2019)

- Privacy and confidentiality of the participant was taken care of during the research.
- Consent was taken from all the participants before collecting the data.

- Study was approved by the Ethical Committee of the University of Health Sciences.
- Written permissions were taken from the Medical and Nursing Superintendent of the hospital.
- Any harm to the participants was avoided.

3. RESULTS: Total 12 participants of active lung cancer were included in the study. The participant's age ranges between 18 and 63 years. About 75% participants had stage III however 25% participants has stage IV cancer. Patients who were getting treatment include; 67% were on chemotherapy treatment however 33% were using multiple treatment modalities including chemotherapy, radiotherapy and surgery as shown in Table 1.

Table 1: Demographic Data of the Participants

Characteristics	Categories	f (%)
Age		18-63 Years
		Mean= 41.08
		S.D= \pm 15.02
Gender	Male	9 (75%)
	Female	3 (25%)
Marital Status	Single	3 (25%)
	Married	8 (67%)
	Divorced/Separated	1 (8%)
Educational Status	Uneducated	3 (25%)
	Primary	5 (42%)
	Secondary	4 (33%)
	Graduate	0
Occupation	Working	5 (42%)
	Not Working	7 (58%)

Family Type	Nuclear	8 (67%)
	Extended	4 (33%)
Cancer Stage	I	0
	II	3 (25%)
	III	9 (75%)
Treatment Modalities	Chemotherapy	8 (67%)
	Radiotherapy	0
	Surgery	0
	Multiple	4 (33%)

In-depth interviews were conducted to collect the data and saturation of the data was achieved. After using inductive analyses, three major themes Stressors, Coping strategies and Social support were developed from the compiled participants' data.

Theme 1: Stressors: These stressors were the major hurdles in physical and mental health adaptability of patient suffering from lung cancer disease.

Subtheme 1: Psychological Stress: A patient cannot have a healthy life if suffering from psychological issues. Due to this stress, patients were unable to take care of their physical health. As participants expressed their psychological stress in different ways,

“My condition was very worst, there was no chance of survival, and no doctor was agreeing to treat me. Doctor said the patient is on last stage, when you came to us. We have to approach them when we need to go to doctor.”(ID2)

The fear of death is always associated with the lung cancer disease due to which a psychological pressure was developed and patients were always worried about their health and outcomes of the disease.

“Yesterday doctor told me, your treatment is over here now from our side. You just have to continue chemotherapy. May be you have to face some trouble within 6 months.” (ID 7)

Subtheme 2: Financial Stress: Another subtheme derived under the umbrella of major theme “Stressors” was Financial Stress. It is more or less connected to psychological health directly or indirectly. While dealing with any health issue, finance management is the most challenging task. So, when it comes to the problem like chronic disease, it sometime makes the person miserable. Few numbers of patients affords treatment from private hospitals. So, participants included in this study were from public hospitals. Mostly who started their treatment from private sector finally

approached public hospitals due to high expenses and non-affordability. Patients exclaimed that,

“There are always financial issues. Household finances and travelling issues are there. These issues disturb me psychologically.” (ID4)

“To be honest, till now we are lending loan from different sources, the money which comes from daily wages is utilized on household. Nothing is free here. We buy each medicine by our own pocket” (ID9).

Subtheme3: Familial Stress: Another subtheme originated from the collected data was familial stress. Whenever any loved one is in pain the one who gets disturb is the family. The result of current study showed that the lung cancer disease was a huge burden on the family as well. It was very difficult for the family to take care of the patient and vice versa. Those patients, who were the only breadwinner for the family, got familial stress because they cannot imagine who will take care of their family.

Some responses from the patient narrated,

“I want to be healthy as soon as possible. My children are orphans and I used to take care of everything.” (ID 1, Female)

“My family is in stress due to my health. My kids are in Sargodha and I am here. There are some issues related to travelling. It takes me 5 hours to reach Lahore.” (ID2)

“I am unable to do any work. I feel dependent. I am a debtor. Now I feel this as a trouble for my children” (ID8)

Theme-2: Coping Strategies: Dealing with the problems and stressors is always challenging and time taking. Everyone has its own method to solve problems and deal with stressors. This major theme of 'Coping Strategies' was originated from the data gathered from patients regarding

their coping mechanism to deal with the adaptability issue.

Subtheme 1: Spiritual Belief: This was a subtheme derived from the major theme of coping strategies as most of the result revealed that patients have strong belief in Allah. Almost all the patients respond that they have left the prognosis and outcomes on Allah's will.

Patient stated,

“I pray a lot so I feel lighten and it's the Allah who will save my life.” (ID 2)

“Everything is handled by Allah. He will do the best for me.” (ID 3)

“I didn't get worry. All praise to Allah, life and death is Allah's will.” (ID 4)

Subtheme 2: Hope of New beginning: Another subtheme derived from the data which helped in coping with the disease is 'hope of new beginning'. It was realized from narrative data of participants dealing with the deadly disease having lethal outcome, a hope of life or new beginning was always there for them. Patients suffered a lot from different problems during disease process but they still believe in some miracles.

“Now I am hopeful that I will survive. Initially I was hopeless but I can walk now. I sweat a lot, I feel restlessness but I am satisfied with the treatment.”(ID 2)

“Chemotherapy has just changed and it's the first cycle. I hope I will get better.” (ID 6)

Subtheme 3: Accepting the Situation: Data collected from the patients revealed that initially it was difficult to accept what's happening in their life but with time they accepted the reality. They cope up with the situation and accepted the situation. Patient stated,

“I had left smoking one year back. I will have a CT scan in which they will check the

condition of lump. There is improvement in the pain. Initially the pain was severe and unbearable but now it is better than before. Rest CT scan report will decide what the progress is inside.” (ID 9)

This study was influenced by the theoretical Framework of Callista Roy (1976).

Callista Roy presented an adaptation model, which highlights the adaptability of an individual toward any problem or change. Themes extracted from this study were also studied under the concepts of Roy’s adaptation model as shown in Figure 3.1

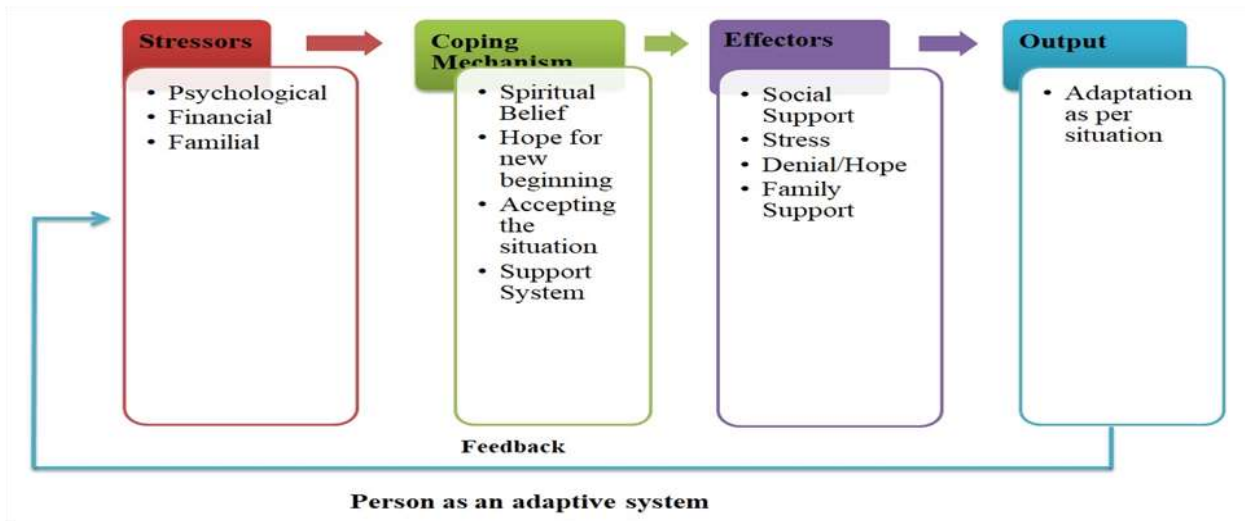


Figure 3.1: Integration of Roy’s Adaptation Model

4. Discussion: The purpose of this study was to explore the physical and mental health adaptability of lung cancer patients to give a current view of research-based psychological and physical experiences of these patients and social support among lung cancer patients in Lahore, Pakistan.

Study findings showed that lung cancer is responsible for the greatest number of cancer-related fatalities globally. Patients with lung cancer may experience varying degrees of functional impairment, which can have a negative impact on their quality of life, supported by another study (Mazilu et al., 2019). Current study explored that improper mental adaptability such as psychological distress that occurs during depressive episodes can be an indicator of poorer clinical outcomes and survival for patients with

cancer. These findings are supported by literature (Olive et al., 2022)

All the stressors impacted the outcome of the disease and made it difficult to adapt to the disease. These study findings are parallel to the findings of (von Heymann & Johansen, 2021) who revealed that the psychological stress is associated with increase in cancer incidences and, thus, increases the death rate of cancer patients.

Adaptability depends on the strategies people use to cope up with the problem. Findings reported that every individual cope differently with the different problems. . Every patient has its own beliefs, religious practices and ways to pray for better health. All of them felt it as an assessment from Allah and they believed that He is the one who will save their lives from this lethal disease (Tan et al., 2019).

This study finding of using prayers as coping approach is also parallel to a study (SH et al., 2018) which highlight that religion is one of the most influential factor in health. In this study, patients were middle class and having very low-income background. These study findings are similar to the findings of the study conducted by Verduzco-Aguirre et al. (2021) which revealed that the prognosis of lung cancer disease is uncertain. Hope is an adaptive response to illness distress, but uncertainty can cause stress and impair adjustment efficiency. As a result, uncertainty is inversely related to hope.

Despite different strategies to avoid the stress, overcome the anxiety; forget the stigma related to disease, a support system was the basic need for every individual going through the hard time. Results of the study highlighted that social support is a gesture of care for the patient to overcome the problems. These study findings are comparable to the study of Huang et al. (2018) who documented that social support has been shown to improve the patients and caregiver's health, mental and cognitive well-being, and quality of life.

In contrast, a unique finding reported in this study was that females receive less social support than males. As a result, diagnosis and treatment get delayed. All these things support the interruption in adaptability mechanism of physical and mental health. Hence social aspects impact the prognosis of disease differently.

4.1 Conclusion: This study concluded that patients' adaptability lies on multiple things which include coping mechanism of patient, financial condition, and social support present to overcome the problem. In these circumstances, where socioeconomic system is poor and managing the treatment phase is really difficult, every patient is trying his best to cope up with the problem. The financial condition and fear of poor prognosis or death are the major stressors which impact the psychological health because it is

connected with the future of family. But, all stressors can be managed with health belief system, good social support and hope for better life. One thing which we as healthcare professional need to focus on is psychological health of those patients having lung cancer disease. It's not easy to diminish the cause suddenly, but cooperation from family side is very important in this regard. Meanwhile, proper treatment covering physical and mental health is very necessary.

4.2 Recommendations: Following

recommendations are suggested keeping in view the findings of this study:

1. Educational session should be planned for healthcare workers to emphasize on mental health along with physical health of the patient.
2. Family should be the part of treatment. Direct relatives should focus on motivational factors as it helps the patients in adaptation process.
3. Anxiety and fear related stressors should be treated by counseling sessions at public hospitals.
4. Chemotherapy, radiotherapy and surgeries may help in physical recovery but counseling session for the patient and family should be part of treatment.

Declaration of competing interest: None.

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