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# Study on stressors and gender differences in coping strategies among primary caregivers of cardiovascular disease

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## Abstract

**Background:** The term burden refers to the emotional and physical strain experienced by caregivers when providing care for a client. This burden is considered a form of agony. Caregivers, usually family members, have various responsibilities such as personal care, financial support, medical assistance, and transportation arrangements. Coping strategies are utilized to manage stress, with effectiveness varying based on the situation and individual preferences. A study aimed to evaluate coping strategies and burden among caregivers of cardiovascular patients.

**Materials and Methods:** This cross sectional study was conducted at Cardiology Centre Multan from 1 February to 31 August, 2016. As the study was of particular importance for examining the significance of coping strategies used by care givers to cope with their burden during treatment of CHD patients; the gender, age, relationship with recipient, and duration of disease were taken as independent variables. Information about independent variables, coping strategies, and burden were collected using scales; Way of Coping Scale and Zarit Burden Interview Scale respectively.

**Result:** A total of 90 caregivers with mean age of 32.09±8.80 years participated in this descriptive and cross-sectional study. Caregivers were predominately women (N=67, 74.4%), married (N=65, 72.2%), unemployed (N=66, 73.3%), and had children (N=57, 63.3%). Nearly half of the sample had a diploma or academic education (N=46, 51.1%) and had a self-reported middle-range income (N=50, 55.6%). Nearly 90% of the caregivers reported not having any chronic diseases.

**Conclusion:** The study revealed that a significant number of caregivers in 30-40 age group faced a high burden of care, leading them to employ diverse coping strategies. Counselling can offer emotional support, guidance, and practical advice to caregivers, enabling them to effectively manage challenges and maintain their well-being while caring for cardiovascular patients.

**Keywords:** Caregiver burden, cardiovascular disease patient, coping strategies

## Introduction

Health refers to the overall well-being and proper functioning of an individual's physical, mental and social aspects. It is influenced by various factors such as genetics, environment, lifestyle choices and access to healthcare [1]. Cardiovascular disorders are a major global health issue, and they are responsible for a significant burden of illness and mortality worldwide. Caregivers play a multifaceted role that goes beyond physical care, as stated by the World Health Organization (WHO) [2].

In India, where over 10 million deaths are reported annually, cardiovascular diseases (CVDs) contribute significantly to the mortality rate. Among males, CVDs account for approximately 20.3% of all deaths, while among females, it accounts for around 16.9% of all deaths [3] They also offer companionship, emotional support, and advocacy for their clients. Caregivers often become the primary source of comfort and guidance for individuals with long-term disease, helping them navigate the challenges associated with their conditions [4]. The long-term nature of cardiovascular disease can bring about various difficulties and significant changes in the lifestyle of the clients. The responsibilities of caregivers encompass tasks such as medication management, symptom monitoring, daily activity assistance, and emotional support. These duties can impose a significant burden on caregivers, impacting them both physically and emotionally [5].

The demands of caregiving can have detrimental effects on the caregiver's physical, emotional, and mental, causing stress, burnout, and potential depression. Caregivers often prioritize their loved one's needs, neglecting their own-being and putting their own lives on hold. The overwhelming responsibilities of caregiving leave little room for self-care and personal fulfilment [6]. It is important for caregivers to seek support, both practical and emotional, to alleviate the burden and prevent caregiver fatigue. It is worth nothing that coping strategies can vary from person to person, and caregivers may use a combination of problem-focused, emotion-focused and avoidance-oriented coping strategies depending on the situation [7].

To maintain their own-being while caring for loved ones, caregivers need to discover healthy coping mechanisms. Problem-focused involves actively addressing and resolving stressors through practical solutions. Emotion-focused coping focuses on managing and regulating emotional responses to the stressor [8]. Rather than focusing on problem-solving, this coping strategy aims to reduce emotional distress and find ways to cope with the emotions associated with the stressor. Avoidance-oriented coping refers behaviors or strategies aimed at avoiding or minimizing contact with the stressor. This can involve ignoring the problem, denying its existence, or seeking distractions to temporarily escape from the stressor [9].

## Materials and Methods

This cross sectional study was completed with care givers of CHD patients after obtaining consents from them. Care givers of CHD patients were evenly divided into gender contacted at Institute over a period of 1 year. Prior to asking the questions, all participants were assured about the use of information sought from them only for research purpose. All the data was collected by the researchers in personal meetings with care givers at hospital surrounding.

This conveniently approached sample was then requested to fill out the questionnaires. They provided answers about their gender, age, relationship with patient, and duration of disease. Coding was done by assigning 0 to male and 1 to female; 0 to daughter/son and 1 to husband/wife. Age and duration were treated as continues variables. Zarit Burden Interview Scale was used to assess the care giver burden. It was 22 items scale rated on 5-points; 0=never to 4=nearly always. The alpha reliability for this data was found.78. The Ways of Coping used by care giver in this study was measured by Ways of Coping questionnaire, included 66 items mainly divided into two major types; problem focused and emotion focused coping.

Problem focused is based on solving problem or doing something to change the source of stress and emotion focused is based on reducing or managing the emotional distress related to the situation. Under two categories this questionnaire has eight subscales, emotion focused included Distancing, Self-controlling, Escape-Avoidance, and Positive Reappraisal; and Problem focused comprised of Confrontive Coping, Accepting Responsibility, and Planful Problem-Solving; Seeking Social Support links to both problem focused and emotion focused coping strategies. Response format was based on a 4-point likert scale; 0=not used; 2=used somewhat; 3=used quite a bit; 4=used a great deal. Analysis was done with SPSS21.

## Results

A total of 90 caregivers with mean age of 32.09±8.80 years participated in this descriptive and cross-sectional study. Caregivers were predominately women (N=67, 74.4%), married (N=65, 72.2%), unemployed (N=66, 73.3%), and had children (N=57, 63.3%). Nearly half of the sample had a diploma or academic education (N=46, 51.1%) and had a self-reported middle-range income (N=50, 55.6%). Nearly 90% of the caregivers reported not having any chronic diseases.

The mean age of care recipients was 69.91±10.50 years old. More than half were female (N=57, 51.8%), the majority were married (N=82, 74.5%), and illiterate (N=82, 74.5%; see Table 1).

The mean of caregiving burden was 32.80±11.97. The majority of the caregivers suffered from mild (N=58, 52.7%) to moderate (N=51, 46.4%) burden and just one caregiver (0.9%) was under severe burden. The results showed that the most common coping strategies used were positive reappraisal (17.21±7.24) and seeking social support (10.66±4.95) and the least were direct confronting (8.91±4.75) and escape-avoidance (16.42±6.99). The greatest caregiver burden was physical burden (17.54±7.08) and the least was social burden (6.74±5.61) (see Table 2).

**Table 1:** Sociodemographic characteristics of caregivers of older patients with stroke

| **Demographic characteristics** | **N** | **%** |
|---|---|---|
| Sex Female | 77 | 70.0 |
| Male | 33 | 30.0 |
| **Marital status** | | |
| Married | 75 | 68.2 |
| Single | 35 | 31.8 |
| **Job** | | |
| Unemployed | 76 | 79.1 |
| Retired | 4 | 3.6 |
| Employed | 30 | 27.3 |
| **Children** | | |
| 0 | 43 | 39.1 |
| 1 | 29 | 26.4 |
| > 2 | 38 | 34.5 |
| Education level | | |
| Illiterate | 6 | 5.5 |
| Under diploma | 48 | 43.6 |
| Diploma or higher | 56 | 50.9 |
| **Financial status** | | |
| Low | 33 | 30.0 |
| Middle | 60 | 54.5 |
| High | 17 | 15.5 |
| **History of chronic illnesses** | | |
| Yes | 12 | 10.9 |
| No | 98 | 89.1 |

Table 1 shows the average range of coping strategies used amongst caregivers of older patients with a history of stroke based on gender. Results of the independent t-test showed that male caregivers used the positive reappraisal strategy (t(108) = 2.76; p=0.007) and accepting responsibility (t(108) = 2.26; p=0.026) significantly more than female caregivers.

The information displayed in Table 3 shows that the burden of care was significantly and positively correlated with use of the escape-avoidance coping strategy (r=0.245, p=0.010) and distancing coping strategy (r=0.204, p=0.032).

**Table 2:** Means and standard deviations of the subscales of burden and coping strategies

| Variable | Subscales | Mean ± SD | Mean/Number of items |
|---|---|---|---|
| Burden care | Physical | 17.54±7.08 | 2.75 |
| | Emotional | 11.88±6.65 | 2.45 |
| | Economic | 5.84±4.25 | 2.44 |
| | Social | 6.74±5.61 | 2.23 |
| | Total | 34.84±17.48 | 21.66 |
| Coping strategies | Positive reappraisal | 17.21±7.24 | 2.55 |
| | Seeking social support | 10.66±4.95 | 2.49 |
| | Problem-solving | 14.49±6.34 | 2.44 |
| | Self-controlling | 14.34±6.19 | 2.41 |
| | Accepting responsibility | 9.95±4.99 | 2.35 |
| | Distancing | 10.21±5.21 | 2.21 |
| | Confronting | 8.91±4.75 | 2.18 |
| | Escape-avoidance | 16.42±6.99 | 2.15 |
| | Total | 87.81±21.31 | 12.44 |

## Discussion

In the current study conducted at Valiasr hospital in Zanjan, Iran, a total OD 200 caregivers participated, with the largest proportion (43.5%) belonging to the 30-40 years age group, followed by 35% in the 40-50 years age group. Of the caregivers, 64.5% were male and 35.5% were female. The study specifically focused on 110 caregivers. Among this group, the majority were females (70%) while males accounted for 30%. The findings of the study indicated that caregivers of cardiovascular patients faced a significant burden, highlighting the challenges they encounter in fulfilling their caregiving responsibilities [10-15].

In the present research study the results shows that, the mean coping strategies score was 50.4±6.5 with median 49.5. Half of the care givers have score more than 49.5. This implied that the care givers are adopting different coping strategies to manage the burden of care giving. Nevertheless the coping strategies score indicated the care givers need more counseling to cope-up with the burden of care giving. Evridiki Papastavrou and Andreas Charalambous conducted a study on coping strategies employed by informal caregivers of cancer patients. A convenience sample of 130 dyads was used, where patients identified their primary family caregiver for participation. The majority of caregiver's utilized emotionally focused coping methods, such as hoping time would bring change and finding solace in their faith. However, assertive coping strategies and taking risks were less commonly employed by caregivers [16].

Golnar Ghane and Mansoureh Ashghali Farahani conducted a randomized controlled clinical triel to assess the effectiveness of problem-focused coping strategies on the burden experienced by caregivers of hemodialysis patients. The study included 76 family caregivers in Tehran, Iran, who were divided equally into an intervention group and a control group. The majority of caregivers were married females. At the baseline, there was no significant difference in the mean caregiver burden scores between the two groups. The study aimed to evaluate how problem-focused coping strategies could impact caregiver burden [17].

## Conclusion

The present study concluded that caregivers in the 30-40 years age group experienced a high burden. They utilized different coping strategies and sought counseling to manage the burden of caregiving for cardiovascular patients. There was a significant positive correlation between burden score and coping strategies, indicating that as the burden increased, caregivers employed more coping strategies. This highlights the proactive approach of caregivers in addressing the challenges they face.

## Conflict of Interest

Not available

## Financial Support

Not available

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