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**RESEARCH PAPER**

# Role of Peace of Mind for Mental Health Outcomes in Cancer Patients

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| PAPER INFO | ABSTRACT |
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| | The present study examined the role of peace of mind for mental health outcomes (depression and anxiety) in cancer patients. The study was based on a cross-sectional survey research design. Participants comprised of cancer patients (*N* = 300) admitted at government and private hospitals in Panjab. Data were collected using the purposive sampling technique. Peace of Mind Scale (Stud, 2013), Positive Mental Health Scale (Lukat et al., 2016) and Depression Anxiety and Stress Scale (Lovibond & Lovibond, 2000) were used for data collection. Positive mental health worked as a mediator between peace of mind, depression, and anxiety. The findings empirically established that peace of mind is an indicator of having positive mental health and the ability to lower depression and anxiety in cancerous patients. The study is an important addition to the existing body of knowledge on the role of peace of mind for mental health outcomes in cancer patients. |

## Introduction

Cancer is a term that refers to a group of diseases conditions characteristic of the willful growth and aberrant cell proliferation. How-ever, known as metastasis, isn't controlled, if cancer cells are spreading. External factors (tobacco, chemicals, radiation, and infectious organisms) as well as some internal factors cause cancer (inherited mutations, hormones, vulnerable conditions, and arbitrary mutations). Cancer has a variety of causes, all of which are complex and only incompletely understood. Cancer threat is known to be increased by salutary factors, certain ails, a lack of physical exercise, rotundity, and environmental adulterants (Kunnumakara et al., 2008). Cancer is a complaint that's preventable. These factors may interact in the human body to cause or promote carcinogenesis, making cancer the leading cause of mortality.

In 2008, cancer was diagnosed in an estimated 12.66 million people over the world (Shin et al., 2008). Cancer Incidence and Mortality in the World. The International Agency for Cancer. Research is a non-profit committed to cancer research. This translates to around 188 incidences per 100,000 persons (using the crude rate). In Middle Africa, there were 67,000 new cases, whereas, in Eastern Asia, there were 3.72 million. The bulk of instances (48%) occurred in Asia, as one might expect given the continent's population. Malice of the lung, womanish bone, colorectum, and stomach reckoned for two-fifths of all cancers encyclopedically. The most common cancer locales in the UK are bone, lung, colorectum, and prostate cancer; they reckoned for further than half of all cancer cases in 2008.

Each person wishes to be happy and seeks happiness, yet happiness is inextricably linked to both physical and mental health (Khalek, 2006). Mental health has an impact on physical health (Holt & McClure, 2006) however the more inner aggression, discord, and negative emotions we have, the lower our mental health scores become. Torture, sadness, and anxiety have been linked to an increased threat of Type 2 diabetes, coronary heart complaint, disability, cancer, and total mortality. Depression and psychological maladjustment have been linked to negative thinking (Wong, 2008). Favorable thoughts have been discovered to have a positive relationship with life satisfaction and happiness. The more inner peace we have, the better our minds grow. This sense of wholeness and integration of mind and body, followed by an inner sense of harmony, is often expressed in both Eastern and Western spiritual and wisdom traditions (Teresi & Underwood, 2002). The link between health and emotions can be substantial, especially in the later stages of life (Chida & Steptoe, 2008).

According to a recent study, depression and anxiety have enormous societal and individual costs in countries all over the world (Murray et al., 2012). Worry and depression disorders has been showed to have a negative impact on a person's mental health, relationship satisfaction (Heimberg & Stein, 2004), productivity (Simon et al., 2000), social isolation, and medical noncompliance, to name a few things (Croghan et al., 2000). These illnesses have a negative influence on society because they increase healthcare expenditures and put physical and financial effects on others (Matteo et al., 2000). Anxiety is one of the most frequent mental diseases, and depression is the biggest disability causes. (Kessler et al., 1994). Furthermore, illnesses have been discovered to be highly comorbid (Kessler et al., 2003). While useful therapies for depression and worry, only about a third of those who need them use them. Cultural values, stigma, lack of understanding of viable treatments, limited mental healthcare resources, and not having enough time to devote to the treatment have all been cited as barriers to intervention in the research. The origins and intensity of barriers for getting mental health treatments differ depending on the culture and country. In any society, anxiety and depression diagnosis is one of the most significant hurdles to therapy (Kessler et al., 1994).

Depression and anxiety were significantly found and negatively relate with positive mental health in cancer patients, according to the research. That is, higher degrees of sorrow symptoms in cancer patients are linked to lower level of mental well-being. According to the literature, there are significant negative correlations between peace of mind and both anxiety and depression in cancer patients. Because the symptoms of depression and anxiety induce distress, which affects one's subjective well-being, they are well-known risk factors for poor quality of life in a range of populations, including cancer patients. Depression, for example, is characterized by feelings of melancholy, difficulty eating, sleeping, losing energy, and a sense of hopelessness. Tension may arise as a result of having to prove one's self-care. Tense situations may interfere with cancer patients' ability to function because they lack the skills and resources to adjust to their new mental health duties. Social support was also revealed to be a substantial and favorable predictor of cancer patients' happiness. (Journal of Social Work Education, 2008).

The current study aims to explain the role of Peace of Mind for Mental Health outcomes (Depression and Anxiety) in cancer patients. The research has another purpose that peace of mind predicts depression and anxiety and we have a moderator variable that is positive mental health.

According to the available literature on these variables, there hasn't been much research on how cancer patients' mental health outcomes, such as anxiety and depression, are associated to positive mental health outcomes. Previous studies have revealed that these variables are investigated in conjunction with other variables rather than the study

variables, and that the association between positive mental health and other variables is discovered. A cancer diagnosis can affect the emotional health of patients, families and caregivers. Common feelings during this life-changing experience include anxiety, distress and depression. Role at home, school, and work can be affected. It is important to recognize these changings and get help when needed (Gold Zweig et al., 2009).

Hence the core purpose of conducting this study to look further at the moderate's relationship of peace of mind, depression, and anxiety. There are not many researchers conducted on this topic so that's why we have conduct research on this topic to give a fresh topic for research to study in different dimensions. After the research, we can get to know that the generalized study's findings can be applied to the entire population or not. We also look at how demographics affect research factors.

Peace of mind is in cancer patients; it's linked to greater mental wellness. In the research variables, peace of mind was revealed to be a negative predictor of sadness and anxiety among cancer patients. In cancer patients, good mental health is linked to a decreased incidence of sadness and anxiety. Furthermore, in cancer patients, sadness and anxiety are linked in a beneficial way.

## Hypotheses

H1. Peace of Mind is likely to positively predict Positive Mental Health in cancer patients.

H2. Peace of Mind is likely to negatively predict depression in cancer patients.

H3. Peace of Mind is likely to negatively predict anxiety in cancer patients.

H4. Positive mental health would be the moderator between Peace of Mind and depression in cancer patients

H5. Positive mental health would be the moderator between peace of mind and anxiety in cancer patients.

## Material and Methods

This research aims to determine the role of peace of mind for mental health outcomes in cancer patients. This chapter describes the research design, sample, instruments, and description of the sample and procedure of the study.

## Research design

The present study was based on "cross-sectional survey research design". Data were collected from two sections of cancer patients including early stages 1-2 and later stages 3-4. Data were collected from different subgroups of cancer patients divided across gender. Questionnaire booklets were distributed in cancer patients by the researcher as the underlying survey method employed for data collection was "personal interview".

## Sample

In the present study, a sample of cancer patients ($N$= 300) which further divided into males ($n$ = 227, 75.7%), and females ($n$ = 73, 24.3%) was collected from cancer patients from different government and private cancer hospitals of Punjab Pakistan. The sample size was considered adequate according to the recommendations for the generalization of results. The sample was collected from different cancer hospitals in the Panjab province. The 300 cancer patients were further divided into two stages including early stage ($n$ = 150, 50%), and later-stage ($n$ = 150, 50%). The data was collected by applying a convenient sampling technique. It is the techniques that involve the selection of easily assessable subjects, for

conducting the research. This technique demands less time and money for the researcher. The cancer patients who are admitted to the hospitals and going through their treatment are ensured as inclusion criteria. It is ensured that they are admitted to the wards in the cancer hospitals and their treatment is in process. The cancer patients who have completed their treatment and are discharged from the hospitals are ensured as exclusion criteria.

**Table 1**
**Demographic Characteristics of cancer patients (N = *300)***

| Characteristics | *n* | *%* |
|---|---|---|
| Gender | | |
| Male | 227 | 75.7 |
| Female | 73 | 24.3 |
| Stage | | |
| Early-stage 1-2 | 150 | 50 |
| Later-stage 3-4 | 150 | 50 |

Table 1 shows frequency and percentage of cancer patients with respect to gender, and stage. Greater number of men (n = 227, 75.7%) compared to women participated in study (n = 73, 24.3%). Equal number of cancer patients with early stage 1-2 (n = 150, 50%) and later stage 3-4 participated in the study (n = 150, 50%).

**Instruments**

**The Peace of Mind Scale (PoMS)**

The construct and measurement of peace of mind. Happiness (2013) was used to measure how often participants experience inner peace and harmony in their daily life. The original scale consists of 7 items (e.g., "I have peace and harmony in my mind") of which two items are reverse-scored (e.g., "It is difficult for me to feel settled"). The items are rated on a 5-point Likert scale with response categories including 1=, not at all, 2 = Some of the time, 3 = Often, 4 = Most of the time, and to 5 = all of the time and the mean of the item scores reflects an overall measure of peace of mind. The minimum-maximum scores on the overall scale are 5 to 35 with a higher sum of scores indicating a higher peace of mind. Although PoMS was originally developed to measure well-being in the Chinese culture, Lee et al. demonstrated it to be a valid and reliable measure also in a Western sample (European Americans). The alpha reliability ($\alpha$ = .90) and test-retest reliability (r = .75, p \ .05) of the PoMS was adequate. The scale shows good validation properties. The scale was used in the present study based on written permission from the author of the scale through email.

**Positive Mental Health Scale (PMH-Scale)**

It was developed by Lukat et al. (2016). PMH Scale was constructed and is used to measure the inner factors (e.g., emotional and psychological) of positive mental health in suppose to the outer factors (e.g., social support, partnership). The PMH Scale is used to assess positive mental health on different samples of students' mentally ill patients and mentally healthy individuals. The PMH scale is comprised of nine items that show positive statements for positive mental health. The scale is based on positive descriptive statements that show the items are worded positive such as "I enjoy my life" and "I feel that I am actually well equipped to deal with life and its difficulties". The scale is based on a 4-point Likert-type scale with response categories including Not True = 1, usually not True = 2, Occasionally True = 3, True = 4. Minimum-maximum scores on the overall scale are 9 to 36 with a higher sum of scores indicating a higher positive mental health. The results show that scale shows high internal consistency .93 and good test-retest reliability. The scale was used in the present study based on written permission from the author of the scale through email.

**Depression Anxiety Stress Scale (DASS-21)**

DASS was developed by Lovibond and Lovibond (2000) and Urdu translated by Aslam (2007). The scale consisted of 21 items and 3 subscales including depression, anxiety and stress. Each subscale is measured with 7 items. The scale is based on 4-point Likert type response pattern in which 0 corresponds to never and 3 to always. Minimum and maximum scores on a single subscale ranged from 0 to 21. Although DASS-21 has cut off scores but in the present study only low high scores were used. All items in the scale are positively worded. The scale is a reliable and valid measure of depression, anxiety and stress in both clinical and non-clinical samples.

**Procedure**

First of all, the topic was selected through mutual discussion with the supervisor and approved by the Department, and approved by the board of study. A permission letter from the Department of Psychology was received, confirming the researcher's institutional link with the department and declaring that the researcher is researching for the partial fulfilment of an Advanced Diploma in Clinical Psychology. A list of targeted organizations was prepared, which included both private and public hospitals. Concerned officials from the selected government and private hospitals were contacted, and written approval for data collection from their facility was acquired on a permission letter. For data collecting, the researcher individually approaches cancer patients. Every participant's data was obtained separately. The study's nature, goal, and objectives were discussed with the participants with the purpose of establishing a good reputation. Participants who match the study's inclusion criteria are enrolled in the study and asked to participate. With a smile, excuses for not wanting to participate were accepted. The study's goals were as follows:  They were also informed that they had the right to withdraw their information at any time prior to, during, or after the scale's completion. The study participants were required to complete an informed consent by participants. Systematic instructions given to participants on how to complete the scale, the nature of the questions, and the rating scale. Participants' questions were answered before, during, and after the scale was completed. The scale takes 10 to 15 minutes for participants to complete. The participants' comments were positive, and they indicated that they were interested in the study. Following the completion of the scale, the researcher examines the responses of the participants to find any missing or double-rated questions, and asks them to fill the missing items and clarify the double-rating.  The researcher expressed gratitude to the participant for donating his or her time and voluntarily taking part in the study without receiving any compensation. The response rate was assessed to be 100 percent because 300 legitimate forms were returned out of 300 distributed for data collection.

**Ethical Considerations**

Ethical principles of psychological research were followed in the present study. Firstly, the research proposed was reviewed by the departmental Board of Studies (BoS) and the BoD allowed to conduct this study with any observations regarding the violation of ethical codes of conduct. Secondly, the anonymity of the participants' identities was ensured by giving them opinion to either to disclose or not disclose their identities. Thus, mentioning their names was optional. Thirdly, not only the participants were ensured regarding the confidentiality of information but the data was kept under lock and key and not shared with any irrelevant person. Fourthly, the participants were given the right to withdraw the information at any stage and they were requested to sign informed consent. Participants were informed (provided complete information about research) and they were asked to give consent (written willingness). Finally, the research was deception free.

**Results and Discussion**

The present study aimed to examine the role of peace of mind for mental health outcomes in cancer patients. Data analysis was carried out using SPSS-25. Initially, the demographic characteristics were identified through frequencies and percentages. Descriptive statistics and alpha reliability coefficients were computed. Pearson correlation was computed to examine the relationships between variables. Linear regression analysis was applied to examine the effect of peace of mind on positive mental health, depression and anxiety. Moderation analysis was conducted the moderating role of mental well-being between domestic migration stress and its outcomes including social and emotional well-being.

**Table 2**
**Psychometric Properties and Pearson Correlation in Scales (N = 300)**

| Scales | *M* | *SD* | Range | Cronbach's α | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|
| 1. The Peace of Mind Scale | 20.4 | 7.97 | 7-35 | .91 | - | .882*** | -.431*** | -.447*** |
| 2. Positive Mental Health Scale | 27.4 | 12.2 | 9-45 | .97 | | - | -.402*** | -.381*** |
| 3. Depression Scale | 21 | 3.92 | 0-21 | .81 | | | - | .748*** |
| 4. Anxiety Scale | 21 | 4.13 | 0-21 | .77 | | | | - |

Table 2 shows psychometric properties for the scales used in the present study. The Cronbach`s a value for The Peace of Mind Scale, Positive Mental Health Scale, Depression Scale and Anxiety Scale were .91, .97, .81, and .77 (> .70) which indicated satisfactory reliability of all scales administered on cancer patients. Results show that Peace of mind has positive correlation with positive mental health (r = .882, p < .001), and negative correlation with depression (r = -.43, p < .001) and anxiety (r = -.447, p < .001). Positive mental health has negative correlation with depression (r = -.40, p < .001) and anxiety (r = -.38, p < .001). Depression has positive correlation with anxiety (r = .74, p < .001).

**Table 3**
**Moderation of Positive Mental Health between Peace of Mind and Depression and Anxiety in Cancer Patients**

| | | | 95% CI | | | |
|---|---|---|---|---|---|---|
| Predictors | *B* | *SE* | *LL* | *UL* | *P* | *Outcome* |
| Constant | 1.12 | 1.17 | -1.19 | 3.42 | .345 | Depression |
| Peace of mind | -.64 | -.09 | -.46 | -.81 | .000 | |
| Positive mental health | -.39 | -.05 | -.29 | -.48 | .000 | |
| Peace of mind x positive mental health | -.03 | -.02 | -.03 | -.02 | .000 | |
| Predictors | *B* | *SE* | *LL* | *UL* | *P* | Anxiety |
| Constant | .21 | 1.20 | -2.15 | 2.57 | .864 | |
| Peace of mind | -.63 | .09 | -.45 | -.81 | .000 | |
| Positive mental health | -.49 | .05 | -.38 | -.38 | .000 | |
| Peace of mind x positive mental health | -.03 | .01 | -.03 | -.03 | .000 | |

Table 3[a] shows moderation of positive mental health between peace of mind and depression. The R2 value of .41 explained 41% variance in outcome with F (3, 296) = 68.83, p < .001. Findings revealed that peace of mind (B = -.64, p < .001), positive mental health (B = -.39, p < .001) and peace of mind x positive mental health (B = -.03, p < .001) negatively predicted depression. The ΔR2 value of .22 explained 22% change in the variance with ΔF (1, 296) = 111.97, p < .001. The findings revealed that positive mental health moderated between peace of mind and depression in cancer patients. Table 3[b] shows moderation of

positive mental health between peace of mind and anxiety. The R2 value of .44 explained 44% variance in outcome with F (3, 296) = 78.64, p < .001. Findings revealed that peace of mind (B = -.63, p < .001), positive mental health (B = -.49, p < .001) and peace of mind x positive mental health (B = -.03, p < .001) negatively predicted anxiety. The ΔR2 value of .24 explained 24% change in the variance with ΔF (1, 296) = 129.25, p < .001. The findings revealed that positive mental health moderated between peace of mind and anxiety in cancer patients.
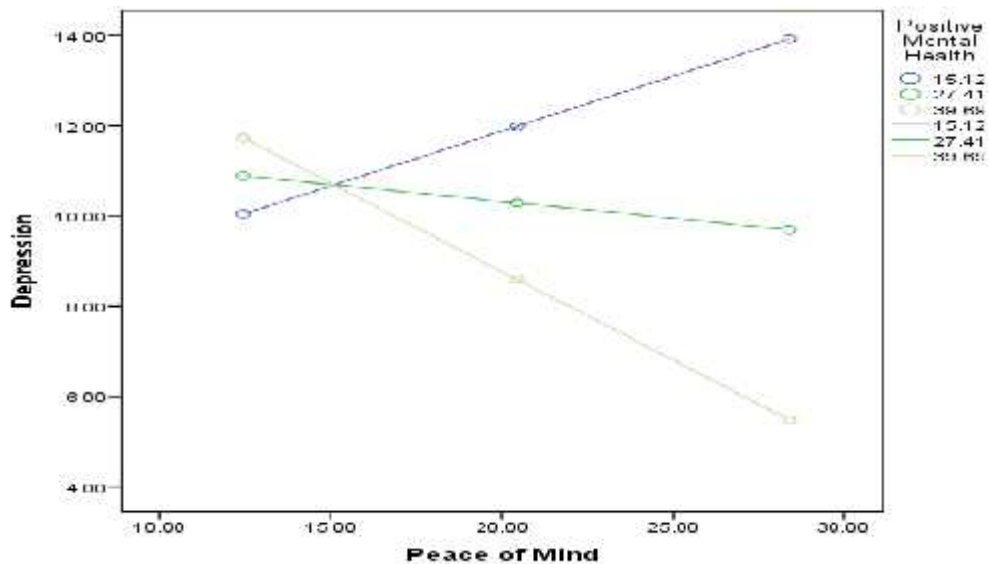


Figure 1: Mod-Graph Showing Moderation of Positive Mental Health between Peace of Mind and Depression in cancer patients

Figure 1 shows that high and moderate level of positive mental health decreased depression in cancer patients, of which high level of positive mental health more decreased depression of cancer patients. However, low level of positive mental health reversed the relationship between peace of mind and depression (became positive instead of negative-antagonistic).
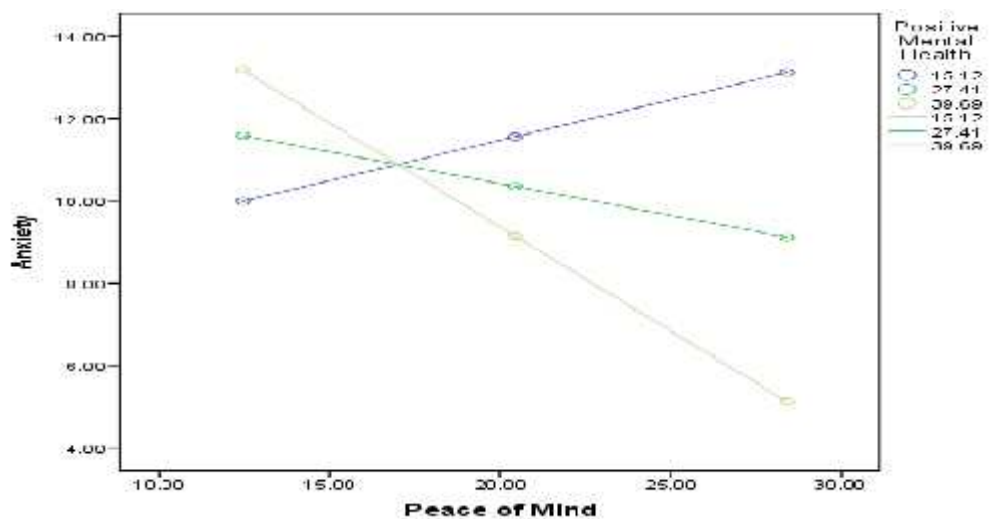


Figure 2 Mod-Graph Showing Moderation of Positive Mental Health between Peace of Mind and Anxiety in cancer patients

Figure 2 shows that high and moderate level of positive mental health decreased anxiety in cancer patients, of which high level of positive mental health more decreased anxiety of cancer patients. However, low level of positive mental health reversed the relationship between peace of mind and anxiety (became positive instead of negative-antagonistic).

## Discussion

The current study focused on cancer patients' mental health. The goal of this study was to look into the effect of peace of mind in cancer patients' mental health outcomes (depression and anxiety). In addition, the study's goal was to look at demographic disparities in the study variables.

The scale's reliability, normalcy, and construct validity were initially established. For unstandardized items, alpha reliability is based on covariance among the items (Coakes & steed, 2003). All of the scales had an alpha coefficient of = / >.90, indicating that they are reliable for use in the study (Kline, 2005). For all scales, values of the skewness and kurtosis were computed to confirm that the data was normally distributed. The values of skewness and kurtosis ought to smaller than +1 and -1, respectively. Items or scales that surpass these limits are problematic and ought to remove from the data (Cisar & Cisar, 2010; Field, 2005). The results reveal that the skewness and kurtosis values for the scales employed in this study are both less than one. The issues with univariate analysis are not present in data (Cisar& Cisar, 2010; Miles & Shevlin, 2001). The construct validity comprised of convergent and discriminant validity (Anestessi, 2006). Zero order correlations in variables were in theoretically desired directions, which confirmed the convergent validity of the scale. Further, the normality of the facts, as well as the theoretically equivalent correlation coefficient in variables three key steps to evaluate the hypotheses using regression analysis. As a result, the key hypotheses were tested after these issues were addressed.

In this study, the first hypothesis, "Peace of Mind is likely to positively predict Positive Mental Health in cancer patients," was confirmed. The findings support a get larger body of theoretical and empirical evidence that suggests that when cancer patients' mental health improves, so does their physical health. As has been shown in prior studies. This is due to a combination of depressive symptoms and those associated with cancer and therapy, as well as clinicians' difficulty in analyzing emotional problems. Aside from the fact that depression causes undetected mental suffering, which can be excruciating, it has a major impact on morbidity and mortality through a variety of mechanisms (WHO, 2005). Mental health and well-being are vital to Europe's social and economic progress, accordance to the European Commission's Mental Health Green Paper and Strategy and the World Health Organization's Mental Health Declaration and Action Plan for Europe (WHO, 2005). (European Commission, 2005). Mental health and well-being are essential to people's quality of life, allowing them to live meaningful lives and contribute as creative and engaged citizens. Social cohesion, productivity, and household peace and stability are all dependent on mental health. all of which contribute to the social capital and economic development of a society. The World Health Organization (WHO) published a report in 2005.

The second hypothesis "Peace of Mind is likely to negatively predict depression in cancer patients." was supported in the present studies. The existing theoretical and empirical literature suggested that as the peace of mind increases the depression of the cancer patients decreases because the depression develops emotional disturbance which decreases the peace of mind of cancer patients. In the realm of oncology, depression is very common. Despite the fact that it has a clear impact on patients, it is under diagnosed and undertreated. Clinical symptoms of depression understand, their frequent appearance in the context of sickness, intertwining of this is due to a combination of depressive symptoms and those associated with cancer and therapy, as well as clinicians' difficulty in analyzing

emotional problems. Aside from the fact that depression causes undetected mental suffering, which can be excruciating, it has a major impact on morbidity and mortality through a variety of mechanisms (Hopko et al., 2008). A decrease in the quality-of-life increased pain sensitivity. Difficulties in keeping track of treatment. Communication problems with careers, friends, and family. Close family are put under a lot of stress. Suicide risk Hospitalization for longer lengths of time Lower chance of survival, according to (Skarstein et al., 2000).

The third hypothesis "Peace of Mind is likely to negatively predict anxiety in cancer patients." was supported in the present studies. As the literature suggested that the cancer patients have a fear that they can die due to this death-causing disease, they left their family, their home, and staying in the hospital causes anxiety in the patients that lower their peace of mind. Anxiety is a common response in cancer patients to a perceived threat, such as the loss of physiological functions, changes in appearance, changes in social roles, family turmoil, death, and so on. Anxiety is a common response in cancer patients to a perceived threat, such as the loss of physiological functions, changes in appearance, changes in social roles, family turmoil, death, and so on. Anxiety disorders can be identified because (ICD-10; DSM-IV): It's generally out of proportion to the severity of the threat. When no help is supplied, the problem persists or worsens. The degree of the symptoms is intolerable, regardless of the severity of the threat (this includes frequent panic attacks, severe physical symptoms, and irrational beliefs such as worries of abrupt death). There is a disruption in normal or intended functioning. Cancer is always accompanied by a serious threat: loss, death, and so on. While the duration of symptoms is significant in determining whether or not anxiety is abnormal, the natural course of anxiety in oncology remains unknown. Intrusive and unpleasant thoughts about recurrence, disability, or death can interrupt concentration, decision-making, sleep, and other aspects of cancer patients' lives (Cancer et al., 2000).

The fourth hypothesis "Positive mental health would be the moderator between Peace of Mind and depression in cancer patients." was supported in the present research. As the literature suggested that as positive mental health increases the peace of mind increases and decreased depression whereas positive mental health decreases the peace of mind decreases and depression increases in the cancer patients. Positive mental health worked as a moderator in this present study. The link between stress & the development of depressive symptoms among college students has been a consistent finding in the research. In line with this, multiple prior-research has found that depression symptoms are common among college students (Uchino, 2008). Stress and depression can harm persons who suffer from them, causing problems with cognitive, occupational, and/or social functioning, which isn't good for students. Psychosocial elements such as social support, according to a modest but rising body of research literature, play crucial role in buffering that harmful impact of stress on mental health outcomes, including depression. More crucially, among youth, social support has been considered protective. Perceived social support, defined as an individual's perspective access to social support resources, or an individual's conviction that help will be accessible if needed, has been connected to favorable psychological and health outcomes on numerous occasions. Most research has focused on testing ideas about whether psychosocial elements like social support are beneficial in altering one's ability to manage stress, as well as their efficacy in reducing negative effects on physical and mental health outcomes. Even though various research in the general population has supported its positive effects, few studies have looked at the role of social support and its consequences for students (Uchino, 2008).

The fifth hypothesis "Positive mental health would be the moderator between peace of mind and anxiety in cancer patients." was supported in the research. As the existing literature suggests that the increase in fear will decrease the mental health of cancer and

decreasing patient's peace of mind. Positive mental health worked as a moderator among variables. Supported with the literature researchers discovered 39 papers that looked at anxiety in men with prostate cancer between 1984 and 2011. In many of these studies, screening-related anxiety was a prominent issue, and the primary incentive for testing was to find peace of mind through a refusal result. Anxiety was also connected to screening avoidance. I'm more afraid of having prostate cancer now that I have a family member who has it. Towell and Balderson. Anxiety interfered with 30 to 40% of patients' day-to-day functioning, according to most studies. Anxiety was higher in a group waiting for biopsy results, and it was linked to the test outcomes rather than concerns about the procedure. Anxiety was reduced even when a prostate cancer diagnosis was confirmed because the uncertainty was gone, but not as much as when a negative result was achieved. The bulk of prostate cancer anxiety studies were small, and only a few were prospective.  Anxiety changes were consistent with the anticipation that anxious men, particularly younger men and those with a family history of prostate cancer, would be more likely to explore screening in areas where anxiety has been extensively examined, such as pursuing screening (Sousa et al. 2012). This may have an impact on localized cancer treatment options, as more worried men may choose surgery to limit the danger of cancer spreading. Patient anxiety's role in decision-making in cancer is a neglected area of our present understanding, our existing knowledge is still fragmented in certain respects. The impact of patient anxiety on prostate cancer screening, decisions about treatment, and should be recovered investigated in future studies (Nordin et al., 2001).

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