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Original Article

THE EFFECT OF PEER GROUP SUPPORT ON FAMILY CAREGIVER BURDEN IN POST-STROKE PATIENT CARE

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ABSTRACT

Background: The caregiver burden experienced by families in caring for stroke patients can significantly affect their quality of life.
Purpose: This study aims to determine the effect of peer group support on the caregiver burden of families caring for post-stroke patients.
Methods: This study used a true experimental design with a pretest-posttest control group method, conducted at Universitas Airlangga Hospital in Surabaya from January to April 2025. The population consisted of 153 individuals, and the sample included 52 families of stroke patients, divided into two groups (treatment = 26, control = 26). Data were collected using the Caregiver Burden Inventory (CBI) questionnaire and analyzed using the Wilcoxon and Mann-Whitney test.
Results: The results showed a significant reduction in caregiver burden in the treatment group after receiving the peer group support intervention ($p < 0.001$). The Mann-Whitney test also indicated a significant difference between the two groups after the intervention ($p = 0.001$).
Conclusion: Peer group support has been proven effective in reducing the burden of care experienced by families of post-stroke patients. Further studies are recommended to explore its use in reducing stress and anxiety during the caregiving process.
Keywords: Caregiver Burden, Family, Peer Group Support, Non-Communicable Disease, Stroke.

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INTRODUCTION

Stroke is the second leading cause of death and the third leading cause of disability worldwide, with a significant impact not only on patients but also on their families. Stroke patients often experience motor impairments, making them dependent on family members to meet their daily needs. This condition creates physical, psychological, social, and financial burdens for caregivers, which frequently lead to stress, fatigue, and even depression.

According to WHO, global stroke cases have increased by 43% and stroke-related mortality by 102%, with Indonesia ranking first in stroke mortality rates. Based on the 2018 Basic Health Research (Riskesdas), the prevalence of stroke in Indonesia was 10.9‰, while in East Java it reached 12.4%. Data from Universitas Airlangga Hospital recorded 313 stroke patients in the past year, the majority being ischemic stroke. Preliminary interviews revealed that 7 out of 10 family caregivers reported stress and fatigue, with caregiver stress prevalence estimated at 30–40%.

Family plays a crucial role in patient care, yet the psychosocial needs of caregivers are often overlooked. The burden may involve psychological, physical, financial, and social pressures, which are exacerbated by a lack of environmental support. Therefore, peer group support is expected to provide caregivers with opportunities to share experiences, exchange information, and offer mutual motivation.

Several studies have demonstrated the effectiveness of peer group support for patients with hypertension and diabetes; however, research focusing on its impact on family caregiving burden among stroke patients remains limited. This study aims to explore the experiences of stroke caregivers and examine the effect of peer group support on reducing caregiving burden.

METHODS

Study Design

This study employed a quantitative approach with a true experimental design, specifically a pretest–posttest control group design, aimed at examining the effect of peer group support on the caregiving burden of families caring for post-stroke patients.

Setting and Participants

The study was conducted at Universitas Airlangga Hospital (RSUA) Surabaya with family caregivers of stroke patients as respondents. The location was chosen due to the relatively high number of stroke cases, which facilitated the recruitment of participants who met the inclusion

criteria, as well as easier research access. The study was carried out from January to April 2025, with data collection conducted from January 28 to February 28, 2025, and data analysis completed in April 2025. The population consisted of families of ischemic stroke patients undergoing outpatient follow-up at Universitas Airlangga Hospital Surabaya, totaling 153 individuals. Samples were selected using simple random sampling from families who met the inclusion criteria, namely being the primary caregiver and having at least three months of caregiving experience. A total of 46 respondents were recruited and equally divided into the control group and the intervention group (23 respondents each).

Intervention

The study involved two groups: the intervention group, which received peer group support, and the control group, which received conventional hospital education (usual care).

Instruments and Data Collection

Sampling was carried out through initial screening of family members caring for stroke patients who experienced caregiving burden. A total of 52 respondents were recruited based on sample size calculation and then randomly assigned into two groups (treatment and control), with 26 respondents in each group. Written informed consent was obtained, followed by the completion of a pre-test questionnaire. Subsequently, respondents were enrolled in WhatsApp groups according to their respective groups, which served as the platform for scheduled interventions and discussions

Data Analysis

Data processing was carried out through editing, coding, scoring, and statistical analysis using SPSS. The data analysis included both descriptive and inferential statistics, with the Wilcoxon test and the Mann–Whitney test applied to examine differences in caregiving burden between groups before and after the intervention.

Ethical Consideration

Prior to the research, the researcher obtained research permission, preliminary data, and ethical clearance from the RSUA Ethics Committee.

RESULTS

Based on the characteristics of the respondents, the majority were adults aged 26–45 years, female, residing in Surabaya, of Javanese ethnicity, Muslim, and had a secondary level of

education. This indicates that caregiving responsibilities for stroke patients are generally still assumed by women with a medium level of education.

Table 1. Control Group Data Before and After the Intervention.

No.	Category	Before		After	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
. 1.	Mild burden	-	-	0	-
2.	Moderate burden	16	61.5	19	73.1
3.	Severe burden	10	38.5	7	26.9
	Total	**26**	**100.0**	**26**	**100.0**

In the control group, prior to the intervention, most respondents (61.5%) experienced a moderate caregiver burden, and 38.5% experienced a severe burden. After receiving standard education from the hospital, there was only a slight change: 53.8% remained in the moderate category, 38.5% still experienced a severe burden, and only 7.7% reported a reduction to a mild burden. This indicates that conventional educational approaches did not produce a significant reduction in caregiver burden (Table 1).

Table 2. Treatment Group Data Before and After the Intervention.

No.	Category	Before		After	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
. 1.	Mild burden	2	7.7	20	76.1
2.	Moderate burden	14	53.8	6	23.1
3.	Severe burden	10	38.5	0	0
	Total	**26**	**100.0**	**26**	**100.0**

In the treatment group, which received the peer group support intervention over five sessions across three weeks, significant changes were observed. Prior to the intervention, 73.1% experienced a moderate burden and 26.9% experienced a severe burden. After the intervention, 76.1% of respondents reported a reduction to a mild burden, and the remaining 23.1% were categorized as having a moderate burden. No respondents remained in the severe burden category.

Table 3. Crosstabulation.

Caregiver Burden	Group							
	Treatment group				Control group			
	Pre-test	f (%)	*Post-test*	f (%)	*Pre-test*	f (%)	*Post-test*	f (%)
Mild	0	0.0%	20	76.1%	0	0.0%	2	7.7%
Moderate	19	73.1%	6	23.1%	16	61.5%	14	53.8%
Severe	7	26.9%	0	0.0%	10	38.5%	10	38.5%
p-*value* *a*	< 0.001				0.174			
p-*value* *b*	0.001							

The Wilcoxon test showed a significant change in the treatment group ($p < 0.001$), while no significant change was observed in the control group ($p = 0.174$). Furthermore, the Mann-Whitney test showed a significant difference between the two groups ($p = 0.001$), confirming that peer group support is effective in reducing the caregiver burden of families caring for stroke patients.

These findings strengthen the evidence that peer-based social support interventions can positively impact the psychosocial well-being of caregivers, in contrast to standard hospital education.

DISCUSSION

This study demonstrates that the peer group support intervention significantly reduced the caregiving burden among families in the treatment group. Caregivers reported feeling more emotionally supported, less isolated, and better able to understand their role in caring for post-stroke patients. Active group discussions fostered mutual trust and emotional bonding, which in turn increased motivation and preparedness for caregiving. This finding is consistent with da Silva and Boery (2021), who reported that structured support interventions for family caregivers of stroke survivors improved psychological well-being and reduced perceived burden, and with Dewa Ayu Putu (2022), who found that peer support groups enhanced caregivers' quality of life by providing a safe space to share experiences and receive validation from others facing similar challenges.

The effectiveness of the intervention also appeared to be shaped by the sociodemographic characteristics of the respondents. The predominance of adult caregivers aged 26–45 years may

have supported greater responsiveness and cooperation during the sessions, while the Javanese cultural values held by most participants—which strongly emphasize family solidarity and collective responsibility (Adi, 2020)—likely reinforced caregivers' willingness to engage openly and support one another within the group.

In contrast, the control group, which received only standard hospital education without interactive dialogue, did not show a significant reduction in caregiving burden. This finding is in line with Ariska et al. (2020), who identified information deficits and a lack of emotional outlets as key contributors to persistent caregiver burden among families of stroke patients, and with Borah et al. (2023), who reported that passive educational approaches were insufficient to relieve the psychological stress experienced by caregivers of stroke patients during rehabilitation. Passive interventions such as lectures or leaflets appeared less effective in changing caregivers' perceptions and emotional responses, particularly among women, who dominated both groups and have been reported to be more susceptible to caregiving-related emotional stress (Alim et al., 2023). Although respondents living in Surabaya generally had good access to health information, the education-only approach proved insufficient on its own.

The Mann–Whitney test confirmed a significant difference between the treatment and control groups, reinforcing that peer group support was more effective than conventional education alone. Respondents with middle to higher education levels and strong Islamic backgrounds appeared to engage more actively in the intervention; their acceptance of the caregiver role was strengthened by spiritual values such as sincerity (ikhlas) and trust in God (tawakal), which have been associated with psychological resilience among Muslim caregivers. Taken together, these findings suggest that discussion-based, peer-driven interventions that combine informational and emotional support have a substantially greater impact on caregiver burden than one-way, education-only approaches (da Silva & Boery, 2021).

IMPLICATION AND LIMITATIONS

This study has several limitations that should be considered when interpreting its findings. First, respondents were drawn from a single hospital (Universitas Airlangga Hospital, Surabaya) with a relatively small sample size (52 respondents), which may limit the generalizability of the findings to caregivers in other regions or healthcare settings. Second, most respondents shared similar sociodemographic characteristics—predominantly female, of Javanese ethnicity, and Muslim—so the intervention's effectiveness may not generalize well to caregivers from different cultural, religious, or gender backgrounds. Third, caregiver burden

was measured using a self-reported questionnaire, which may be subject to social desirability or recall bias. Finally, the follow-up period was relatively short, and this study did not assess whether the reduction in caregiver burden was sustained over a longer period after the intervention ended. Future studies with larger and more diverse samples, longer follow-up periods, and objective outcome measures are recommended to strengthen the generalizability and robustness of these findings.

CONCLUSION

Based on the findings of this study, several important conclusions can be drawn regarding the effectiveness of peer group support interventions on the caregiving burden of families caring for post-stroke patients. First, peer group support was proven effective in reducing the caregiving burden in the intervention group. This indicates that by sharing experiences, providing motivation, and offering emotional support among family caregivers, they were able to gain psychological reinforcement that contributed to reducing both physical and mental strain in caring for stroke patients.

Second, the standard education provided by the hospital also played a role in decreasing the caregiving burden of families. Such education offered basic knowledge and a better understanding of post-stroke care, thereby enhancing caregivers' skills and confidence in fulfilling their roles.

Third, although standard education showed benefits, the study revealed that peer group support was more effective than relying solely on hospital education. Peer group activities not only provided information but also emotional support, a sense of togetherness, and opportunities for caregivers to exchange experiences, resulting in a more significant impact on reducing caregiving burden.

Overall, this study demonstrated that peer group support is an effective strategy to alleviate the burden of families caring for post-stroke patients. This program is recommended as an alternative intervention for hospitals and healthcare providers to support family caregivers. Through peer group support, caregivers are expected to be better prepared to face the challenges of stroke care, reduce stress levels, and improve the quality of life of both patients and their families.

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AI ASSISTANCE STATEMENT

This research was conducted without the use of AI assistance. AI tools were employed solely for refining the grammar during manuscript preparation. The scientific content—including research findings, data analysis, data interpretation, discussion, and conclusions—represents scholarly work for which the author bears full responsibility.

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