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# Exploring the Influence of Psychological Inflexibility on Depression, Anxiety, Self-Efficacy, and Gender Disparities among Individuals with Chronic Illnesses

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## Abstract

This research's goal was to explore the Influence of Psychological Inflexibility on Depression, Anxiety, Self-Efficacy, and Gender Disparities among Individuals with Chronic Illnesses." Sialkot, Pakistan. Chronically ill patients may prioritize the management of physical pain. It is important to also address mental health issues that may arise from psychological inflexibility. This psychological trait can have a negative impact on patients' mental health, leading to conditions such as anxiety and depression, and can also lower their self-efficacy. This study examined the mental health disorders like anxiety and depression developed due to psychological inflexibility in patients suffering from chronic pain. The research participants comprised one hundred and twenty (120) patients suffering from chronic illnesses, ranging from twenty to fifty (20-50) years old individuals, and opted through purposive sampling. The information was gathered using the three questionnaires along with demographic and onset forms. The data analysis was done through SPSS and it was revealed through correlation analysis that Psychological Inflexibility, Anxiety, Depression, and Self-efficacy have a significant relationship with each other. Moreover, the evidence of the t-test suggested, that there is a substantial variation between men and women concerning the level of self-efficacy and anxiety. Evaluation of Linear Regression revealed that anxiety and self-efficacy are high predictors of psychological inflexibility. Results are discussed to explain the findings about Pakistan culture and previous empirical evidence.

**Keywords**: Psychological Inflexibility, Self-Efficacy, Chronic Illness, Anxiety.

## تلخیص

تحقیق کا مقصد سیالکوٹ، پاکستان کے درد میں مبتلا مریضوں میں ڈپریشن ، اضطراب اور خود کی افادیت پر نفسیاتی لچک کے اثرات دیکھنا تھا۔ دائمی طور پر بیمار مریض جسمانی درد کے علاج کو ترجیح دیتے ہیں۔ دماغی صحت کے مسائل کو بھی حل کرنا

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ضروری ہے جو نفسیاتی لچک سے پیدا ہو سکتے ہیں۔ یہ نفسیاتی خصلت مریضوں کی ذہنی صحت پر منفی اثر ڈال سکتی ہے، جس سے پریشانی اور افسردگی جیسے حالات پیدا ہو سکتے ہیں، اور ان کی خود افادیت کو بھی کم کر سکتے ہیں۔ اس تحقیق میں دماغی صحت کی خرابیوں کا جائزہ لیا گیا جیسے اضطراب اور ڈپریشن دائمی درد میں مبتلا مریضوں میں نفسیاتی لچک کی وجہ سے پیدا ہوتا ہے۔ کل ایک سو بیس مریض تھے ، جن کی عمر بیس سے پچاس سال کے درمیان تھی گیا تھا۔ معلومات کو آبادیاتی اور رضامندی کے فارم کے ساتھ تین سوالناموں کا استعمال کرتے ہوئے جمع کیا گیا تھا۔ اعداد و شمار) ایس-پی۔ایس۔ایس (کے ذریعے کئے گئے اور نتائج سے معلوم ہوا کہ نفسیاتی لچک، اضطراب افسردگی اور خود افادیت کے درمیان ایک اہم تعلق ہے۔ مزید یہ کہ، ٹیسٹ کے نتائج سے پتہ چلتا ہے کہ خود افادیت اور اضطراب کی سطح کے حوالے سے مردوں اور عورتوں کے درمیان بہت نمایاں فرق ہے۔ لکیری رجعت کے نتائج سے معلوم ہوا ہے نفسیاتی عدم لچک اضطراب اور خود افادیت کا ایک اہم پیش گو ہے۔ نتائج کو پاکستانی ثقافت اور سابقہ تجرباتی شواہد کے حوالے سے بیان کرنے کے لیے زیر بحث لایا گیا ہے۔

**کلیدی الفاظ:** نفسیاتی لچک، خود افادیت، درد میں مبتلا مریض، اضطراب۔

## Introduction

Chronic illness is a sickness that develops over time. It is a persistent health condition or has other long-lasting repercussions. The prevalence of chronic diseases is increasing all over the world. In Pakistan, the top 10 causes of morbidity and mortality are chronic illnesses including heart diseases, diabetes, cancer, and lung diseases, which account for around 25% of all fatalities (Sania *et al.*, 2006). At present, the situation of chronic diseases is serious in China. Half of the adults in Canada have at least one chronic disease. In the USA, chronic illnesses are the main cause of poor health, disability, and death. Approximately 60% of adults meet the criteria of multimorbidity in America (Ying *et al.*, 2021). Chronic illnesses patients suffer from chronic pain which is defined as any pain continuing for more than three months and has many different causes (Pizzo & Clark, 2012 ).

Moreover, the load of persistent pain is immense, according to some studies, it affects more than 30% of people worldwide. In terms of therapeutic options and psychological effects it may be appropriate to see persistent pain as an illness (Steven *et al.*, 2021). Chronic Pain frequently co-exists with other medical problems which lowers quality of

life in terms of health. Every area of a patient's life can be impacted by chronic pain. Chronic illnesses and constant discomfort can affect daily life in several ways. As well as patients experience psychological inflexibility and other symptoms which might make them feel more miserable and bring more pain; the frustration of confronting them can give rise to major mental disturbances like anxiety and depression. This research aims to explore the relationship between psychological inflexibility and mental illnesses like anxiety and depression in patients suffering from chronic pain. Patients have their main concern with physical pain and they do not prioritize their mental health which leads them towards mental health problems.

In addition, Psychological inflexibility consists of dysfunctional control efforts known as six main psychological inflexibility processes; experiential avoidance, conceptualized self, rigid attention, disturbed values, inactivity or impulsivity, and cognitive fusion (Hayes *et al.,* 2006). Those who experience intense pain through one or more of these six basic processes are more likely to develop psychological inflexibility, which may eventually result in psychopathology (Tanhan 2019). The ability to prioritize avoiding or being too influenced by one's mental, and emotional moods and other internal occurrences over engaging in constructive and worthwhile actions is known as psychological inflexibility (Hayes *et al.,* 1996).

Furthermore, Psychological inflexibility is being discovered to effectively link to a variety of issues, many of the major psychological disorders including depression and anxiety (Hayes *et al.,* 2006). Patients with chronic diseases suffer from psychological inflexibility which is significantly related to mental health problems. Psychological inflexibility is highly related to depressive symptoms and sleep issues. Research has revealed that during a pandemic, psychological inflexibility plays an important role in facilitating the development of mental health problems. Moreover, it has identified the role of psychological inflexibility as a significant moderator of perceived stress and loneliness towards depression (Anissa *et al*., 2021).

Furthermore, Depression is the persistent sense of emptiness or an inability to experience pleasure. It is an extreme sadness that lasts more than days. Comorbid depression along with anxiety are widespread among chronic illness patients. Over 67% of patients with chronic pain have a concomitant psychiatric disease, and a sizeable portion of patients have depression and generalized anxiety disorders (Annagur *et al.*, 2014). A consistently desolate mood, an absence of interest in actions, and less capacity for satisfaction are characteristics of depression (Magni & Marchetti, 1993). According to research on the general population, those with chronic pain are more depressed than people without the condition. By the Diagnostic and Statistical Manual (DSM IV) criteria, one-third of the patients in a pain clinic population had "major depression" (Woo, 2010). It has been observed that severe pain intensity increases depression symptoms (Robinson *et al.*, 2003). Recent research showed a stronger connection between chronic patients and

depression. Patients with more chronic diseases had more severe pain and were more likely to develop symptoms of depression. The intensity of pain partially mediates the interaction between depression and chronic illnesses (Ying *et al*., 2021).

Many people living with chronic illness, experience a significant degree of anxiety, as it can be disruptive. Chronic conditions can bring unpredictability and heightened levels of anxiety as the brain's ability to regulate pain can increase both pain and anxiety. Health Psychologist Laurie J. explains that 'Anxiety is a physiological reaction, you can't think your way out of it' (F, Shelley 2023). Moreover, Anxiety is an illness that produces worry and dread and is made up of cognitive, physical, emotional, and behavioural elements. Similarly with depression, measurements of anxiety and chronic pain exhibit a substantial connection. In people with chronic pain, generalized anxiety disorder is the anxiety condition that is most frequently recognized (McWilliams *et al.,* 2003).

According to Bandura (1977), self-efficacy describes a person's trust regarding their ability to take the actions required to achieve particular objectives. It refers to an individual's capacity to perform well in a range of circumstances. Self-efficacy is defined as a cognitive process where individuals acquire new behaviors that alter their ability to improve future events, through environmental and social influence. It is a set of beliefs, not a trait. Individuals must believe they can deal with their difficult situations, as meeting one's goal is directly impacted by people's belief in their efficacy.

Therefore, patients must have increased self-efficacy and a strong belief that they can manage their condition, to improve self-management of disease processes. Patients with chronic conditions can have better outcomes and quality of life by developing self-efficacy (Holly, 2019). However, many people with chronic diseases have poor skills in self-management, which may be related to low self-efficacy. Patient's capacity to control the symptoms of their chronic illnesses on their own is significantly influenced by self-efficacy (Sally, 2021).

Moreover, chronic illness patients frequently exhibit psychological rigidity, which makes them more susceptible to mental health issues including anxiety and depression. The prevalence of depression and anxiety in patients with chronic diseases is extremely high in the Pakistani population (Habibi *et al.,* 2022). Another research in Pakistan shows that anxiety was found in 67% of subjects and depression was found in 72.3% of subjects in patients suffering from chronic diseases. According to the results of one study, anxiety and depression symptoms can have a significant impact on the management of chronic diseases, patient's quality of life, and overall health. Additionally, psychological inflexibility impairs a person's capacity for problem-solving, which results in low self-efficacy.

## Problem Statement

Exploring the Influence of Psychological Inflexibility on Depression, Anxiety, Self-Efficacy, and Gender Disparities among Individuals with Chronic Illnesses was inquired. According to a study (Ruiz, 2014), the distinct impact of generalized self-efficacy and anxiety sensitivity on excessive anxiety was completely influenced by psychological inflexibility. Another study (Dindo *et al.*, 2019) demonstrates a substantial connection between psychological inflexibility, depression as well and anxiety symptoms in adult populations.

## Objectives

1. To explain the relationship among psychological inflexibility, Depression, Anxiety, and self-efficacy in chronic illnesses patients.
2. To determine the difference between psychological inflexibility, depression, anxiety, and self-efficacy among chronic illnesses patients with regard to gender.
3. To find out the self-efficacy and anxiety are predictors of psychological inflexibility among chronic illnesses patients.

## Hypotheses

1. There would be a significant relationship among psychological inflexibility, depression, anxiety as well and self-efficacy in those suffering from chronic illnesses.
2. There would be a significant difference in psychological inflexibility, depression, anxiety, and self-efficacy among chronic illness patients with regard to gender.
3. Self-efficacy and anxiety would be significant predictors of psychological inflexibility among chronic illness patients.

## Significance of the Study

The research intends to inquire into the Influence of psychological inflexibility on self-efficacy, anxiety, depression, and Gender Disparities in chronic illness patients and it's important because people having severe illness have an increased potential of developing psychological issues. The reason for conducting this research is that it will help the psychiatric field of Sialkot with work that has to be done on the mental health of Chronic Illness Patients and in which period they need counseling and therapy. Psychological inflexibility is related to chronic pain which is mostly shown in chronic illness patients that's why we took these patients as our sample. We selected depression, anxiety, and self-efficacy as our variables because the lack of psychological flexibility root of people's mental health problems and people lose hope, and confidence in themselves. The

achievement of our study will be that psychological inflexibility influences depression, anxiety, and self-efficacy in chronic illness patients.

## Literature

The meta-analysis was conducted by (Yao *et al.,* 2023) and the objective of the study was to get more accurate estimations of these patterns and synthesize primary research. Three different meta-analysis findings showed a strong and substantial connection between psychological inflexibility and symptoms of depression, anxiety, and stress. Males are more likely than females to experience a link between psychological inflexibility and depressive symptoms, and the link between psychological inflexibility and stress symptoms varies depending on the measure used in initial research that evaluates psychological inflexibility and the symptoms of stress.

Additionally, Tsukasa (2020) findings indicated that psychological inflexibility would be linked to a higher level of depressive symptoms and sleep disturbance in women who are suffering from persistent pain compared to women absent persistent pain.

Similarly, Tsukasa (2016) study's objective was to determine whether a higher prevalence of depressed symptoms and trouble falling asleep was psychological rigidity. According to the findings, psychological inflexibility appeared significantly connected with a higher incidence of both depressive and sleep issues.

Furthermore, Tavakoli *et al.,* (2018) investigation looked at European Americans in comparison to Americans a substantial consideration in interpreting the anxious symptoms of college students is the individual's attempt to minimize and control experiencing unfavourable feelings, thoughts, or experiences. It might be possible to teach students psychological flexibility strategies through therapies like acceptance and commitment therapy so they can react to emotionally trying circumstances more effectively.

In addition, Ross *et al.,* (2012) investigated looked into the associations that psychological flexibility and mindfulness had with depression and anxiety following psychosis. The approach is a correlational model that predicted 46% of the variance in anxiety as well as depression ranges included psychological flexibility yet did not include mindfulness. Psychological flexibility seems to explain a greater percentage of the variance in depression and anxiety scores in this cohort, even though aspects of mindfulness are linked to depression and anxiety after a psychotic episode.

Moreover, Joseph *et al.,* (2021) looked into the relationship between mindfulness, psychological flexibility, emotional intelligence improved performance (physical and psychological daily functioning), and higher self-efficacy in people with chronic pain.

Furthermore, Benkel *et al.,* (2020) investigation was to explain how chronic illness affected patients' perceptions of their circumstances. The majority of participants reported that changes in their lives had a negative impact on them, according to the results. Encouragement can come in the form of interpersonal support from other people as well as from activities and religious beliefs. The most helpful people were found to be healthcare professionals, family, and friends. The most prevalent feelings among individuals and their social networks were sadness and worry.
Additionally, Manning *et al.,* (2022) findings offer preliminary evidence that in those individuals who getting therapy for weight-related behaviors, psychological rigidity may be a significant factor in terms of fatigue and exercise view. However, Mehmood *et al.,* (2022) investigated and looked into the patients with chronic illnesses typically reported feeling more anxious and lacking trust in the Covid-19 control methods' effectiveness. During the COVID-19 outbreak, they commonly mentioned having trouble getting medical attention and worrying that going to the hospitals would have a negative effect on their health.

As, the findings from Arbinaga (2023) demonstrated the relationship between psychological flexibility, perfectionism, and reported injuries and pain catastrophizing among football referees. Compared to those with low psychological inflexibility evaluations, referees with medium to high levels showed more suffering worrying, rumination, hopelessness, and magnification. These findings help clarify the factors affecting how painful a factor appears.

Furthermore, Farooq *et al.,* (2019) investigations found that anxiety and depression symptoms were common among Karachi adults, in Pakistan. The main factors that were linked to the feeling of anxiety and depression included multimorbidity, female gender, poor educational attainment, having more children, and seeking out religious healers. This study by Ashraf *et al.,* (2023) examined the effects of self-efficacy and perfectionism on academic procrastination across university students throughout Pakistan and the variations across genders. Evaluations revealed that students' perceptions of their gender did not significantly differ from one another and that self-efficacy has no discernible impact on academic procrastination. The results offer substantial proof for participants to reduce academic procrastination among university students.

Moreover, Sheng *et al.,* (2017) outcomes of this study demonstrated a strong relationship between persistent pain and depression from an understanding of both areas of the brain and the functioning of the nervous system, suggesting that chronic pain may trigger depression. To aid in the discovery of new therapeutic targets and liberate patients from

depression brought on by chronic pain, more research into the underlying neuroplasticity alterations between pain and depression is necessary.

In addition, Patricia *et al.*, (2021) investigation looked to identify the prevalence of symptoms of depression and anxiety between Ecuador healthcare workers and learners as well as investigating how psychological rigidity, isolation, and psychological stress link to these illnesses. The findings revealed that alcohol intake differed across men and women and that the sample's prevalence of anxiety and depressive symptoms was generally low. Regardless of gender or prior personal history with COVID-19, psychological inflexibility and isolation modulated the effect of stress on anxiety and depressive mood in individuals.

## Methodology

The research design used in this study was correlational.

## Research Variables

In this study, psychological inflexibility was the independent variable with the hospital depression anxiety scale and generalized self-efficacy scale as the dependent variables. These three were the main variables of this research.

## Participants

The present study consisted of 120 participants 89 females and 31 males from different hospitals in Sialkot, Pakistan to determine psychological inflexibility along with depression, anxiety, and self-efficacy. They were selected from different hospitals through a purposive sampling technique. Their age range was from 20 to 50.

## Measures

In this study, three questionnaires with consent and demographic form were administered. The research data was gathered physically. The questionnaires were in the Urdu language. The three measures and the consent plus the demographic form include:

## Consent Form and Demographic Form

The consent form was used to obtain the preceding approval of the participant. The demographic form was used to take information regarding the personal details of the participant. Items such as the participant's age, gender, and educational level were included in the demographic form.

**Psychological Inflexibility in Pain Scale (PIPS)**

Psychological Inflexibility in Pain scale is a sixteen-item scale derived by Rikard *et al.*, (2009) which is employed for assessing avoidance of pain, cognitive fusion, and different other domains like fusion, value orientation, and dirty discomfort in people with chronic pain. The psychological inflexibility in pain scale was translated from English to Urdu, by the authors of this research, and it was utilized in this study. For Tool translation, permission was taken from the author as well. As the study was conducted in Pakistan, It was easier for participants to interpret the questionnaire in their native language. It has two components i.e. Avoidance of pain and Fusion with pain thoughts. It has seven dimensions, beginning from 1= never true, 2= very rarely true, 3= seldom true, 4= sometimes true, 5= often true, 6= almost always true, and 7= always true. Avoidance of pain items are 2, 3, 7, 8, 9, 11, 13, 14, 15, and 16. Fusion with pain thoughts items are 1, 4, 5, 6, 10 and 12. High scores indicate a greater level of psychological inflexibility.

**Hospital Anxiety and Depression Scale (HADS)**

The hospital anxiety and depression scale in the Urdu version derived by Tareen *et al.*, (1991) has an emphasis on reducing the effect of physical disease on the overall score, The Urdu version is a 14-item test created to evaluate anxiety and depression symptoms in patients. It has two subscales i.e. Depression and Anxiety scale. Depression items are 2, 4, 6, 8, 10, 12 and 14. Anxiety items are 1, 3, 5, 7, 9, 11 and 13. It was believed that by doing this, a tool for Identifying anxiety and despair in people with physical health issues would be developed (Mumford *et al.*, 1983).

**Generalized Self-Efficacy Scale (GSES)**

The generalized self-efficacy scale in the Urdu version derived by Tabassum *et al.*, (2003), is a 10-item psychometric tool to assess 12 years or older than 12 years individual's abilities to manage challenging tasks in their life. Each item's response possibilities are in the form of a 4-point Likert scale. It has four dimensions, 1= not at all true, 2= hardly true, 3= moderately true, and 4= exactly true (Schwartez *et al.*, 1995).

**Procedure**

To acquire the main data, subjects were recruited from different hospitals in Sialkot. Proper permission was taken from the hospitals for research data. The administration of questionnaires was done physically. Consent was taken from the research participants before administration. The respondents were debriefed about the research goal and guaranteed that their answers wouldn't be disclosed to outside parties. Participants were

selected randomly and had the choice to wilfully discontinue as and when desired. Over a month, surveys were distributed, and information was gathered. The information was collected in 2023.

## Results

### Demographic Analysis

In this study, the data of 120 participants were collected; the demographic analysis characterized the sample concerning age, gender, and educational level that are described in this table.

**Table-1**
**Frequencies, percentage, mean, standard deviation, and range of demographic variables (N=120)**

| Variables | f | % | | |
|---|---|---|---|---|
| **Age** | | | **M** | **SD** |
| 21-28 | 26 | 21.7 | 2.68 | 1.13 |
| 29-35 | 25 | 20.8 | | |
| 36-42 | 31 | 25.8 | | |
| 43-50 | 38 | 31.7 | | |
| **Gender** | | | | |
| Female | 89 | 74.2 | | |
| Male | 31 | 25.8 | | |
| **Education** | | | | |
| Matric | 75 | 62.5 | | |
| Inter | 18 | 15.0 | | |
| Bachelors | 19 | 15.8 | | |
| Masters | 8 | 6.7 | | |

*Note: M= Mean, SD= Standard Deviation & f= Frequency*

Table 1 shows that there were one hundred twenty (120) participants, the Females were 74.2% while 25.8% were males. 21.7% of participants were aged 21-28, 20.8% were aged 29 to 35, 25.8% were aged 36-42 and 31.7% were aged 43 to 50. Moreover, the mean and standard deviation for the age variable had been 2.68% alongside 1.13. Additionally, 62.5% of respondents had completed their matriculation, 15.0% completed intermediate, and 15.8% completed bachelor's level 6.8% completed their master's level.

**Relationship between Psychological Inflexibility, Depression, Anxiety and Self-Efficacy**

Explaining the link underlying psychological inflexibility, depression, anxiety, and self-efficacy among those with chronic illnesses represented one of the main objectives of this study. For this purpose, correlational analysis was used; the results are shown in Table 02.

**Table-2**
**Pearson product-moment correlation among psychological inflexibility, depression, and anxiety along with self-efficacy (N=120)**

| Variables | PIPS | GSES | ANX | DEP | M | SD |
|---|---|---|---|---|---|---|
| **PIPS** | ….. | -0.18* | 0.22* | 0.05 | 80.75 | 16.16 |
| **GSES** | -0.18* | ….. | -0.12 | -0.31** | 28.65 | 6.37 |
| **ANX** | 0.22* | -0.12 | ….. | .16 | 11.31 | 3.27 |
| **DEP** | 0.05 | -0.31** | 0.16 | ….. | 9.75 | 3.37 |

*Note:*p>.05, **p>.01, PIPS= Psychological Inflexibility, DEP= Depression, ANX= Anxiety and GSES= Generalized Self-efficacy Scale.*

Table 02 shows the correlation between Psychological Inflexibility, Depression, Anxiety, and Self-efficacy. Furthermore, all variable's mean and standard deviation were identified. As observed in this table, psychological inflexibility is significantly negatively correlated with self-efficacy (r= -.18*) but significantly positively correlates with anxiety (r= .22*) and positively low correlates with depression (r= .05). In addition, self-efficacy is negatively correlated with anxiety (r=-.12) and also significantly negatively correlates with depression (r= -.31**). Furthermore, anxiety is positively correlated with depression (r= .16).

**Gender Differences in Psychological Inflexibility, Depression, Anxiety and Self-efficacy**

The objective of the research is to investigate the differences in psychological inflexibility, depression, anxiety as well and self-efficacy among chronic illnesses patients with regard to their gender. To determine if the difference existed in psychological inflexibility, depression, anxiety, and self-efficacy due to gender, a t-test was applied. The outcomes are displayed in Table 03.

**Table-3**
**Mean, SD, t values in female and male samples for psychological inflexibility, depression, anxiety, and self-efficacy (N=120)**

| | Female | | Male | | | 95%CI | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Variables** | **M** | **SD** | **M** | **SD** | **t(120)** | **p** | **UL** | **LL** | **Cohen's d** |
| **PIPS** | 81.32 | 16.39 | 79.12 | 15.63 | .65 | .91 | 8.88 | -4.49 | 0.13 |
| **GSES** | 28.64 | 6.88 | 28.70 | 4.73 | -.05 | .03 | 2.57 | -2.71 | 0.01 |
| **ANX** | 11.46 | 3.46 | 10.90 | 2.66 | .81 | .02 | 1.91 | -.79 | 0.18 |
| **DEP** | 9.62 | 3.60 | 10.09 | 2.62 | -.66 | .09 | .92 | -.18 | 0.14 |

*Note. M= mean; SD= standard deviation; p=Level of Significance; CI= Confidence Interval; LL=lower limit; UL= upper limits*

In Table 03, the t-test indicates that exists would be substantial variations in men and women, in their level of education in GSES (t=-.05, p=.03). The mean and SD of GSES are almost equal in males (M=28.70, SD=4.73) and females (M=28.64, SD=6.88) with an effect size of Cohen's d= 0.01. Furthermore, there would be substantial variations in males and females with regards to the level of ANX (t=-.81, p=.02), and the mean and SD of ANX are also equal in males (M=10.90, SD=2.66) and females (M=11.46, SD=3.46) with an effect size of Cohen's d= 0.18 which shows small impact size.

**Influence of Psychological Inflexibility on Anxiety and Self-Efficacy in Chronic Illnesses Patients**

To determine how Psychological inflexibility has effects on Anxiety and self-efficacy in chronic illness patients, we used linear regression to determine the prediction of Self-Efficacy along with Anxiety on Psychological inflexibility, shown in Tables 04 and 05.

**Table-4**

**Linear regression analysis of psychological inflexibility which is a predictor of self-efficacy in chronic illnesses patients (N=120)**

| Variables | $R^2$ | $\Delta R^2$ | B | SE | β | t | p | F(Model) |
|---|---|---|---|---|---|---|---|---|
| **Constant** | .03 | .02 | 34.50 | 2.94 | | 11.73 | | |
| | | | | | | | .04 | 4.10 |
| **PIPS** | | | -.07 | .03 | -.18 | -2.02 | | |

*Note: * p>.05, **p>.01, ***p>.001, PIPS=Psychological inflexibility, β=Beta, SE=Standard Error.*

The table shows that 3% of the variance in psychological inflexibility can be attributed to the model comprises. Analysis explicated in the table that psychological inflexibility is a significant predictor of self-efficacy ($R^2$=.03, t=11.73), (F=4.10, β=-.18).

**Table-5**

**Linear regression analysis of psychological inflexibility is a predictor of anxiety in chronic illnesses patients (N=120)**

| Variables | $R^2$ | $\Delta R^2$ | B | SE | β | t | p | F(Model) |
|---|---|---|---|---|---|---|---|---|
| **Constant** | .05 | .04 | 7.60 | 1.49 | | 5.09 | | |
| | | | | | | | .01 | 6.40 |
| **PIPS** | | | .04 | .01 | .22 | 2.53 | | |

*Note: * p>.05, **p>.01, ***p>.001, PIPS=Psychological inflexibility, β=Beta, SE=Standard Error.*

The table shows that 5% of the variance in psychological inflexibility can be attributed to the model comprises. Results explicated in the table that psychological inflexibility is a notable indicator of anxiety ($R^2$=.05, t=5.09), (F=6.40, β=-.22).

**Discussion**

Psychiatric interventions for patients who are suffering from physical illnesses are also crucial equivalent to their medical interventions. Psychiatrists and psychologists have a major role in the strengthening of the mental health of people. This research's goal was to comprehend the outcomes of psychological inflexibility on self-efficacy, anxiety, and depression in chronic illness patients. Besides this, it was also carried out to comprehend the menaces of patients with chronic illnesses and those in pain developing anxiety, depression, and low self-efficacy due to psychological inflexibility which can also enlighten the issues for helping the psychiatric community to work on and originate intervention plans for them.

To assemble data for this study; purposive sampling was applied to 120 participants suffering from chronic illnesses. Three standardized measures; the psychological inflexibility in pain scale, hospital anxiety and depression scale, and generalized self-efficacy scale were used along with demographic and consent forms. The data was analyzed through a statistical package of social science (SPSS).

The first hypothesis of this study was “there would be a significant relationship among psychological inflexibility, depression, anxiety as well as self-efficacy in those suffering from chronic illnesses". Statistical analysis in Table 2 demonstrated a negative connection between psychological inflexibility with self-efficacy (r= -.18*). This is compatible with a study by (Bayly *et al*., 2018) that found psychologically flexible students had higher college self-efficacy whereas psychologically inflexible students had inadequate college self-efficacy. Thus, the finalization is that psychological inflexibility and self-efficacy do not directly correlate. But Positive low relates with depression (r=.05), whereas significantly positive correlates with anxiety (r=.22*). This supports the study by Usubini *et al*. (2022) found that it had a strong connection between psychological inflexibility as well as anxiety, depression, and depressive indications. That study also revealed that the level of psychological inflexibility raised in regards to anxiety, as well as depression.

Additionally, self-efficacy has a substantial negative correlation (r=-.31**) to depression as well as to anxiety (r=-.12**). This supports a study by Wu *et al*. (2013) that found a negative relationship between self-efficacy, anxiety along depression among adults with diabetes. The analysis also evinced a positive correlation between depression and anxiety (r=.16). This supports a study by Haug *et al*., (2004) that found a relationship between anxiety and depression that was about as strong, with depression having a slightly stronger association.

The second hypothesis of this study was there would be a gender difference in psychological inflexibility, depression, anxiety, and self-efficacy among chronic illness patients. The results

in Table 3 revealed significant differences in self-efficacy and anxiety levels between males and females (t=-.05, p=.03; t=-.81, p=.02). It contradicts earlier research (Shahed *et al.*, 2019) that claimed there was no gender-related variation in self-efficacy.

The third hypothesis was that psychological inflexibility would have a major effect on patients with chronic illnesses' levels of anxiety, and self-efficacy. The study (Fransico, 2014) indicated that Psychological inflexibility influences the impact of anxiety sensitivity and self-efficacy upon concern. Investigations have also indicated that psychological inflexibility is a reliable indicator of self-efficacy.

Some cultural and religious factors infer the study. Participants in this study predominantly were Muslims and their self-efficacy rate is significant which can be said due to their belief in God (Allah SWT) that everything is in the hand of Him and whatever He does is best for them (Sabry & Vohra, 2013). Additionally, hardships are the test from Him to test his people and he will ease all their problems. In Pakistan's culture, women are burdened with most of the family responsibilities so, it can also be an additional factor in practicing self-efficacy.

Much research has been done on depression, anxiety, self-efficacy, and psychological inflexibility but few researches explain psychological inflexibility specifically in pain among chronic illness patients. Additionally, Pakistan lacks such studies, particularly those about various professions. The goal of this research is to enhance the therapies and counseling provided to patients who suffer from chronic illnesses and to encourage both the medical community and patients to seek the advice of mental health specialists regarding their mental health, particularly during challenging circumstances to develop better coping mechanisms.

## Theoretical and Practical Applications

The intervention aims to facilitate providing counseling that manages their life with their illnesses alongside positive coping skills. Patients not merely with psychological problems but even with medical problems are also recommended to a psychiatrist or psychologist. Acceptance and Commitment Therapy (ACT) was observed as worthwhile. ACT fosters psychological flexibility by incorporating mindfulness, acceptance, commitment, and commitment-based approaches into behaviour modification. ACT contends against classical ways of dealing with pain that place more of a focus on handling pain without entirely relieving it. It will be effective if hospital management and their doctors encourage them. Family and friends should take care to ensure social support.

## Limitations

The male participants' responses were limited because there was a huge number of females with chronic pain as compared to males. The sample size should be expanded for the

generalization of results. Difficulty in data collection was faced as the study was conducted in hospitals of Sialkot, the response rate of inpatients is least as compared to outpatients.

## Conclusions

The information was acquired from patients with chronic illnesses through surveys and questionnaires. The overall findings of this analysis suggest psychological inflexibility, anxiety, and depression are significantly correlated. Anxiety and depression show a negative correlation with self-efficacy. The male and female variation occurs with the level of self-efficacy and anxiety.

Such findings may be a result of the sample size, where female respondents outnumbered male respondents. Self-efficacy and anxiety are greatly influenced by social and cultural expectations of gender roles and duties. Women's possibilities and self-perceptions of efficacy in Pakistan may be restricted by traditional gender norms, whilst men may be socialized to have more self-efficacy. These duties and expectations might exacerbate anxiety because they put people under pressure to live up to social norms.

Additionally, in Pakistan, self-efficacy and anxiety may be impacted differentially for men and women depending on cultural beliefs about collectivism, honour, and familial responsibilities. For instance, societal standards of modesty and women's constrained decision-making authority may cause them to feel less self-effective. Yet, self-efficacy and anxiety levels are impacted by access to knowledge and opportunities for empowerment. In Pakistan, women now have more access to education than in previous years. Women's self-efficacy may be increased and anxiety levels may be decreased by this increased information and empowerment. It has also been demonstrated that psychological inflexibility influences self-efficacy and anxiety. Knowing the issues faced by patients in their conditions suggests the hour of need for psychological support and intervention from psychiatrists and psychologists to originate preventive measures along with psychological treatment for them.

ACT utilizes approaches like acceptance, commitment, mindfulness along behavior modification to elevate psychological flexibility. By accepting and learning from pain, sufferers can restrain the power that suffering has over their lives. ACT confronts traditional pain management strategies which emphasize control of pain rather than prioritizing the management of the pain without fully removing it.

Principally, while formulating the treatment and preventive measures, specialists should scrutinize religious and cultural facets. It will stimulate the citizens to adapt and execute those plans. It should also make sure to be accessible with the help of hospital management as well as physicians.

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