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## Abstract

The present study was designed to determine the coping strategies used by diabetics with special reference to age gender and education. The sample consisted of 100 (50 mal and 50 female) diabetics. Brief COPE scale was administered to know the coping strategies of diabetics. The results showed that (1) there was a significant gender difference in the coping strategies of diabetics (2) the problem focused coping strategies were more used by male diabetics than females ( $t = 4.90$ ,  $df = 98$ ,  $p < .001$ ) (3) the emotion focused coping strategies were more used by females diabetics than males ( $t = -3.45$ ,  $df = 98$ ,  $P < .001$ ) (4) there was non-significant relationship between age and coping strategies in diabetics ( $r = -.068$ ,  $n = 100$ ,  $p > .001$ ) (5) there was non-significant relationship between the education and coping strategies ( $r = .101$ ,  $n = 100$ ,  $p > .001$ ). The researchers concluded that the coping strategies of diabetics are affected by gender and are not affected by age and education.

**Keywords:** Coping Strategies, Diabetes

## 1. Introduction

Diabetes, commonly called Diabetes mellitus, is defined as the collection of metabolic diseases which involve increased blood glucose. It may be due to deficient generation of insulin or the cells of the body don't react appropriately to the insulin or both. It can be divided into three types Type 1 diabetes, type 2 diabetes and gestational diabetes. In type 1 diabetes, body does not create insulin. It is also called insulin dependent diabetes, juvenile diabetes or early onset diabetes. The chances of its start are before 40<sup>th</sup> years of life and in teen ages and adulthood. In type 2 diabetes, the insulin production in the body is impaired. It is not produced enough to perform normal function or the body cells don't respond to insulin. The gestational diabetes influence females at the time of pregnancy. The females have increased amount of glucose in the blood and their body cells are not able to sufficiently deliver insulin to transport the majority of the glucose into their cells, bringing about continuously rising levels of glucose (Nordqvist, 2010).

The psychological and action oriented methods people utilize in their day to day life to overcome disturbing feelings, handicaps, difficulties and diseases particularly long term diseases are called coping strategies. Such difficulties create challenging situations in a person's life. That's the reason that coping has become an integral part of our lives. The attention is directing towards the optimistic coping strategies to produce positive results. It decreases the problematic effects of a situation by focusing on the welfare of a person. Coping strategies does not deal with the solution of a problem but its management (Lazarus & Folkman, 1984). It means the problem is managed in a better way.

Coping is the combination of cognitions and the behaviors to deal with the internal and external needs and stresses. There is a dynamic association between the coping and stressor (Lazarus & Folkman, 1984). Coping is a combination of different methods to deal with the problem.

Pearlin and Schooler (1978) described coping as the activities which guard individuals from the mental damage that is experienced due to the disturbing societal involvements. This defensive role can act in three manners (i) through minimizing or changing stress producing situation (ii) through changing the meanings of the problem (iii) through limiting the painful psychological experiences of the stressor.

Coping strategies in diabetes can be divided into two broad components (i) cognitive component (ii) learned component.

The cognitive component is concerned with the psychological method of evaluation of circumstances. This evaluation figures out the coping strategies that must be utilized (Lazarus & Folkman, 1984). This method of evaluation can be divided into two types (i) Primary appraisal (ii) secondary appraisal. In primary appraisal, the analysis of the problem is done at conscious level. On the other hand, in secondary appraisal, resources like social, financial, mental and material are analyzed to make planning to cope with the stressor. Another significant point in this perspective is personal control of an individual (Naughton, 1997).

Learned component consists of what is learned and encouraged by the societal and cultural encounters. The different social learning theories propose that our actions and its inspiration is due to the experiential reinforcement and learned helplessness. A large number of coping strategies are learned by social experiences. Another important factor in the selection of coping strategies is culture. This component has an imperative effect while coping with diabetes. In Pakistani culture, the long term illnesses are not assumed socially good. On account of this reason, diabetics do a deliberate attempt to shroud their illness. It, in turns, influences the selection of coping strategies and it move their disease towards severity (Naughton, 1997).

There are two major types of coping strategies (i) Problem focused coping strategies (ii) Emotional focused coping strategies. Problem focused coping strategies emphasize on altering the problematic situation or its solution. These are also called active coping strategies. It focuses on the practical solutions of the problematic situation. The solution may be sorted out in external environment or internally to a person like cognitive solutions for example problem solving skills, altering inspiration to the solution of problem and learning social strategies. These are promoted and exercised more in western societies because those are action directed societies. The preference to these strategies are given when the people believe that problem can be altered (Lazarus & Folkman, 1984).

These coping strategies include (i) Confrontive Coping Strategies (ii) Seeking social support (iii) Planful problem solving. The hostile methods for the change in stressful scenario is called confrontive coping strategies (Lazarus, 1993). These provoke people to take risks for the betterment of the situation. These are concerned with direct interaction with the problem. In social support resources are interchanged between two or more individuals with the purpose of enhancing the benefits for the receiver (Shumaker & Brownell, 1984). Shumaker & Hill (1991) described social support by differentiating between structure and function. They described structure as the existence and nature of relationship in a social network. They also described function as the nature of resources given. It has been proved that the social support increases the mental well-being and provides a cushion

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against the impact of stress (Dwyer & Cummings, 2001). The greater social support have been present in females as compared to males (Shumaker & Hill, 1991).

Planful problem solving is described as the consciously made strategies to change the stress along with the critical strategies for the resolution of stress (Lazarus, 1993).

Emotion focused coping strategies are also called passive coping strategies. These comprises of the activities that balance the felt experience due to upsetting situation (Taylor, 1999). The upsetting feelings felt due to the diabetes are managed through these strategies. Preference will be given to these strategies as compare to problem solving in health related issues. Folkman and Lazarus (1988) divided emotion focused strategies in different categories; (i) cognitive reappraisal (ii) positive reappraisal (iii) self-control (iv) acceptance (v) distancing (vi) avoidance/escape (vii) distraction.

Cognitive reappraisal is the method which involve an individual's will to persuade himself/herself that the stress is non-significant. The cognitions are changed to manage the stress (Lazarus & Folkman, 1984).

The ability to cognitively redesign the circumstances for making them optimistic is called positive appraisal. It is vitally connected with enhancing the optimistic thinking (Folkman & Moskowitz, 2004).

Society has significant role in the process of positive appraisal. Islamic culture teaches that all happens because of a reason. It will be beneficial for the person in long run. Therefore individual attempts to focus on optimistic aspect of the situation. This in turn will produce a sense of self satisfaction.

Self-control involves the methods that involve adjustment of the emotions and behaviors of a person. Acceptance is described as the efforts made by a person to keep the matters on correct path. Distancing refers to the mental efforts that are required to separate a person and these reduce the importance of the problematic situation. Avoidance/Escape is described as the hopeful thoughts along with the actions that are used to avoid or escape from the difficulties (Folkman & Lazarus, 1988).

Distraction is the mostly utilized emotional coping strategy and is also called leisure activity. The diabetics use it to alter their focus for the time being. Once in a while, paying attention to the diabetes cause it to be more powerful. That's why distraction proved to be better strategy to cope with it in that situation (Tull, 2007).

What is the best coping strategy is the question of interest of all the times. The evaluation of the coping strategies with reference to diabetes is an important area of interest. The selection of coping strategy, whether it will be problem focused or emotional focused, is dependent on a lot of factors. The type of diabetes whether it is type I or type II, intensity and the length of the time of disease are worth mentioning factors. The role of culture, knowledge of diabetic about disease and the environment also play an important role in the selection of coping strategies. Most of the diabetics don't use single coping strategy in all the times instead they use the combination of different strategies according to the situation. The avoidant coping strategies may be beneficial in case of diseases with short duration and give poor results in case of chronic diseases like diabetes. On the other hand problem focused coping strategies proved to be good in chronic diseases lie diabetes.

In addition to the above mentioned coping strategies, diabetics also use different strategies like self coping strategies, asking for help, humor, disclosure and reframing. Humor is an interesting coping strategy.

An important coping strategy to deal with stress is called humor. In the start, humor works to shift the thoughts which are producing stress. The laughter is the result of effective humor that in turn physically relieves stress. It alters the focus from towards others (Mills, Reiss & Dombeck, 2008). Latta (1998) said that humor happens on the grounds that the situation in a joke causes a psychological change from one perspective onto the next. This in turn will cause the decrease in the undesirable feelings brought about by the earlier perspective.

Disclosure refers to the releasing of emotions. It give relaxation and many other benefits like to gain emotional support, knowledge and positive reinforcement (Taylor, 1999).

Reframing is the technique that involve change in the perspective of a person to take it as optimistic. It is also related to focus on optimistic results and meanings in the situation. On the other hand, it is to search well in situation (Stoeber & Janssen, 2011). Some coping methods become habits and their excessive use can cause harm such as alcohol, cocaine and drugs use. These provide temporary escape from the situation but have more negative consequences. According to a study conducted by Karlsen and Bru (2002) the small number of diabetics showed denial and mental disengagement and resignation in relation to diabetes associated issues in adults. The majority of adults showed that the use of active task related coping strategies like looking for social support, looking to gain information about problem and to prepare a schedule is rare among them. This was most commonly y present in type 2 diabetics.

### **1.1. Aims and Objectives**

On the basis of review of literature about the coping strategies, this research was planned to see the type of coping strategies used by diabetics with special reference to age gender and education.

### **1.2. Hypotheses**

The hypothesis formulated for the fulfillment of this objective are (1) there would be gender differences in coping strategies in diabetics (2) there would be a relationship of age and coping strategies in diabetics (3) there would be a relationship of education and coping strategies in diabetics (4) problem solving coping strategies are more used by male diabetics than female diabetics (5) emotional focused coping strategies are more used by female diabetics than male diabetics.

## **2. Methods**

The present investigation studied the coping strategies in types of diabetes with special reference to age, gender and education by using survey research design. A purposive sampling strategy was used as the choice of the sample was contingent upon the following criteria (1) the diagnosis of diabetes would have been confined more than one year (2) the diabetic should be under treatment and taking medication from more than one year (3) the diabetic should be between 15 to 70 years of age.

The sample consisted of 100 diabetic patients (N=100). The diabetics drawn from Shaikh Zaid Hospital Lahore (n=33), Jinnah Hospital Lahore (n=33) and Mayo Hospital Lahore (n=34). The sample was distributed equally across both genders (male=50, female=50) who met the inclusion exclusion criterion. Brief version of COPE<sup>21</sup> Questionnaire was used to measure the coping strategies of the diabetics.

A consent form was given to the each participant and they were ensured that the information acquired from them will be kept confidential and will be used for research purpose. After this, questionnaire was administered to explore their coping strategies

with special reference to gender, age and education. The SPSS version 17 was used to analyze the data. Descriptive statistics such as frequency of demographic data was tabulated. Independent sample t-test was applied to assess gender difference in coping strategies in diabetics. Independent sample t-test was also applied to assess the frequency of problem solving and emotional focused coping strategies in male and female diabetics. Correlation was applied to assess the relationship between age and coping strategies in diabetics.

### 3. Results

**Table 1: Descriptive Statistics**

Treatment	Male		Female		t	p
	Mean	SD	Mean	SD		
Gender differences in coping strategies	67.72	7.28	61.60	6.32	4.48	.001
Gender differences in problem solving coping strategies	6.66	1.22	5.44	1.26	4.90	.001
Gender difference in emotional focused coping strategies	4.94	1.39	6.04	1.77	-3.45	.001

The Table 1 shows the Mean, standard deviation, statistics and significance of the difference in gender, emotion focused coping strategies and problem solving coping strategies between males (n=50) and females (n=50) diabetics. Independent sample t-test was calculated to examine the gender difference in the coping strategies in diabetics. The results given in table 2 are (t =4.48, df = 98, p<.001) indicate that there is a significant difference in mean scores of male and female diabetics. The results (t = 4.90, df = 98, p< .001) also indicate that there is a significant difference in mean scores of male and female diabetics in *problem solving coping strategies*. The results (t = -3.45, df = 98, P< .001) also indicate that there is a significant difference in mean scores of male and female diabetics in emotion focused coping strategies.

**Table 2: Correlation matrix among the variables of coping strategies, age and education (N=100)**

Variable	Coping strategies of diabetics
Age of diabetics	-.068
Education of diabetics	.101

The relationship between the age, education of the diabetics and their coping strategies was investigated by using Pearson product moment correlation coefficient. There was no significant correlation between the two variables (r=-.068, n=100, p>.001), indicating that coping strategies of diabetics are not affected by age. The table also indicates that there was no significant correlation between the education and coping strategies (r=.101, n=100, p>.001), indicating that with coping strategies of diabetics are not affected by education.

### 4. Discussion

The present study hypothesized that there would be gender differences in coping strategies. The results (t =4.486, df = 98, p<.001) confirmed the hypothesis and indicate that there is a significant difference in males and females diabetics. The results are consistent with Johnson, Bennett, Carmichael & Koser (2000), which indicated that females coping strategies are different from those of spouses. The results are also consistent with Gafvels and Wandell (2007), which indicate that foreign born men and women with type 2 diabetes use different coping strategies as compared with Swedish-born patients. They also concluded that gender affects the selection of coping strategies.

The present study also hypothesized that problem focused coping strategies are more used by male diabetics than females. The findings (t = 4.90, df = 98, p< .001) of present research confirmed the hypothesis and proved that problem focused coping strategies are more used by male diabetics than females. These findings are consistent with DeCoster and Cummings (2005) which indicate that there is a significant gender difference in the utilization of problem focused coping strategies.

The present study also hypothesized that emotion focused coping strategies are more used by female diabetics than males. The findings (t = -3.45, df = 98, P< .001) of present research confirmed the hypothesis and proved that emotion focused coping strategies are more used by female diabetics than males. These findings are consistent with DeCoster and Cummings (2005) which indicate that there is a significant gender difference in the utilization of emotion focused coping strategies.

The present study also hypothesized that there would be a relationship of age and coping strategies in diabetics. The findings of the present research (r=-.068, n=100, p>.001), showed that there is no relationship of age and coping strategies in diabetics in Pakistani society.

The present study also there would be a relationship of education and coping strategies in diabetics. The findings of the present research (r=.101, n=100, p>.001) showed that there is no relationship between education and coping strategies in diabetics in Pakistani society. No researches are available related to such findings. As most of the researches are conducted in the western societies where awareness about coping strategies and the lifestyle of the diabetics is very much different from Pakistani society, it may be a major reason for showing no marked differences. The commitment to religion, lower literacy rate and poor health education and awareness in Pakistani diabetics may also cause the difference in findings of previous and present research.

Some of the patients thought that if they told the exact income and occupation, they might be in trouble. Therefore they were reluctant to provide true information about their particulars. Some female patients did not cooperate with the researcher by considering him male. Some patients were very talkative. They wasted time of the researcher instead of giving required information. Some of the patients who belonged to upper class did not provide us our required information because they thought it was their insult and wastage of time.

## 5. Conclusion

It was concluded from present study that there is a significant difference in coping strategies of male and female diabetics and there is a significant difference in male and female diabetics in problem solving coping strategies. It was also concluded that there is a significant difference in male and female diabetics in emotion focused coping strategies. It was also concluded that the coping strategies of diabetics are not affected by age and education.

### 5.1. Limitation and Suggestions

An important limitation of the study is that the findings of the present research cannot be generalized because the data was collected from few hospitals of Lahore city and majority of the patients belong to Lahore city. In future, data must be collected from more hospitals.

The attention towards the management of diabetes is changing in the recent decades. The attention is shifting towards the positive coping strategies to deal with diabetes. Coping is becoming the utmost in the management of diabetes. There is a need of educating the people and also the health professionals about the importance of coping strategies in the management of diabetes.

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