

## **Psychological Issues among Individuals with Chronic Illnesses: A Multi-Informant Perspective in Pakistan**

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### **Abstract**

**Background and Objective.** Individuals with the chronic illnesses also experience the psychological issues along with the physiological ones. These psychological issues have devastating effects on the overall health of these individuals. It has been evident from the literature that the psychological issues are deteriorating their quality of life (Awopetu, Omadu & Abikoye, 2017). Current study was conducted to discover the psychological issues of individuals with chronic illnesses (i.e., cardiac, diabetes and cancer).

**Method.** Focus Group discussions were conducted by using multi-informant approach to provide a broader picture. The focus group guides were prepared following the Self-determination Theory (Deci & Ryan, 2004), the Diathesis–stress model (Ingram & Luxton, 2005), and the Disability-Stress-Coping Strategy (Wallander & Varni, 1998). Twenty-four focus group discussions (1-6 focus groups with individuals having chronic illnesses, six with caregivers of the individuals having chronic illnesses, six with the doctors treating these patients and six were conducted with nurses and paramedical staff) comprised of 6-9 members each.

**Result.** After the collection of data, it was organized and coded after which themes were generated by using the content analysis approach (Berelson, 1952). Generated themes have provided the major indicators of psychological issues and these are crying spells, sleeping difficulty, sadness, hopelessness, loss of interest in life, appetite problems and loss of interest in everything, aggression (physical and verbal).

**Conclusion.** Findings have its implication for caregivers and professionals working with the patients i.e. the doctors, nurses, paramedical staff etc. It may also help the doctors to consider the psychological condition of the patients while treating their physiological problems.

**Keywords.** *Chronic illness, multi-informant approach, psychological issues, loss of interest, sadness, sleeping difficulty.*



## Introduction

The individuals with chronic illnesses also develop psychological issues (Turner & Brain, 2000). Chronic diseases or medical condition always accompanies the diminished self-esteem, personal worth and self-efficacy of an individual (Bedrov & Bulaj, 2018). Psychological issues include depression, anxiety etc. anxiety disorders and adjustment disorder are common among cancer patients (Gregurek et al., 2010; Hadi, Asadollahi & Talei, 2009; Pasquini & Biondi, 2007). Higher rates of depression, anxiety and many other problems are being commonly observed in heart patients (Ilic & Apostolovic, 2002; Zafar, 2022). Depression is commonly reported among individuals with chronic diseases like heart diseases, diabetes, asthma, cancer etc. (Clarke & Currie, 2009).

Chronic diseases are not completely curable but are manageable. Diabetes is a condition which really requires a complex self-management and medical treatment. Holistic approach is needed to deal with such patients. Psychological interventions can be used to treat common mental health problems in diabetes (Britneff & Winkley, 2013). These psychological problems may take any form (Verhaak, Heijmans, Peters & Rijken, 2005) i.e., depression and other negative mood related problems (Brown, Nicassio, & Wallston, 1989). Depression is common among diabetics (Anderston, Freedland, Clouse & Lustman, 2001; Lewko & Misiak, 2015; Solowiejczyk, 2010). In a meta-analysis, the odds of having depression were two-fold in patients with diabetes compared with those without. Many psychological issues of chronically ill patients are being reported by their caregivers (Taylor, 2006).

The World Health Organization (WHO) has reported that the seven of the top ten causes of death in 2010 were chronic diseases, among those chronic diseases, heart diseases, cancer and diabetes are considered as a leading cause of death (CDC, 2014; NVSS, 2013). Approximately half (117 million) of US adults have at least one of the 10 chronic conditions examined (i.e., hypertension, coronary heart disease, stroke, diabetes, cancer, arthritis, hepatitis, weak or failing kidneys, current asthma, or chronic obstructive pulmonary disease (Ward, Schiller & Goodman, 2014).

Considering the situation of Pakistan, the prevalence of chronic diseases is increasing day by day. As reported by WHO (2005), 60% of deaths worldwide and 80% in developing countries, like Pakistan, have been reported due to neglected health issues and chronic diseases (Abegunde, Mathers, Adam, Ortegón, & Strong, 2007; WHO, 2005). Jafar et al (2013) have anticipated that the 3.87 million Pakistanis will lose their lives between 2010 to 2025 due to NCDs (Non Communicable Diseases) like cardiovascular diseases, cancers and chronic respiratory diseases. They also highlighted that the economic burden associated with NCD deaths will also rise from \$152 million to \$296 million during these years (Jafar et al, 2013).

It has been indicative from the literature that chronic illnesses are accompanied by psychological issues i.e., certain psychological disorders are common among cancer patients (Audrey, 1988, Bodurka-Bevers et al., 2000; Carroll, Kathol, Noyes, Wald, & Clamon, 1993; Katon & Sullivan, 1990; Kugaya et al., 2000), cardiac patients (Friedman, 2000; Katon & Sullivan, 1990) and diabetics (Anderson, Freedland, Clouse, & Lustman, 2001; Lustman, Clouse, Griffith, Carney, & Freedland, 1997). As most of the times these psychological issues go unattended and unnoticed by the health practitioners but these issues play a significant role in aggravation of these symptoms and eventually hampers the treatment process. This fact is indicating a dire need to assess the psychological condition of the patients.

Daughter of cancer patient reported that her father said that “let me alone. No more treatments” (cited in Taylor, 2006). According to doctors the patients are more in a hopeless condition and as one of the diabetic patient on doctor’s suggestion she bursts out sadly and started crying and said on doctor’s advice that “she has tried everything but nothing works” (Greenberg, 2007).

However, health professionals working with these chronic patients often identify psychological problems and disorders associated with their diseases. Moreover, about two out of three patients with serious psychological problems remain undiagnosed (Hermanns, Kulzer, Krichbaum, Kubiak, Haak, 2006; Pouwer, Beekman, Lubach & Snoek, 2006).

Therefore, it is very important for the healthcare professionals to be able to identify these problems with ensuring their treatment and ongoing support (Britneff & Winkley, 2013). Most of the researches done on exploration of psychological issues are either done only with patients (Anderston, Freedland, Clouse & Lustman, 2001; Brown, Nicassio & Wallston, 1989; Lewko & Misiak, 2015; Solowiejczyk, 2010) or the caregivers or the doctors (Mitnick, Leffler & Hood, 2009), there is a less research on having all these perspectives (patients, caregivers, doctors, nurses and paramedical staff) under one umbrella of research. There is an exigent need to conduct a research that may focus on the psychological issues of patients by taking all the perspectives into consideration including patients themselves, doctors, caregivers, nurses and paramedical staff. Literature provide evidences that multi-informant approach for chronically ill patients provide broader and in depth information as compared to single informant (Mandelbaltt, Figueiredo & Cullen, 2003). Keeping in view the significance of topic and methodology, the present study was conducted to fill this gap of literature.

## **Methods**

For the exploration of the psychological issues among individuals with chronic illnesses the Focus Group Discussions (FGDs) were conducted. Focus groups have been reported as a suitable method for the exploration of such sort of research questions (Morgan, 1996). 24 focus group discussions were conducted in the Pakistan Institute of Medical Sciences Islamabad (PIMS).

### **Focus group guides**

On the basis of the literature review (Crane, 1981; Dahlem & Deffenbacher, 2001), and different theoretical models i.e., the Self-determination Theory (Deci & Ryan, 2004), the Diathesis–stress model (Ingram & Luxton, 2005), and the Disability-Stress-Coping Strategy (Wallander & Varni, 1998) focus group guide for patients, caregivers, doctors, nurses and paramedical staff were prepared. The examples of questions are: What type of difference you feel in your life after this disease? With physiological problems, what other problems you are suffering from after this disease? If psychological one then what they are? Please explain detail what these psychological issues are? Probing questions were also generated under each question for getting a breath of responses. Focus group discussion guides covered different categories i.e., chronic illness, change in behavior, emotions, cognition and feelings of the patients associated with the chronic illness.

## **Participants**

Focus group comprised of 43 patients (16 cancer patients, 13 diabetic patients and 14 cardiac patients). These patients were taken from wards of Oncology, Cardiology, and General Medicine Department of PIMS. Age of the patients ranged from 25 to 63 years. These patients were married and belonged to lower socio economic status as most of the patients are getting treatment with the help of Pakistan Bait-ul-Mal, social welfare services of the hospital.

Similarly, 6 FGDs were conducted with the caregivers as well. 48 caregivers (17 caregivers of diabetic and cancer patients, 14 caregivers of cardiac patients) were approached for the FGDs. Only those caregivers were included who volunteered to participate in discussions to share their opinions.

6 FGDs were conducted with doctors 33 doctors (21 females and 12 males) were approached for the FGDs. These were doctors of individuals with chronic illnesses at Pakistan Institute of Medical Sciences.

6 FGDs conducted with nurses and paramedical staff (Pakistan Institute of Medical Sciences Islamabad), those who are dealing with patients from last at least 6 months. 35 nurses and 16 paramedical staff members were approached for the FGDs.

## **Procedure**

The standard procedure (Chrzanowska, 2002) was executed to conduct series of FGDs. The participants (patients, caregivers, doctors, nurses and paramedical staff) were approached with the permission of the hospital authorities. The consent was taken from the participants, and these discussions were conducted in the side room of the wards. The participants (patients, caregivers, doctors, nurses and paramedical staff) those who were only having one chronic illness at a time were included, whereas those who had co-morbidity were excluded. The well trained moderator and note taker were accompanying by the observer in the FGDs. After describing confidentiality measures the session was started. It took almost one hour and forty-five minutes to complete the focus groups. The moderator commenced the sessions with introductions and then by asking generally how they were feeling then the respondents were asked to state their chronic condition. Firstly, the topic to be addressed was introduced and then the respondents asked to briefly discuss their various conditions and symptoms. Next the respondents discussed the psychological issues, they were facing from.

In the end of every session the moderator summarized the major points and participants were asked to add any information they believed to be important and to comment on the accuracy of reflection. The best efforts were made to have as homogeneous group as possible. A series of FGDs were conducted till the saturation point. The order of putting the question was rotated in every focus group, so that the order effect on the responses of the participants could be minimized.

## Data analysis and Results

The information gathered through the FGD was analyzed with the help of content analysis approach (Berelson, 1952). Content analysis helps in determining the characteristics of content, to develop the insight about the sources or producers of the content and also to determine the effects of content upon the audience (Feliciano, 1967). It is defined as “a research technique for the objective, systematic, and quantitative description of the manifest content of communication” (Berelson, 1952, p. 17). The researcher organized the data, after this the data was coded and then themes were generated. After the data analysis by the researcher the committee approach was conducted. This committee of experts revisited the statements and themes. This committee comprised of 2 health psychologists, 2 M.Phil and 2 Ph.D (psychology) scholars. They have extensive knowledge about the psychological issues of individuals with chronic illnesses and qualitative research. They first independently gone through the statements and themes, then it was checked that whether they all have consensus on the given themes or not. It was found that they have consensus on all the given themes. To explore the inter-rater reliability Krippendorff’s Alpha was computed as it is the standard reliability statistic (inter-rater reliability) for content analysis and similar data (Hayes & Krippendorff, 2007).

**Table 1**

*Krippendorff’s Alpha for inter-rater reliability of coders*  
(N = 6)

N	Krippendorff’s Alpha
6	.89

Result in table 1 indicates that the Krippendorff’s Alpha is .89 which is high reliability, which indicates that the six coders did agree on themes.

The results of the FGDs indicated that the individuals with chronic illnesses feel low and sad as 32 years old cancer patient have said that “بہت اُداسی ہے” sadness is very common among them as mentioned by the mother of cardiac patient that “بہت اُداس رہتی ہے۔” Doctors and nurses of the cardiac, cancer and diabetic patients have also reported the same thing about the patients “ہر وقت اداس رہتے ہیں۔” They wanted to be alone and in FGD’s almost every patient has reported it, as 50 years old cardiac patient said that “اکیلے رہنے کا دل کرتا ہے۔” According to the caregivers, doctors and nurses of these patients they wanted to be alone all the time and have no interest in life “ان ان “they wanted to be all alone.”

They also experience the feelings of hopelessness in their life, as 32 years old cancer patient said that “بہت نا امیدی ہے۔” their caregivers also mentioned the same thing about them as mother of cancer patient said that “بہت نا امیدسا رہتا ہے۔” Doctors and nurses have also reported that the cancer, diabetic and cardiac patients have intense feelings of hopelessness as one of the doctor said that “پروقت۔” doctors, nurses and paramedical staff have clearly mentioned that individuals with chronic illnesses have diminished hope about the disease and it’s outcomes. They have lost all their interest in life and its activities. It is commonly experienced by cardiac, diabetic and cancer patient as one 45 years old cancer patient said that “سب کچھ جیسے ختم ہو گیا ہوں۔ , کسی چیز میں دل نہیں لگتا۔” one 40 years old diabetic patient said that “کسی سے بات کرنے کا بھی دل نہیں کرتا۔” furthermore one patient said that “لگتا ہے جیسے زندگی ختم ہو گئی ہے۔” they are uncertain about their future as 45 years old cancer patient have said that “کبھی کبھی سمجھ نہیں آتی کہ آگے کیا ہوگا۔” they are not sure about their future. They have lost interest in everything they also experience sleep disturbances as 45-year-old cancer patient reported that “نیند بھی جیسے ختم ہی ہو گئی” along with the sleep their appetite also gets affected as 32 year cancer patient said that “بے ساری رات پڑی رہتی ہوں پر نیند نہیں آتی۔” they don’t want to live even.

The FGD’s also highlighted that these individuals who are with chronic illnesses also experience anger as 50 years old cancer patient said that “کبھی کبھی دل کرتا ہے کہ چیزیں” 40 years old diabetic patient said that “اٹھا اٹھا کے پٹخوں۔ بہت غصہ آتا ہے۔” 32 years old cardiac patient said that “پہلے کبھی اتنا غصہ نہیں آتا تھا جتنا اب آتا ہے۔” بے وجہ غصہ کرنے لگی ہوں۔ کبھی کبھی کنٹرول ہوتا ہے اور کبھی “کبھی نہیں۔” their caregivers and paramedical staff have also mentioned the same thing.

Through the analysis the most commonly reported psychological issues were highlighted.

**Table 2**

*Statements and indicators of patients for the information provided as an understanding of psychological issues among individuals with chronic illnesses*

<b>Statements by patients</b>	<b>Indicators</b>
Feel like life is meaningless.	Hopelessness
End of this disease is death I feel like life is moving towards its end.	
I am sure I will not survive.	
I know every single patient who suffers from cancer will die soon and I will also die soon.	Crying spells
Most of the heart patients have painful death and I know I will also die with it.	
Feel like crying a loud.	
Don't know why I all the time want to cry.	
Feels like life is aimless.	
Don't have any interest in doing anything.	Loss of interest
Have sleeping difficulty. I use to spend hours on bed but unable to sleep.	Sleeping difficulty
Have appetite problem. Sometimes I don't want to eat anything.	Appetite problems
Sometimes food is in front of me and I don't want to eat.	Anger
I have developed anger after this disease.	
Sometimes I feel it's difficult to control aggression.	
Sometimes I react without good reason.	
I have no control over my anger.	
Feel like hitting others	
<b>Common statements by caregivers</b>	
Their behavior is changed after this disease.	Loss of interest
They have loss interest in life.	Crying spells
She doesn't have any interest in anything.	
His eyes are always fill with tears and sometimes unable to calm her down from crying.	Feelings of sadness
All the time he uses to be sad.	Sleeping difficulty
She is unable to sleep properly. Mostly she lies on bed for hours but is unable to sleep not even at night.	
They feel like they will not get well.	Hopelessness
Most of the time we request him to eat but she always refuses.	Appetite problems
On our numerous request he use to take food but of very less amount.	
Because of negative thoughts they react aggressively.	
Before this disease he was very polite.	Negative thoughts
	Change in behavior
<b>Common statements by doctors, nurses and paramedical staff</b>	
They have lost all hopes.	Loss of hopes
They have firm faith that they will die soon.	Hopelessness
On every statement patient show less or no interest.	Loss of interest
They are least interested in doing anything.	Uncertainty
Because of uncertain future they react aggressively	Anger
Sometimes they report that they wanted to shout loudly	
Sometime behave aggressively.	

With the help of the content analysis the data was analyzed and the above mentioned indicators were identified from the data. The data revealed that the indicator of hopelessness is identified by patients, caregivers, doctors, nurses and paramedical staff. Crying spells and difficulty falling in sleep were identified by patients and caregivers. Loss of interest and irritability is identified by patients, caregivers, doctors, nurses and paramedical staff. Shouting and behaving aggressively was identified by patients themselves, caregivers, doctors, nurses and paramedical staff. Following is the table indicating the frequency percentages of all participants (patients, caregivers, doctors and paramedical staff) on different indicators of psychological issues.



**Table 3**

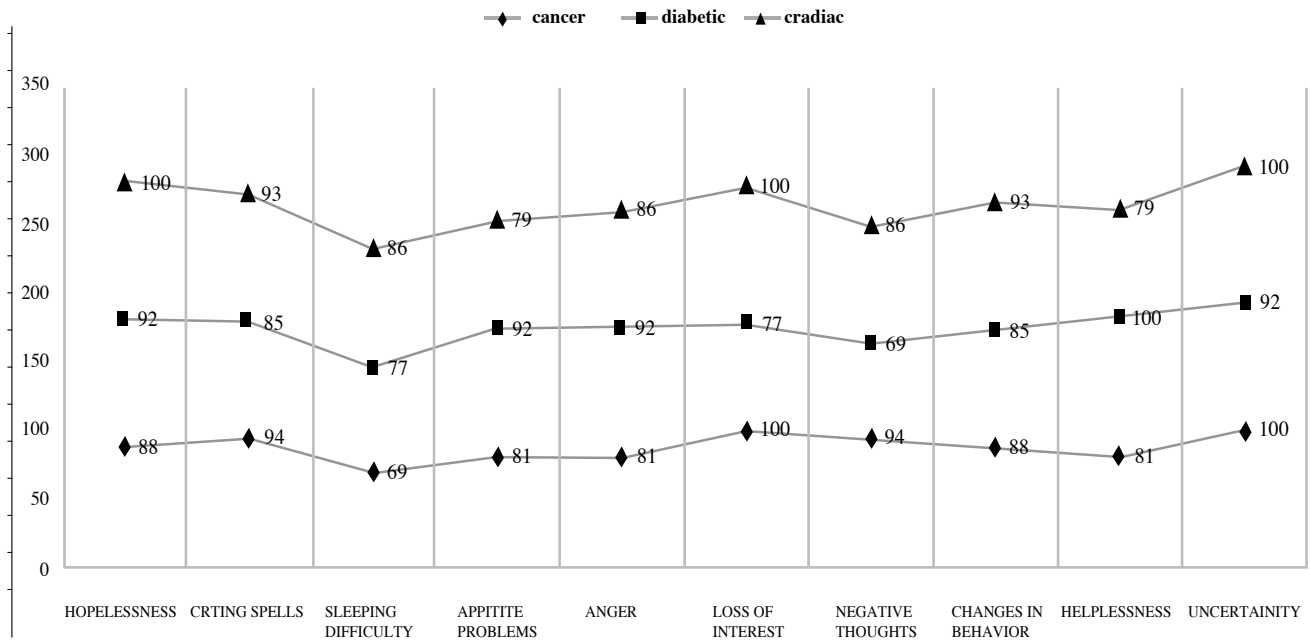
*Frequency percentages of psychological symptoms of individuals with chronic illnesses, which are reported by them, their doctors and their caregivers*

	Individuals with Cancer			Individuals with Cancer			Individuals with Cancer			Doctors	Caregivers
	Total f(%)	Females f(%)	Males f(%)	Total f(%)	Females f(%)	Males f(%)	Total f(%)	Females f(%)	Males f(%)		
Hopelessness	14 (88)	9 (100)	5 (71)	12 (92)	9 (100)	3 (75)	14 (100)	8 (100)	6 (100)	30(92)	46(95)
Crying Spells	15 (94)	9 (100)	6 (86)	11 (85)	9 (100)	2 (50)	13 (93)	8 (100)	5 (83)	30(90)	43(90)
Sleeping Difficulty	11 (69)	6 (67)	5 (71)	10 (77)	8 (89)	2 (50)	12 (86)	8(100)	4 (67)	29(89)	43(90)
Appetite Problems	13 (81)	7 (78)	6 (86)	12 (92)	9 (100)	3 (75)	11 (79)	8(100)	3 (50)	30(90)	43(90)
Anger	13 (81)	6 (67)	7 (100)	12 (92)	8 (89)	4 (100)	12 (86)	7 (88)	5 (83)	26(80)	38(80)
Loss Of Interest	16 (100)	9 (100)	7 (100)	10 (77)	9 (100)	1 (25)	14 (100)	8(100)	6 (100)	27(82)	40(83)
Negative Thoughts	15 (94)	9 (100)	6 (86)	9 (69)	8 (89)	1 (25)	12 (86)	8 (100)	4 (67)	27(82)	40(83)
Changes In Behavior	14 (88)	7 (78)	7 (100)	11 (85)	9 (100)	2 (50)	13 (93)	8 (100)	5 (83)	28(85)	40(84)
Helplessness	13 (81)	8 (89)	5 (71)	13 (100)	9 (100)	4 (100)	11 (79)	7 (88)	4 (67)	30(90)	46(95)
Uncertainty	16 (100)	9 (100)	7 (100)	12 (92)	9 (100)	4 (100)	14 (100)	8 (100)	6 (100)	31(95)	47(97)

The results in table 3 indicate the frequency percentages of all the patients on psychological symptoms which are reported by them, their caregivers, doctors, nurses and paramedical staff.

Following graph is presenting the overall percentage of psychological symptoms of individuals with chronic illnesses.

**PSYCHOLOGICAL ISSUES AMONG INDIVIDUALS WITH CHRONIC ILLNESSES**



Graph is showing the complete comparative picture of the psychological issues which are reported by those individuals who are having chronic illness. These symptoms are commonly reported by these patients.

## Discussion

Chronic illnesses or diseases are the major cause of death and disability worldwide. In Pakistan, chronic diseases or illness are projected to account for 42 percent of all deaths. The burdens of chronic illnesses like cancer and many others in which patient faces, not only include deteriorating health, but also a significant decline in the quality of Life and substantial working disability (Awopetu, Omadu & Abikoye, 2017; Short, Vasey & Bellue, 2008). The present study was conducted to explore the psychological issues among individuals with chronic illnesses. This study is providing the multi-informant approach to provide a broader and clear picture about psychological issues because it is assumed that patients sometimes exaggerate the problems and sometimes cannot properly report their problems so it is necessary to get the information from some other sources.

Literature highlighted that most of the researches done on exploration of psychological issues are either done only with patients (Anderston, Freedland, Clouse & Lustman, 2001; Awopetu, Omadu & Abikoye, 2017; Lewko & Misiak, 2015; Solowiejczyk, 2010) or the caregivers or the doctors (Mitnick, Leffler & Hood, 2009), there is a less research on having all these perspectives (patients, caregivers, doctors, nurses and paramedical staff) in one research. There is a need to have a research which explains the psychological issues of patients by having the perspectives of all informants by using multi-informant approach, including patients themselves, doctors, caregivers, nurses and paramedical staff.

In order to have a detailed picture of the psychological issues among individuals with chronic illnesses, the FGDs were conducted. On the basis of the literature review (Crane, 1981; Dahlem, & Deffenbacher, 2001), and different theoretical models i.e., the Self-determination Theory (Deci & Ryan, 2004), the Diathesis–stress model (Ingram & Luxton, 2005), and the Disability–Stress–Coping Strategy (Wallander & Varni, 1998) focus group guides for patients, caregivers, doctors, nurses and paramedical staff were prepared. Probing questions were also generated under each question for getting a breath of responses. FGD guides covered different categories i.e., chronic illness, change in behavior, emotions, cognition and feelings of the patients associated with the chronic illness.

After FGD the data was analyzed with the content analysis method. The data was organized, coded separately and then themes were generated through content analysis approach, which is widely used to have a detailed and in-depth analysis of qualitative data (Berelson, 1952). Through the analysis the most commonly reported psychological issues were crying spells, difficulty in sleeping, sadness, hopelessness, aggression (verbal and physical), loss of interest (in everything) and appetite issues. Literature also indicated that these issues are common among individuals with chronic illnesses (Anderston, Freedland, Clouse & Lustman, 2001; Lewko & Misiak, 2015; Solowiejczyk, 2010). Furthermore, the data revealed that the indicator of hopelessness is identified by patients, caregivers, doctors, nurses and paramedical staff. Crying spells and difficulty falling in sleep were identified by patients and caregivers. Loss of interest and irritability is identified by patients, caregivers, doctors, nurses and paramedical staff. Shouting and behaving aggressively was identified by patients themselves, caregivers, doctors, nurses and paramedical staff.

After the data analysis by the researcher the committee approach was conducted. This committee of experts revisited the statements and themes. This committee comprised of 2 health psychologists, 2 M.Phil and 2 Ph.D (psychology) scholars. They have extensive knowledge about the psychological issues of individuals with chronic illnesses and also expert in qualitative research. The chronic diseases increase the chances of severe psychological issues i.e., diabetes increases the risk of depression (Anderston, Freedland, Clouse & Lustman, 2001) which is consistent with the results of present study. Results of the present study revealed that depressed mood and anger is common among cardiac patients and literature also indicated this fact (Ilic & Apostolovic, 2002; Solowiejczyk, 2010). Caregivers and doctors also mentioned that the patients have crying spills and develop hopelessness, in other words a depression. In a meta-analysis, the odds of having depression were two-fold in patients with diabetes compared with those without. Depression is also reported by the caregivers of the chronically ill (cancer) patients (Taylor, 2006). Daughter of cancer patient reported that her father said that “let me alone. No more treatments” (cited in Taylor, 2006). According to doctors the hopelessness is very common among patients, as one of the diabetic patient on doctor’s suggestion she bursts out sadly and started crying and said to the doctor that “she has tried everything but nothing works” (Greenberg, 2007).

Anger, guilt and sadness have been reported by chronically ill patients (Shapiro, 1996). Present study results also revealed the incidence of anger among individuals with chronic illnesses. The most common psychiatric disorders in cancer patients are depression, anxiety disorders and adjustment disorders (Gregurek et. al, 2010). The increasing number of persons suffering from major chronic illnesses faces many obstacles in dealing with their painful condition and unable to get the psychological support and information. Health care programs are developed by the government to deal with all the issues related with the chronic illnesses (Wagner, Austin, Davis, Hindmarsh, Schaefer & Bonomi, 2014). It is important to explore the psychological issues of the individuals with chronic illnesses for their better treatment outcomes so it is very important for the healthcare professionals to identify those affected, ensure they receive appropriate care and provide ongoing support (Britneff & Winkley, 2013).

### **Conclusion**

Chronic illnesses are silent killers as their symptoms are more evident in the latter stages or in the last stages in which survival is minimal. They never come alone, they always accompany certain problems and sometimes the disease in itself is not very dangerous but the complications lead the early deaths in patients. Psychological issues are very common among individuals with chronically illnesses. Present study highlighted the fact that these psychological issues are effecting the patients most and it has been evident with the multi-informant approach (patients, caregivers, doctors, nurses and paramedical staff) that these are not only reported by patients themselves but also the people around them. The common issues are crying spells, sleeping difficulty, sadness, hopelessness, loss of interest in life, appetite problems and loss of interest in everything, aggression (physical and verbal). So it is loud and clear that chronic illnesses are great burden in society but this burden is manageable with proper planning.

### **Limitations and recommendations**

In the present study only three chronic illnesses were taken and only focused group discussion were conducted. The other chronic illnesses should be studied in the future researches and multimethod approach should be used for detailed and clearer explorations. The mixed approach can be used by opting the multi-informant and multimethod approach for detailed description and explanation about chronic illnesses.

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**Conflict of interest.** The authors are well informed and declared no competing interests.

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**Availability of data and materials.** The datasets used and/or analyzed during the current study are available from the corresponding authors on reasonable request.

**Authors contributions.** SY: study design, literature search, manuscript preparation, data collection and analysis. RH: literature search, manuscript revisions, analysis, approval of the final version.

**Ethics approval and consent to participate.** The integrate study was approved by the National Institute of Psychology Review Board. Consent was obtained from all participants.

**Competing interest.** The authors declare to have no competing interests.



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