

Original Research Article

BURDEN AND COPING STRATEGIES AMONG CAREGIVERS OF SCHIZOPHRENIA PATIENTS: A CROSS-SECTIONAL STUDY

Gaddam Saritha¹, Syeda Nissar Fatima², Divya Meghana Sreevaram³, Anil V⁴

¹Assistant Professor, Department of Psychiatry, Government Medical College and General Hospital, Qutubullapur, Telangana, India.

²Assistant Professor, Department of Psychiatry, SRTR GMCH, Ambajogai, Maharashtra, India

³Senior Resident, Department of Psychiatry, ESIC Medical College & Hospital, Sanath Nagar, Hyderabad, Telangana, India

⁴Assistant Professor, Department of Psychiatry, Government Medical College and General Hospital, Nalgonda, Telangana, India.

Received : 09/07/2024
Received in revised form : 06/09/2024
Accepted : 22/09/2024

Corresponding Author:

Dr. Anil V,
Assistant Professor, Department of Psychiatry, Government Medical College and General Hospital, Nalgonda, Telangana, India.
Email: drani197@gmail.com.

DOI: 10.70034/ijmedph.2024.3.150

Source of Support: Nil,
Conflict of Interest: None declared

Int J Med Pub Health
2024; 14 (3); 839-845

ABSTRACT

Background: Caregivers of schizophrenia patients often face substantial physical, emotional, and psychological burdens. Understanding the impact of caregiving and the coping strategies employed by caregivers is crucial for developing targeted interventions to support them. **Objective:** This study aims to assess the caregiving burden and coping strategies among caregivers of schizophrenia patients, focusing on socio-demographic factors, psychological distress, and coping mechanisms.

Material and Methods: A cross-sectional study was conducted among 30 caregivers of schizophrenia patients. Data on socio-demographic characteristics, caregiving burden (assessed using the Family Burden Interview Schedule), and coping strategies (using the Coping Check List) were collected. Psychological distress was measured using the General Health Questionnaire-12 (GHQ-12). Descriptive statistics were used to analyze the data, with results presented as percentages.

Results: The majority of caregivers were aged 51–60 years (36.7%), with 63.3% residing in rural areas. Severe psychological distress was reported by 56.6% of caregivers, with a higher proportion among females (83.3%). Significant financial burden (56.7%) and disruptions in routine family activities (66.7%) were common. Positive coping strategies such as problem-solving (80.0%) and religious practices (83.3%) were widely employed, while avoidance strategies were less used (23.3%).

Conclusion: Caregivers of schizophrenia patients experience substantial burdens, particularly in terms of psychological distress and financial strain. Constructive coping strategies, such as problem-solving and religious practices, play a significant role in managing these challenges. Targeted support and interventions are essential to reduce caregiver burden and improve their well-being.

Key Words: Schizophrenia, caregiver burden, coping strategies, psychological distress, family burden, socio-demographic factors.

INTRODUCTION

Schizophrenia is a chronic and severe mental disorder that affects approximately 1% of the global population.^[1] It profoundly impacts the cognitive, emotional, and social functioning of individuals, often leading to significant impairments in daily life.^[2] Patients with schizophrenia require long-term care and support, much of which is provided by

family caregivers. These caregivers, who often assume responsibility for the patient's well-being, medication adherence, and overall management of the condition, face a substantial caregiving burden.^[3] This burden can manifest in various ways, including emotional strain, financial difficulties, disruption of family routines, and adverse effects on the caregiver's physical and mental health.^[4]

The burden of caregiving for schizophrenia patients is further exacerbated by socio-demographic factors, such as gender, age, education, socioeconomic status, and the nature of the caregiver-patient relationship. Studies have shown that caregivers, particularly in low- and middle-income countries, often experience high levels of psychological distress, financial strain, and a lack of adequate support systems.^[5] In addition to understanding the caregiving burden, it is essential to explore the coping mechanisms caregivers employ to manage the associated stress. Coping strategies, both constructive (such as problem-solving and religious practices) and maladaptive (such as avoidance or magical thinking), significantly influence the caregivers' ability to manage the challenges of caregiving and maintain their well-being. This study aims to assess the caregiving burden and coping strategies among caregivers of schizophrenia patients, with a focus on identifying key socio-demographic factors, psychological distress levels, and the effectiveness of various coping mechanisms. By gaining a comprehensive understanding of these factors, targeted interventions can be developed to better support caregivers and reduce the burden they experience.

MATERIAL AND METHODS

Study Design and Subjects

The study was a cross-sectional design conducted between October 2014 and September 2016, involving 30 caregivers of schizophrenia patients who attended the outpatient services of the psychiatry department. The sample consisted of caregivers who met the inclusion criteria and were assessed to explore their burden and coping mechanisms while providing care to patients diagnosed with schizophrenia.

Place of Study

The study was conducted at the Department of Psychiatry, Kamineni Institute of Medical Sciences, Narketpally, Telangana, India.

Inclusion Criteria:

- Caregivers of schizophrenia patients.
- Caregivers aged 21 to 60 years, of either gender.
- Caregivers who had lived with the patient for 12 months or more.
- Patients with schizophrenia for more than 6 months.
- Informed consent obtained for inclusion in the study.

Exclusion Criteria

- Caregivers with unsound physical or mental health.
- Caregivers of schizophrenia patients with no other comorbidity.
- Families with additional members having psychiatric or other comorbid conditions.

- Caregivers who were unwilling to participate in the study.

Study Tools

Intake Proforma

A self-structured proforma was used to collect socio-demographic details and psychosocial history of caregivers and patients.

Socio-Economic Status (SES) Scale by O.P. Aggarwal (2005)

A 22-item questionnaire assessing various indicators of socioeconomic status, which are determinants of health, nutritional status, mortality, and morbidity. The SES scale categorizes socioeconomic status into six levels:

- Upper High: ≥ 76
- High: 61–75
- Upper Middle: 46–60
- Lower Middle: 31–45
- Poor: 16–30
- Very Poor: ≤ 15

International Classification of Diseases-10 (ICD-10), WHO (1992)

This tool was used to classify mental and behavioral disorders, with a focus on diagnosing schizophrenia.

Brief Psychiatric Rating Scale (BPRS) by Overall JE and Gorham DR (1962)

An 18-item scale used to assess positive, negative, and affective symptoms in patients with psychotic disorders, particularly schizophrenia. Symptoms are rated on a scale from 0 to 7, with higher scores indicating greater severity:

- 0: Not assessed
- 1: Not present
- 2: Very mild
- 3: Mild
- 4: Moderate
- 5: Moderately severe
- 6: Severe
- 7: Extremely severe

General Health Questionnaire-12 (GHQ-12) by Goldberg DP and Hillier VF (1979)

A 12-item screening tool designed to identify individuals at risk of developing psychiatric disorders. Each item is scored on a Likert scale from 0 to 3, with a total score range of 0–36. Scores >15 indicate distress, while scores >20 indicate severe psychological distress.

Family Burden Interview Schedule (FBIS) by Pai S and Kapur RL (1981)

This 24-item scale assesses the burden experienced by families caring for schizophrenia patients across six domains:

- Financial burden
 - Disruption of routine family activities
 - Disruption of family leisure
 - Disruption of family interaction
 - Effect on physical health of others
 - Effect on mental health of others
- Items are rated on a scale from 0 (no burden) to 2 (severe burden). A higher score indicates a greater

burden. The scale has reliability and validity coefficients of 0.87 and 0.72, respectively.

Coping Check List (CCL) by Rao K, Subbkrishna DK, and Prabhu GG (1989):

A 70-item checklist measuring various coping strategies used by caregivers. The items are grouped into nine categories and scored dichotomously (Yes/No), with test-retest reliability of 0.74 and an overall alpha coefficient of 0.86. The categories include:

- Positive cognitive strategies
- Negative cognitive strategies
- Problem-solving strategies
- Distraction
- Magical thinking
- Avoidance
- Religious coping
- Help-seeking behavior
- External attribution

Data Collection Procedure

Patients attending outpatient services of the Department of Psychiatry were screened using the Mental Status Examination (MSE) and diagnosed with schizophrenia according to ICD-10 criteria. The diagnosis was confirmed by a senior psychiatrist. Caregivers of patients with a history of schizophrenia for more than 6 months, who met the inclusion criteria, were recruited for the study.

Caregivers were identified as family members who were intimately involved in the care and daily needs of the patient. Written informed consent was obtained from all caregivers. Sociodemographic information was collected using the intake proforma, and caregivers were screened for psychological distress using the GHQ-12. Burden was assessed using the FBIS, and coping strategies were evaluated using the CCL. Schizophrenia patients were assessed for the severity of their illness using the BPRS.

Data Analysis

The data was entered and analyzed using SPSS software (version 17). Descriptive statistics were used to summarize the socio-demographic characteristics, psychological distress levels, burden, and coping strategies. Results were presented as percentages, and statistical tests were applied where appropriate.

Ethical Considerations

Approval for the study was obtained from the Institutional Ethics Committee of Kamineni Institute of Medical Sciences. Written informed consent was obtained from all participants, ensuring the confidentiality of their identities.

RESULTS

This study assessed the burden and coping strategies among caregivers of schizophrenia patients. The findings are organized based on socio-demographic characteristics, caregiving burden, and coping mechanisms.

Socio-Demographic Characteristics

The caregivers' age, gender, and place of residence distribution are shown in **Table 1**. The majority (36.7%) of caregivers were in the 51–60-year age group, with more males (44.5%) than females (25.0%). Most caregivers (63.3%) resided in rural areas.

As seen in **Table 2**, 83.3% of caregivers were Hindu, with a small representation of Muslim (10.0%) and Christian (6.7%) caregivers. All caregivers (100%) were married.

In terms of education and socioeconomic status, **Table 3** indicates that 36.7% of caregivers had college-level education, with a higher percentage of illiterate females (58.3%) compared to males (16.7%). In terms of socioeconomic status, 36.7% of caregivers belonged to the poor class, while 60.0% were in the middle socioeconomic segments.

Occupation and Family Type

Table 4 shows that most male caregivers (50.0%) were engaged in agriculture, while a significant proportion of females (41.7%) were unskilled workers. A majority of caregivers (86.7%) belonged to nuclear families, with more females (91.7%) than males (83.3%) in nuclear households.

Duration of Caregiving and Relationship with Patients

As shown in **Table 5**, 50.0% of caregivers had been caring for the patient for over 20 years, with more males (55.6%) than females (41.7%) in this category. Most caregivers were either parents (46.7%) or spouses (46.7%) of the patients, with a higher percentage of females (83.3%) being parents compared to males (22.2%).

Psychological Distress and Financial Burden

The **GHQ-12** scores (General Health Questionnaire-12) and financial burden of caregivers are summarized in **Table 6**. A majority (56.6%) of caregivers experienced severe psychological distress (GHQ-12 score > 20), with a higher percentage of females (83.3%) reporting severe distress compared to males (38.9%). Additionally, 56.7% of caregivers reported severe financial burden, with a significantly higher proportion of females (75.0%) affected than males (44.5%).

Disruption of Family Activities, Leisure, and Interaction

Caregivers reported substantial disruptions to family life. As shown in **Table 7**, 66.7% of caregivers experienced severe disruption of routine family activities, while 40.0% reported severe disruption of family leisure. Regarding family interaction, 60.0% reported moderate burden, with 26.7% experiencing severe disruption.

Physical and Mental Health Effects on Others

The effects on physical and mental health of others in the family are detailed in **Table 8**. Half of the caregivers (50.0%) reported no burden on physical health, while 43.3% reported moderate effects. Regarding mental health, 53.3% experienced no burden, and 40.0% reported moderate effects on mental well-being.

Subjective Burden on the Family

The overall subjective burden on the family is shown in **Table 9**. Severe burden was reported by 63.3% of caregivers, particularly among female caregivers, where 100% reported severe burden.

Coping Strategies

Caregivers employed various coping strategies, as seen in **Table 10**. Positive coping strategies, such as problem-solving (80.0%) and religious practices (83.3%), were widely used. Magical thinking was reported by 80.0% of caregivers, while 76.7% did not engage in avoidance strategies. Help-seeking behavior was adopted by 83.3% of caregivers, and external attribution was reported by 43.3%.

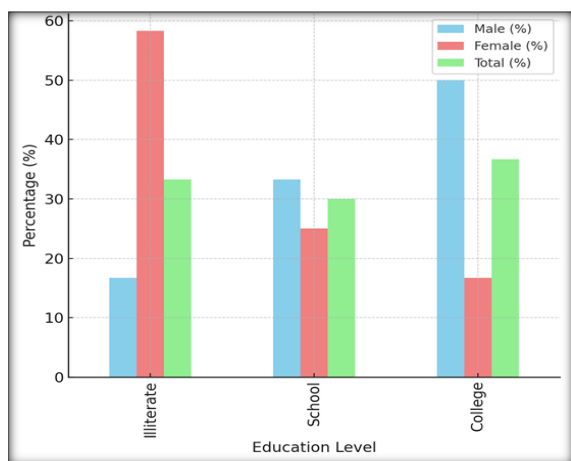


Figure 1: Distribution by Education Level

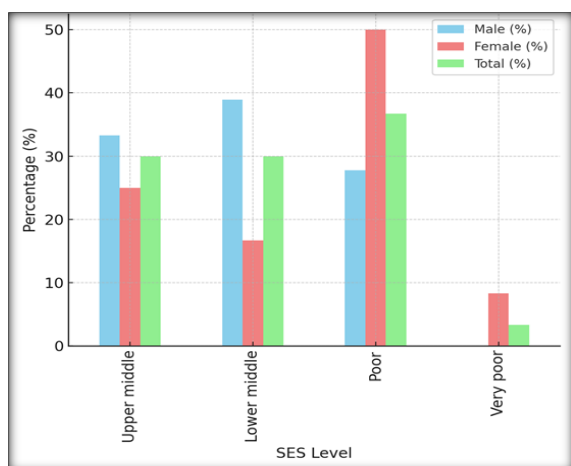


Figure 2: Distribution by Socioeconomic Status

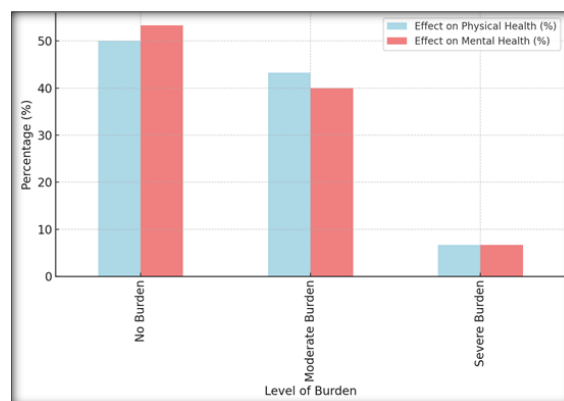


Figure 3: Distribution by Effects on Physical and Mental Health of Others

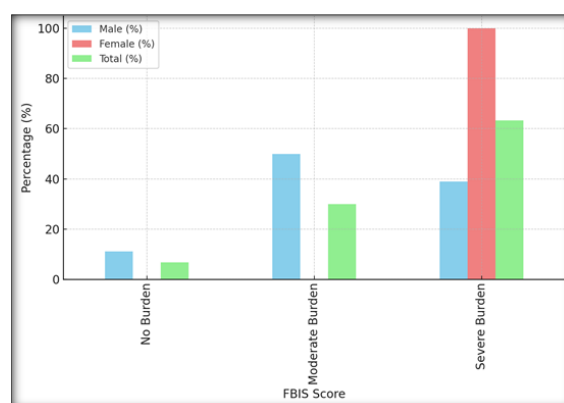


Figure 4: Distribution According to Subjective Burden on the Family

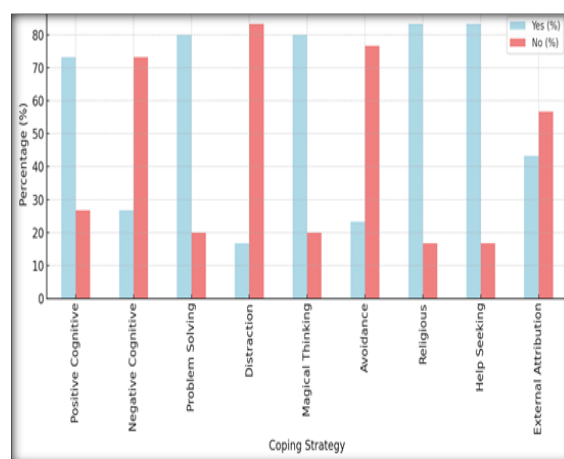


Figure 5: Distribution According to Coping Strategies

Table 1: Distribution by Age, Gender, and Place of Residence

Age Group (yrs)	Male n (%)	Female n (%)	Total N (%)	Rural n (%)	Urban n (%)	Total N (%)
21 – 30	01 (05.5)	02 (16.7)	03 (10.0)	01 (05.6)	02 (16.7)	03 (10.0)
31 – 40	06 (33.3)	03 (25.0)	09 (30.0)	05 (27.8)	04 (36.7)	09 (30.0)
41 – 50	03 (16.7)	04 (33.3)	07 (23.3)	05 (27.8)	02 (16.7)	07 (23.3)
51 – 60	08 (44.5)	03 (25.0)	11 (36.7)	08 (44.4)	03 (25.0)	11 (36.7)
Total	18 (100)	12 (100)	30 (100)	19 (63.3)	11 (36.7)	30 (100)

Table 2: Distribution by Religion and Marital Status

Religion	Male n (%)	Female n (%)	Total N (%)	Married n (%)	Unmarried n (%)	Total N (%)
Hindu	15 (83.3)	10 (83.3)	25 (83.3)	18 (100)	--	30 (100)
Muslim	01 (05.6)	02 (16.7)	03 (10.0)	--	--	--

Christian	02 (11.1)	--	02 (06.7)	--	--	--
Total	18 (100)	12 (100)	30 (100)	18 (100)	--	30 (100)

Table 3: Distribution by Education and Socioeconomic Status (SES)

Education Level	Male n (%)	Female n (%)	Total N (%)	SES Level	Male n (%)	Female n (%)	Total N (%)
Illiterate	03 (16.7)	07 (58.3)	10 (33.3)	Upper middle	06 (33.3)	03 (25.0)	09 (30.0)
School	06 (33.3)	03 (25.0)	09 (30.0)	Lower middle	07 (38.9)	02 (16.7)	09 (30.0)
College	09 (50.0)	02 (16.7)	11 (36.7)	Poor	05 (27.8)	06 (50.0)	11 (36.7)
Total	18 (100)	12 (100)	30 (100)	Very poor	--	01 (08.3)	01 (03.3)

Table 4: Distribution by Occupation and Type of Family

Occupation	Male n (%)	Female n (%)	Total N (%)	Type of Family	Male n (%)	Female n (%)	Total N (%)
Unskilled	02 (11.1)	05 (41.7)	07 (23.3)	Nuclear	15 (83.3)	11 (91.7)	26 (86.7)
Skilled	02 (11.1)	02 (16.7)	04 (13.3)	Joint	03 (16.7)	01 (08.3)	04 (13.3)
Agriculture	09 (50.0)	01 (08.3)	10 (33.3)	Total	18 (100)	12 (100)	30 (100)
Business	04 (22.2)	--	04 (13.3)				
Unemployed	01 (05.6)	04 (33.3)	05 (16.7)				
Total	18 (100)	12 (100)	30 (100)				

Table 5: Distribution by Duration of Stay and Relationship with the Patient

Duration of Stay (yrs)	Male n (%)	Female n (%)	Total N (%)	Relationship	Male n (%)	Female n (%)	Total N (%)
≤10	02 (11.1)	01 (08.3)	03 (10.0)	Parent	04 (22.2)	10 (83.3)	14 (46.7)
10–20	06 (33.3)	06 (50.0)	12 (40.0)	Spouse	12 (66.6)	02 (16.7)	14 (46.7)
≥20	10 (55.6)	05 (41.7)	15 (50.0)	Others	02 (11.1)	--	02 (06.6)
Total	18 (100)	12 (100)	30 (100)	Total	18 (100)	12 (100)	30 (100)

Table 6: Distribution by GHQ-12 Score and Financial Burden

GHQ-12 Score	Male n (%)	Female n (%)	Total N (%)	Financial Burden	Male n (%)	Female n (%)	Total N (%)
<15 (No Distress)	05 (27.8)	--	05 (16.7)	No burden	04 (22.2)	--	04 (13.3)
15–20 (Moderate)	06 (33.3)	02 (16.7)	08 (26.7)	Moderate burden	06 (33.3)	03 (25.0)	09 (30.0)
>20 (Severe)	07 (38.9)	10 (83.3)	17 (56.6)	Severe burden	08 (44.5)	09 (75.0)	17 (56.7)
Total	18 (100)	12 (100)	30 (100)	Total	18 (100)	12 (100)	30 (100)

Table 7: Distribution by Disruption of Family Activities, Leisure, and Interaction

Level of Burden	Disruption of Family Activities	Disruption of Family Leisure	Disruption of Family Interaction
No Burden	01 (03.3)	01 (03.3)	04 (13.3)
Moderate Burden	09 (30.0)	17 (56.7)	18 (60.0)
Severe Burden	20 (66.7)	12 (40.0)	08 (26.7)
Total (N = 30)	30 (100)	30 (100)	30 (100)

Table 8: Distribution by Effects on Physical and Mental Health of Others

Level of Burden	Effect on Physical Health	Effect on Mental Health
No Burden	15 (50.0)	16 (53.3)
Moderate Burden	13 (43.3)	12 (40.0)
Severe Burden	02 (06.7)	02 (06.7)
Total (N = 30)	30 (100)	30 (100)

Table 9: Distribution According to Subjective Burden on the Family

FBIS Score	Male n (%)	Female n (%)	Total N (%)
No Burden	02 (11.1)	--	02 (06.7)
Moderate Burden	09 (50.0)	--	09 (30.0)
Severe Burden	07 (38.9)	12 (100)	19 (63.3)
Total	18 (100)	12 (100)	30 (100)

Table 10: Distribution According to Coping Strategies (CCL)

Coping Strategy	Yes n (%)	No n (%)	Total N (%)
Positive Cognitive	22 (73.3)	08 (26.7)	30 (100)
Negative Cognitive	08 (26.7)	22 (73.3)	30 (100)
Problem Solving	24 (80.0)	06 (20.0)	30 (100)
Distraction	05 (16.7)	25 (83.3)	30 (100)
Magical Thinking	24 (80.0)	06 (20.0)	30 (100)
Avoidance	07 (23.3)	23 (76.7)	30 (100)

Religious	25 (83.3)	05 (16.7)	30 (100)
Help Seeking	25 (83.3)	05 (16.7)	30 (100)
External Attribution	13 (43.3)	17 (56.7)	30 (100)

DISCUSSION

The findings of this study emphasize the significant burden faced by caregivers of schizophrenia patients and the diverse coping mechanisms they employ to manage the associated stress. Schizophrenia is a chronic mental disorder that necessitates long-term care, placing a substantial psychological, physical, and social strain on caregivers. Consistent with previous research, most caregivers in this study reported high levels of psychological distress, financial burden, and disruptions in family activities, leisure, and interaction. Such findings align with those of Grover et al., who noted similar emotional and financial strains among caregivers of individuals with schizophrenia.

Factors and Burden

The demographic analysis revealed that the majority of caregivers resided in rural areas (63.3%) and were from middle or lower socioeconomic backgrounds (66.7%). Caregivers in rural settings may have less access to mental health resources and social support, exacerbating their caregiving burden. This is consistent with Rahmani et al., who found that rural caregivers experienced heightened stress due to limited healthcare services. The caregivers were also aged between 51 and 60 years, suggesting that older caregivers bear a significant portion of the caregiving responsibility, despite potentially facing health challenges of their own.

Additionally, female caregivers reported significantly higher psychological distress compared to their male counterparts. This finding mirrors existing research by Kamarulbahri et al.,^[10] who demonstrated that traditional gender roles disproportionately assign caregiving responsibilities to women, contributing to their increased levels of stress.

Psychologists and Burden

More than half of the caregivers (56.6%) in this study experienced severe psychological distress, as measured by the GHQ-12. This aligns with findings from Rahmani et al., who highlighted that caregivers of schizophrenia patients are at a higher risk for mental health issues, including anxiety and depression. Female caregivers, in particular, exhibited higher distress levels, which may be attributed to their dual roles in managing caregiving duties and household responsibilities. The financial burden was also critical, with 56.7% of caregivers reporting severe financial strain. As noted by Shamsaei et al.,^[11] financial challenges are often closely linked to heightened psychological distress, underscoring the need for economic support systems.

Coping Mechanisms

The coping employed by caregivers in this study were varied, with a significant reliance on problem-solving (80.0%) and religious coping (83.3%).

Religious practices and magical thinking (80.0%) were particularly common, reflecting the role of spiritual beliefs in helping caregivers find meaning and manage their stress. This is especially relevant in the Indian cultural context, where religious beliefs often play a significant role in coping with personal challenges, as noted by Tan et al.^[12]

On the other hand, avoidance strategies were only used, with only 23.3% of caregivers adopting this approach. This suggests that most caregivers face the challenges of caregiving directly, despite the high burden they experience. Help-seeking behavior was also widely adopted (83.3%), indicating that many caregivers actively sought assistance from medical professionals, family members, or community resources. These findings are in line with Geriani et al.,^[14] who noted that proactive coping strategies are more effective in managing the caregiving burden.

Implications for Practice

The high levels of disorder identified in this study highlight the urgent need for targeted interventions to support caregivers of schizophrenia patients. Mental health professionals should routinely assess the psychological well-being of caregivers and provide interventions such as counseling, financial support, and respite care. Strengthening community-based mental health services, particularly in rural areas, could provide much-needed support to caregivers who may have limited access to formal healthcare systems. This recommendation is supported by Kamarulbahri et al.,^[10] who emphasized the importance of improving mental health services in underserved regions.

Educational programs aimed at enhancing problem-solving skills mechanisms can help caregivers manage their roles more effectively. The significant reliance on religious and spiritual coping strategies also suggests that culturally sensitive approaches should be integrated into caregiver support programs to enhance their effectiveness. Rahmani et al. echoed this sentiment, highlighting the importance of tailoring interventions to the cultural contexts of caregivers.

Limitations and Future Research

This study has several limitations. The sample size was relatively small (30 caregivers), which may limit the generalizability of the findings. Additionally, the cross-sectional design of the study does not allow for tracking changes in caregiver burden over time. Future research should include larger, more diverse samples and adopt a longitudinal design to better understand the evolving nature of caregiver burden and coping strategies.

Moreover, it would be valuable to explore the effectiveness of specific coping strategies in reducing caregiver burden and improving psychological well-being. Future studies could also

examine the impact of caregiver support programs on reducing the burden and enhancing coping capacity.

CONCLUSION

Caregiving, while undoubtedly burdensome, is an essential responsibility, especially when supporting individuals with chronic and disabling illnesses such as schizophrenia. Schizophrenia can profoundly impact not only the patient but also the entire family, affecting both the daily life and the physical and mental health of caregivers. The prolonged stress associated with caregiving in such conditions can have detrimental effects, making it crucial to provide long-term treatment, care, and rehabilitation.

To address these challenges, it is imperative to educate both family members and the community involved in the care of schizophrenia patients. Equipping caregivers with the necessary knowledge and resources will enable them to better manage the demands of caregiving. Coping strategies are essential tools that caregivers adopt to navigate difficult situations, and the role of personality factors in determining the effectiveness of these strategies should not be overlooked.

Information gathered from studies on caregiving burden and coping mechanisms can greatly assist in developing targeted interventions that support caregivers. By empowering caregivers with effective coping skills and providing the right support systems, the overall rehabilitation process for patients with schizophrenia can be improved, ultimately enhancing the quality of care provided

REFERENCES

1. Walke SC, Chandrasekaran V, Mayya SS. Caregiver Burden among Caregivers of Mentally Ill Individuals and Their Coping Mechanisms. *J Neurosci Rural Pract.* 2018 Apr-Jun;9(2):180-185. doi: 10.4103/jnrp.jnrp_312_17. PMID: 29725166; PMCID: PMC5912021
2. Gupta P, Bharti P, Bathla M, Singh AH, Bhusri L. A cross-sectional study to assess the caregiver burden and the quality of life of caregivers of the patients suffering with psychiatric illness. *Ind Psychiatry J.* 2022 Jan-Jun;31(1):151-157. doi: 10.4103/ipj.ipj_228_20. Epub 2022 May 20. PMID: 35800861; PMCID: PMC9255620.
3. Guan Z, Wiley JA, Tang S, Sun M. Internalised stigma, social support, coping and care-giving burden among Chinese family caregivers of adults diagnosed with schizophrenia: A parallel mediation analysis. *Health Soc Care Community.* 2022 Nov;30(6):2300-2310. doi: 10.1111/hsc.13780. Epub 2022 Mar 30. PMID: 35355363.
4. Hsiao CY, Lu HL, Tsai YF. Caregiver burden and health-related quality of life among primary family caregivers of individuals with schizophrenia: a cross-sectional study. *Qual Life Res.* 2020 Oct;29(10):2745-2757. doi: 10.1007/s11136-020-02518-1. Epub 2020 May 11. PMID: 32394137.
5. Kumar S, Dixit V, Ali R, Chaudhury S. Gender differences in burden of care and coping strategies among caregivers of schizophrenia patients. *Ind Psychiatry J.* 2023 Jan-Jun;32(1):78-85. doi: 10.4103/ipj.ipj_44_22. Epub 2022 Sep 14. PMID: 37274572; PMCID: PMC10236670.
6. Janah M, Hargiana G. Levels of stress and coping strategies in family caregivers who treat schizophrenic patients with risk of violent behavior. *J Public Health Res.* 2021 May 31;10(s1):jphr.2021.2404. doi: 10.4081/jphr.2021.2404. PMID: 34060756; PMCID: PMC9309628.
7. Cham CQ, Ibrahim N, Siau CS, Kalamam CR, Ho MC, Yahya AN, Visvalingam U, Roslan S, Abd Rahman FN, Lee KW. Caregiver Burden among Caregivers of Patients with Mental Illness: A Systematic Review and Meta-Analysis. *Healthcare (Basel).* 2022 Nov 30;10(12):2423. doi: 10.3390/healthcare10122423. PMID: 36553947; PMCID: PMC9777672.
8. Grover S, Pradyumna, Chakrabarti S. Coping among the caregivers of patients with schizophrenia. *Ind Psychiatry J.* 2015 Jan-Jun;24(1):5-11. doi: 10.4103/0972-6748.160907. PMID: 26257476; PMCID: PMC4525432.
9. Rahmani F, Ranjbar F, Hosseinzadeh M, Razavi SS, Dickens GL, Vahidi M. Coping strategies of family caregivers of patients with schizophrenia in Iran: A cross-sectional survey. *Int J Nurs Sci.* 2019 Mar 8;6(2):148-153. doi: 10.1016/j.ijnss.2019.03.006. PMID: 31406884; PMCID: PMC6608655.
10. Kamarulbahri TMST, Ariaratnam S, Nikmat AW, Abdullah NN, Khing TL. Coping strategies and their associated factors among caregivers of patients with schizophrenia in Kuantan, Malaysia. *Front Psychiatry.* 2022 Sep 29; 13:1004034. doi: 10.3389/fpsy.2022.1004034. PMID: 36245870; PMCID: PMC9556896.
11. Shamsaei F, Cheraghi F, Bashirian S. Burden on Family Caregivers Caring for Patients with Schizophrenia. *Iran J Psychiatry.* 2015 Sep;10(4):239-45. PMID: 27006669; PMCID: PMC4801494.
12. Tan SC, Yeoh AL, Choo IB, Huang AP, Ong SH, Ismail H, Ang PP, Chan YH. Burden and coping strategies experienced by caregivers of persons with schizophrenia in the community. *J Clin Nurs.* 2012 Sep;21(17-18):2410-8. doi: 10.1111/j.1365-2702.2012.04174.x. PMID: 22889442.
13. Rahmani F, Roshangar F, Gholizadeh L, Asghari E. Caregiver burden and the associated factors in the family caregivers of patients with schizophrenia. *Nurs Open.* 2022 Jul;9(4):1995-2002. doi: 10.1002/nop.2.1205. Epub 2022 Mar 28. PMID: 35347867; PMCID: PMC9190687.
14. Geriani D, Savithry KS, Shivakumar S, Kanchan T. Burden of care on caregivers of schizophrenia patients: a correlation to personality and coping. *J Clin Diagn Res.* 2015 Mar;9(3):VC01-VC04. doi: 10.7860/JCDR/2015/11342.5654. Epub 2015 Mar 1. PMID: 25954685; PMCID: PMC4413135.