

## **Humor as an Effective Stress Coping Strategy for Cardiac Patients**

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### **Abstract**

The objective of the research was to explore the effect of humor as a coping strategy in cardiac patients. It was hypothesized that humor as a coping strategy would be positively related to reduction of the perceived stress associated to the cardiovascular problems; there would be a gender difference in the frequency of using humor as a stress coping strategy. A sample of 48 patients (24 males and 24 females) suffering from Cardiovascular disease were selected through purposive sampling from different hospitals of Karachi city (Pakistan).

*Keywords:* Humor, cardiovascular diseases (CVD), stress, gender difference

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Their age ranged from 50 to 60 years. The Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) and the Coping Humor Scale (Martin & Lefcourt, 1983) were administered on patients suffering from heart disease. The statistical analysis was done by computing the t-test and applying co-relations. The results showed that there was no relationship between humor and stress thus it has no impact on reducing stress at all. The results further indicate that there is no gender difference in using humor as a coping strategy for the management of perceived stress amongst the CVD patients.

Humor is defined as the tendency of particular cognitive responses to provoke laughter, physical reaction, and provide amusement. Humor is experienced across all ages and cultures. In positive psychology, humor is studied in a variety of functions, particularly as a coping mechanism and as character strength in the broaden-and-build theory. A practical definition of humor remains indefinable due to its dependence on and variance across cultures. However, humor is correlated with good self-efficacy (Evans, 2010) and resilience.

Different people cope with stress in different ways, some use emotion focused strategies and some use problem focused techniques. Humor as a defense mechanism has an ability to distract an individual and reduce the intensity of the stressor. Distraction itself is at times used as a stress coping and management technique which works quite well for some people but not for all. Some researches suggest that humor has a wide range of health benefits. Regular doses of humor have proven to be beneficial to the patient's sense of well-being, ability to tolerate pain and painful procedures. In simplest terms, it enabled the patients to cope and adjust better (Cousins, 1979). McCrae and Costa's (1986) sample of community adults ranging from 21 to 90 years of age ranked the ability to find humor in stressful situations as a highly effective coping mechanism for solving problems and reducing distress associated with stressful life events.

Numerous studies have supported the view that humor and laughter are beneficial for relieving tension and anxiety (Kuiper & Martin 1998, Lefcourt et al., 1995, Yovetich, Alexander, & Mary, 1990). Furthermore, research reveals that a good sense of humor is related to muscle relaxation, control of pain and discomfort, positive mood states, and overall psychological health including a healthy self-concept (Kuiper, Rod, & Kathryn, 1992, Labbott, Shelley, Mark, & Randall, 1990).

The level of stress is somewhat also related to the way an individual appraises the situation i.e. negative appraisals could increase the stress level and positive appraisals could reduce stress. Several studies have examined the influence of humor on cognitive appraisal. The results of Kuiper's et al. study (1993) suggest that a better sense of humor does facilitate more positive cognitive appraisals. They found a positive relationship between use of humor as a coping mechanism and appraisal of exams as challenging in a sample of college students and concluded that humor is associated with healthier coping by reappraising stressful events as less threatening and more challenging.

The mechanism of humor is equally used by both men and women. Newman and Stone (1996) found that men with a good sense of humor appraised a serious video of an industrial accident as less stressful than those with a poor sense of humor. Fry (1995) examined the influence of sense of humor on cognitive appraisal of stress and coping styles in a pilot study of female executives. The results suggested that women with a high sense of humor may be more capable at cognitive restructuring and reappraising stressful life events in more positive ways; women with a good sense of humor also try to find meaning in the stressful events and perceived stressful events as challenging to their personal growth by expecting some gain from the experiences. According to Lockwood, (2011) heart patients often use humor to distract themselves from the high levels of stress and fear often associated with a life-altering diagnosis like heart disease – such as upcoming surgery, tests, or even the ongoing awareness of increased risk of future cardiac events.

Based on research conducted by Lockwood (2011) during a ten year period from the year 2000 through 2010, it has been established that individuals who employ humor as a "serious" part of their everyday lives have fewer physical complaints (associated with heart disease), less arterial blockage, fewer angioplasties, fewer heart attacks, and greater longevity when compared to subjects who exhibited a depressive, anxious, or angry lifestyle. It appears that the experience of "pleasant" or mirthful emotions counteracts the deleterious, long-term physical effects of distressing emotions (Sultanoff, 1998).

Based on these findings it could be concluded that humor provides support in reducing emotional discomfort. Henceforth these researches further propose that a humorous lifestyle increases an individual's ability to more effectively manage emotional distress, therefore reducing the damaging physical impact of these potentially harmful emotions.

The humorous approach to daily life could create healthy changes in cognitive (perspective to the world), emotional, and physiological states. (Lockwood, 2011) It is these positive alterations in attitude and approach that researchers believe lead to improved physical health--particularly related to heart disease. It could be further concluded from these findings that individuals who incorporate a humorous lifestyle into their daily lives are more likely to improve their overall physical and emotional health, thus maintaining optimal wellness and cope well with stress. Coping is described as strategies used to mitigate or tolerate physical, emotional or financial stress (Folkman & Lazarus, 1980). Folkman and Lazarus stated that coping strategies might be behavioral, such as problem-solving techniques, or cognitive. However there could be some gender difference in the usage of coping strategies. It is often observed that women use more emotion focused coping techniques while men use problem focused coping more often (Endler & Parker, 1990) Some of the researches have also investigated gender differences in using humor as coping strategy and found that

men use humor more frequently than women (Lewis, 2000).

In the light of the literature review, the objective of the present research was to study the relationship of humor as a coping strategy with perceived stress in cardiac patients. It was hypothesized that.

Humor as a coping strategy would be positively related to reduction of the perceived stress associated to the cardiovascular problems.

There would be a gender difference in the frequency of using humor as a stress coping strategy.

## **Method**

### **Sample**

A sample consisting of 48 patients suffering from Cardiovascular disease was selected through purposive sampling from different hospitals of Karachi including both private and government hospitals. The sample included 24 male patients and 24 female patients. Their age ranged from 50 years to 60 years. The selection criterion was based on the fact that the patient should have some knowledge of English language so that they could better comprehend the items on the scales being used. The second criterion for selection was that the patients should have only been diagnostically labeled as cardiac patients and not any other disorder along with it. The sample did not include those cardiac patients who were not labeled for any other pathology but had some psychiatric issues (clinical depression, anxiety etc.)

### **Materials**

*A Demographic sheet* was designed to gather the information of the participants which included name, age, gender, qualification, marital status, occupation and the labeled disorder.

**The Perceived Stress Scale** (Cohen, Kamarck, & Mermelstein, 1983) was administered to measure the stress. It is the most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. The questions are of a general nature and hence are relatively free of content specific to any sub-population group. The questions in the PSS ask about feelings and thoughts during the last month. In each case, respondents are asked how often they felt a certain way. PSS-4 is based on psychometric principles and is considered to be sound. However, the limited four-item abridged scale suffers in internal reliability ( $r=.60$ ). It provides a less adequate approximation of perceived stress levels than the larger scales. Test-retest reliability and predictive validity is strongest for shorter time periods.

**The Coping Humor Scale** (Martin & Lefcourt, 1983) was used to measure the humor coping skills in the participants. It consists of 7 items, each of which is a self-descriptive statement about the use of humor in coping with life stress. Respondents rate the degree to which each statement describes them on a scale from 1 (strongly disagree) to 4 (strongly agree). The CHS has been used in research on the use of humor in coping with stress and the association between sense of humor and both mental and physical health. The internal consistencies range lies between .60 to .70 and a test-retest reliability coefficient of .80 over a 12-week period.

## **Procedure**

The study was conducted at different hospitals of Karachi. The initial step was to get the consent forms read and signed by the participants. The participants were clearly communicated their rights to withdraw from the study any time they desired. Then their verbal consent was taken, after taking their agreement and providing them with necessary information and the patients filled in the demographic sheet which comprised of their personal information. After completing the ethical formalities the

*Humor as an Effective Stress Coping Strategy for Cardiac Patients*

participants were presented with questionnaires that measured humor and perceived stress. The results were then calculated.

**Results**

Pearson Correlation was applied to see the relationship of Humor as a coping strategy with perceived stress. Further t- test was applied to see gender differences in the frequency of usage of humor as a coping strategy amongst the cardiac patients.

**Table 1**

*Showing Correlation between Humor Coping Scales (CHS) and Perceived Stress Scale (PSS)*

	Perceived Stress
Humor coping	-0.183

The results indicate that no significant relationship exists between using humor as a coping strategy and decline in perceived level of stress.

**Table 2**

*Showing t-scores of Humor as a Coping Strategy between both Male and Female Participants*

Humor Coping Between Gender	n	M	t	df
Males	24	18.42	0.78	46
Females	24	17.35		

The results indicate that no significant relationship exists between using humor as a coping strategy and decline in perceived level of stress.

**Table 3**

*Showing t-scores of Perceived Stress between both Male and Female Participants*

Perceived Stress Between Gender	n	M	t	df
Males	24	18.64	0.63	46
Females	24	22.1		

There was no significant gender difference observed in the level of perceived stress related to cardiovascular illnesses.

### **Discussion**

According to the results, humor alone was not very effective in reducing the stress experienced due to cardiovascular diseases. Almost no relationship was seen to exist between the two variables. One reason might be that perceived stress is not only a significant risk factor playing a significant role in the etiology of cardiac diseases but also remains a threat in aggravating the cardiac disease. The patients who participated in the study were under medical treatment for quite some time which could have made them more negative towards their recovery as in the past few years their condition was either similar or slightly improved. Henceforth these cardiac patients could have developed a fear of threat and uncertainty towards life making them more sensitive and vulnerable towards stress. In these circumstances only using humor to cope with stress was not enough for them. Research suggests that the dispositional sense of humor may moderately reduce reactions to



life stressors but not completely eliminate stress. (Lefcourt & Thomas, 1998).

A significant factor that the researchers came across doing the data analysis was that most of the patients coming in for treatment were either widowed or living away from their immediate family (siblings, children, etc.) and were not involved in any kind of psychotherapy or counseling. Lack of sufficient social support structure could have affected the stress level and humor alone under these circumstances could not play a vital role. Functional social support plays an important role in coping with and helping people deal with stress. Having someone around to talk out and share feelings and emotions helps in reducing stress and protects from the physical damage caused due to stress. In stressful times, social support often helps people reduce psychological distress as well e.g., anxiety or depression (Taylor, Gooding, Wood, & Tarrier, 2011). Many studies have reported that social support has a very strong and significant impact on patients with CVD and how they are able to deal with their illness. According to a research which was conducted to see the causes of CVD noted that besides giving up smoking, the presence of social support could greatly reduce the chances of the development of CVD since it could buffer the stressors in a person's life (Wilhelmson, Rosengren & Gomer, 1993). Some of the researches emphasize the importance of social support suggesting that the severity of symptoms of CVD patients may be reduced by the presence of social support (Landsbergis, Schnall, Dietz, Friedman, & Pickering, 1992). Recently, urbanization has taken place in Pakistan leading to many migrating to cities from rural areas. This urbanization may be having a negative impact generally on people, and increasing the incidence of CVDs as the stressors of urbanization, such as, lack of support from neighbors and insecurity in the neighborhood generally, have shown drastic effects on the development and severity of CVDs (Cubbin, et al., 2006).

One very important factor overlooked during this study was the dietary habits of patients as they all belonged to an older age group

in which stress can only be managed well if you have a strong immune system. This could have been one of the major reasons for our unexpected results and hypotheses rejection. According to McClendon, (2011) patients who negatively perceive their illness and have higher levels of stress because of the illness could cope quite effectively with it by making healthier food choices as well as choosing to indulge in physical activity more than any other coping techniques.

The focus of the present study was only on humor coping mechanism and the sample chosen for this study were elderly people. In old age patients develop a fear of uncertainty, which can be reduced by usage of humor but not eliminated. Henceforth in old age those coping strategies are more effective which may focus more on simplifying or minimizing the illness's threat, thus reducing uncertainty rather than distracting oneself by using humor to laugh off the seriousness of the pathological issues. According to study conducted by Felton, Revenson and Hinrichsen (1987), old age CVD patients preferred most to deal with the stress that accompanies the development of CVDs thus reducing the ambiguity and uncertainty rather than using distraction or other emotion focused techniques.

Since few decades Pakistan is facing a lot of political and economic challenges, which has created a strong feeling of uncertainty and insecurity. The lack of security in the country, and the city specifically may have a negative impact on people more than anything else. According to a research, the insecurity and constant state of turmoil may lead to constancy in stress of the people which may not be reduced by minor or less effective coping strategies (maybe humor being one of them) and thus, more effective coping methods would be required to reduce the stress of people, and especially in those who have a tendency to 'stress out' more than others (hypertension, which is one of the leading causes of CVD) (Hobfoll, Shoham, & Ritter, 1991).

According to the results, there is no gender difference in using humor used to cope with stress and the perceived stress (refer to table 2 and 3) This may be due to the fact, that although males and females are socialized to cope in different ways, however, they tend to have similar methods of coping when they are faced by the same types of stressors, in this instance CVDs (Ptacek, Smith, & Dodge, (1994). Another reason might be that in both genders there is equal appreciation of humor. Research also supports that the use of humor is the same in gender, but there are different aspects of humor that one gender favors more than the other. Thorson and Powell (1996) found a series of correlations between personality traits and sense of humor with age and gender. The study showed that aging women use humor to cope with stressors more often than men do, men are more likely to be the creators of humor than women. This suggests that the appreciation for humor is equal in gender; there are different dimensions of humor that one gender favors more than the other.

Humor is a multifaceted phenomenon of human social cognition with large inter-individual variability. Women process humor through limbic reactivity, involving appraisal of its emotional features, while men apply more evaluative, executive resources to humor processing (Kohn, Kellermann, Gur, Schneider, & Habel, 2011). The reason may be individual differences as sense of humor is a multidimensional construct (Thorson & Powell, 1993).

## **Conclusion**

Humor solely cannot reduce the perceived level of stress in the cardiac patients and other important factors such as social support, love, security etc. may also play a vital role as these things are necessary for individual's lives. Hence, it cannot be guaranteed that CVD patients who would laugh out on their problems are stress free and satisfied with their life and are more effectively managing their stresses. Coping with stress requires a multidimensional approach to effectively deal with life stresses rather than a single handed coping strategy.

## **Implications**

The results of this research have several significant implications for individuals suffering from cardiac disorders, caretakers, health care professionals and hospital staff. It can help in developing constructive stress management programs in which the perceived stress can be reduced by teaching the patients to use humor coping techniques along with increasing the social support structure and healthy dietary habits thus at the same time improving interpersonal relations. Happy and relaxed patients have more tolerance and adaptive skills along with good immune system to deal with stress. Henceforth teaching to use humor may increase the availability of functional support and restructure much of the CVD patient's negative attitudes and behaviors related to health and insecurities. Awareness campaigns and counseling sessions can be generated by highlighting how these stressors related to health threats can be reduced by both increased information and development of good coping skills (such as humor) and drawing the attention of individuals towards more positive elements in their life other than the distress related to their health issues. With this awareness, social work clinicians can work on rehabilitation plans and attempt to improve stress management programs among the growing number of cardiac patients in Pakistan.

## **Limitations and Future Recommendations**

The present research has several limitations. Firstly, only few items to measure the global concept of Perceived Life Stresses were used. The other factors discussed in the literature review could also have influenced the participant's responses for e.g. social network etc. Second, archival data set used did not include key demographic variables such as residential locality, earnings and monthly expenses, which at present in Pakistan are one of the key factors playing a role in the etiology of psycho physiological disorders. Although the results cannot be generalized beyond this sample, they suggest that additional research using a random sample of a population would yield valuable results. The sample size can also be

taken on a much larger scale to make generalizations and remove individual differences and biases. The replication of the current findings with other measures and larger populations remains an open question. All measures in the present study were collected at one time. It would be interesting to see whether collecting the measures at different time periods, would affect the pattern of results. Further a research could be done to explore how humor as a good coping technique in handling daily situations rather than coping with health related stress only.

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