Proceedings Series on Health & Medical Sciences, Volume 9
Proceeding of the 1st Holistic Healthcare Delivery through Community-Based Approaches, Technological Innovation, and Preventive Education Conference
ISSN: 2808-1021

The Effects of Hand and Foot Training Videos on Family Caregivers' Knowledge, Attitude, and Behavior in Training Post-Stroke Patients at RSUD Goeteng Taroenadibrata

Ade Sinta Oktaviana[1], Sodikin[2]
[1,2]Faculty of Health Sciences, Universitas Muhammadiyah Purwokerto, Indonesia

ARTICLE INFO

Article history:

DOI:
10.30595/pshms.v9i1.2224

Submitted:
February 21, 2026

Accepted:
April 06, 2026

Published:
April 23, 2026

Keywords:

knowledge, attitude, behavior, video, stroke

ABSTRACT

Family caregivers play a critical role in the rehabilitation of post-stroke patients, especially in performing physical exercises such as Range of Motion (ROM) exercises. This study aimed to evaluate the effect of a video training intervention on family caregivers' knowledge, attitude, and behavior in training post-stroke patients. A pre-experimental one-group pre-test post-test design was employed. Family caregivers of post-stroke patients at RSUD Goeteng Taroenadibrata participated in the study. Data was collected through pre- and post-test questionnaires that assessed caregivers' knowledge, attitude, and behavior regarding stroke rehabilitation exercises. The Wilcoxon signed-rank test was used for statistical analysis. The results indicated significant improvements in the caregivers' knowledge, attitude, and behavior after watching the training video, with p-values of 0.000 for all variables, indicating a strong positive effect. Video-based educational interventions are effective in enhancing the knowledge, attitude, and behavior of family caregivers in training post-stroke patients. This approach can be recommended as a cost-effective method to improve caregiver involvement in post-stroke rehabilitation.

Corresponding Author:
Sodikin
Faculty of Health Sciences, Universitas Muhammadiyah Purwokerto,
Soepardjo Rustam Street KM. 7, Banyumas, Indonesia
Email: sodikin@ump.ac.id

1. INTRODUCTION

Stroke is the second leading cause of death worldwide, with a significant impact on individuals and families. According to the Ministry of Health in Indonesia, stroke has been identified as the leading cause of death. Each year, millions are affected by this condition, leading to a combination of death and disability[1]. Stroke occurs when blood flow to the brain is disrupted, either due to a blockage or rupture of blood vessels, preventing the brain from receiving the necessary oxygen, which results in cell death[2].

In Indonesia, stroke is categorized as a catastrophic disease due to its high treatment costs and potential for fatal complications. The incidence rate continues to rise, and the majority of stroke cases are observed in urban areas. Prevention strategies such as physical activity, blood pressure control, and reducing risks like hypertension and smoking are essential for lowering stroke incidence[3].

Post-stroke patients often experience motor deficits, particularly in joint mobility, and require assistance for rehabilitation. Family caregivers play a crucial role in post-stroke care, providing support for physical exercises such as Range of Motion (ROM) exercises. However, family members' knowledge and attitudes toward rehabilitation significantly influence the quality of care provided[4]. This study aims to

ISBN: xxx-xxx-xxxx-xx-x

evaluate the effect of a hand and foot training video on the knowledge, attitude, and behavior of family caregivers in training post-stroke patients.

2. RESEARCH METHOD

This study used a quantitative approach with a pre-experimental design, specifically the one-group pre-test post-test design. The participants of this study were family members who acted as caregivers for post-stroke patients at RSUD Goeteng Taroenadibrata. The sampling technique used was random sampling, and the inclusion criteria for participants were: (1) family members willing to act as caregivers for post-stroke patients and (2) those willing to fill out the pre- and post-test questionnaires after watching the hand and foot training video.

The data collection was done by administering pre-test and post-test questionnaires before and after the video intervention. The video contained training exercises for hand and foot rehabilitation for post-stroke patients. The main objective was to assess the knowledge, attitude, and behavior of the family caregivers before and after the intervention. The questionnaire focused on these three variables: knowledge, attitude, and behavior regarding post-stroke care, specifically on training hand and foot movements. For the statistical analysis, the Wilcoxon signed-rank test was used to analyze the data, as it is appropriate for comparing paired data from the pre-test and post-test results. The p-value was set at <0.05 for statistical significance.

3. RESULT AND DISCUSSIONS

Results

The results of the pre-test and post-test analysis using the Wilcoxon signed-rank test showed a significant improvement in the family caregivers' knowledge, attitude, and behavior after watching the hand and foot training video. The pre-test data indicated a lower level of knowledge, attitude, and behavior regarding post-stroke rehabilitation exercises. However, after the video intervention, there was a noticeable increase in the caregivers' understanding of how to perform hand and foot rehabilitation exercises for post-stroke patients.

1. Univariat Analysis

Tabel 1 Respondent Characteristics

No	Parameter	Frequency (n)	Presentase (%)	Mean (SD)	Median (Min;Max)
1	Age				
	30-34	7	23,3		
	35-39	4	13,3	41,43	42,50
	40-44	9	30,0	(1,398)	(30;52)
	45-49	5	16,7		
	50-54	5	16,7		
2	Gender				
	Male	10	33,3		
	Female	20	63,7		
3	Occupation				
	Housewife	8	26,7		
	Enterpreneur	5	16,7		
	Employe	4	13,3		
	Farmer	6	20,0		

ISBN: xxx-xxx-xxxx-xx-x

	Trader	2	6,7
	Laborer	2	6,7
	Unemployed	3	10,0
4	Education		
	Elementary School	6	20,0
	Junior High School	10	33,3
	Senior High School	14	46,7
5	Family Status		
	Husband	3	10,0
	Wife	5	16,7
	Child	19	63,3
	Son in Law	3	10,0

Based on Table 1, it can be seen that the most frequent age group of the respondents is between 40-44 years, with a percentage of 13.3% and a total of 9 respondents. The majority gender is female, with a percentage of 66.7% and a total of 20 respondents. The most common occupation is as a housewife (IRT) with a percentage of 26.7% and 8 respondents. The most common educational background of the respondents is high school (SMA/SMK), with a percentage of 46.7% and a total of 14 respondents. The most frequent family relationship status is as a child, with a percentage of 63.3% and a total of 19 respondents.

2. Bivariat Analysis

Table 2 Bivariat Analysis

Intervention with Video	Frequency (n)	Z	P
Knowledge :			
Before	0		
After	30	-4,873	0,000
Attitude :			
Before	0		
After	30	-4,873	0,000
Behavior :			
Before	0		
After	30	-4,956	0,000

Berdasarkan pada Tabel 2 dapat diketahui bahwa pengetahuan dan sikap didapati nilai p adalah 0,000 < 0,05 yang berarti H0 diterima yang bermakna ada pengaruh skor pengetahuan sebelum dan sesudah diberikan intervensi video. Interpretasi dikatakan nilai z negatif karena nilai z -4873 < 0,05 artinya nilai z diterima. Sedangkan perilaku dapat diketahui bahwa nilai p adalah 0,000 < 0,05 yang berarti H0 diterima yang bermakna ada pengaruh skor perilaku sebelum dan sesudah diberikan intervensi video. Interpretasi dikatakan nilai z negatif karena nilai z -4,956 < 0,05 artinya nilai z diterima

Discussions

The findings of this study are consistent with previous research showing that educational videos can effectively enhance the knowledge and attitudes of caregivers, especially in healthcare settings. For instance, Qaryati et al. (2021) found that audiovisual media significantly improved caregivers' understanding of stroke rehabilitation techniques. This study extends that by demonstrating that a video

ISBN: xxx-xxx-xxxx-xx-x

specifically targeting hand and foot rehabilitation exercises can improve caregivers' practical knowledge and skills in a real-world setting[5].

The increase in knowledge observed in the caregivers is crucial, as it highlights the role of education in improving post-stroke rehabilitation outcomes. Family caregivers are often the primary source of care for stroke patients once they are discharged from the hospital. When caregivers are properly educated, they can provide better care, enhancing the recovery process for patients. This is particularly important given that post-stroke patients often face challenges in movement, and the quality of rehabilitation exercises can directly impact their functional recovery[6].

The improvement in attitudes towards rehabilitation may also reflect the caregivers' increased confidence and motivation after receiving the video-based training. As suggested by Rosamry and Fitria (2020), family caregivers who are educated about stroke rehabilitation tend to exhibit more positive attitudes, which leads to better care practices[7]. Similarly, the study by Tobi et al. (2021) also emphasized that educational interventions improve caregivers' engagement in rehabilitation activities, which can directly influence patient outcomes[8].

Behavioral changes in caregivers, as seen in this study, are an essential component of successful rehabilitation. As caregivers' knowledge and attitudes improve, they are more likely to apply what they have learned, resulting in better patient care. The findings of this study suggest that video interventions, as a cost-effective and easily accessible method, can be integrated into post-stroke care programs to empower family caregivers with the knowledge and skills they need to assist patients effectively.

4. CONCLUSION AND RECOMMENDATION

This study demonstrates that the use of video training interventions has a significant impact on the knowledge, attitude, and behavior of family caregivers in training post-stroke patients. The pre- and post-test results show a marked improvement in all three variables, with statistically significant changes observed after caregivers watched the hand and foot training video. These findings suggest that video-based interventions can be an effective tool in educating caregivers about the necessary rehabilitation exercises for post-stroke patients. Given the critical role family caregivers play in the recovery of post-stroke patients, this intervention provides a cost-effective and accessible solution to enhance their knowledge and caregiving practices. The study highlights the importance of education in improving the quality of care and rehabilitation for post-stroke patients

Based on the findings of this study, it is recommended that healthcare providers incorporate video-based educational interventions into rehabilitation programs for family caregivers of post-stroke patients. The effectiveness of these videos in improving caregivers' knowledge, attitudes, and behaviors highlights their potential as a valuable tool in enhancing caregiver involvement in the recovery process. Given the accessibility and simplicity of videos, they can serve as a supplementary educational resource that is both cost-effective and easy to distribute, allowing caregivers to access the material at their convenience.

Moreover, future research should focus on exploring the long-term impact of video training on caregivers' practices and patient outcomes. While this study demonstrated significant immediate improvements, understanding how these changes are sustained over time will be crucial for evaluating the overall effectiveness of such interventions. Additionally, expanding the sample size and including caregivers from various regions and backgrounds could provide a more comprehensive perspective on the applicability and benefits of video-based interventions.

It is also important for caregivers to recognize the value of continued learning and engagement with educational resources, such as training videos. By enhancing their understanding and skills, caregivers can provide better care and rehabilitation for post-stroke patients, which ultimately contributes to improved recovery outcomes. Encouraging caregivers to actively participate in educational programs will help ensure that they are well-equipped to manage the complexities of post-stroke car

ISBN: xxx-xxx-xxxx-xx-x

Acknowledgement

I would like to thank Allah SWT for His blessings. My deepest gratitude goes to my parents, Ayah Tri Eko Wahono and Mamah Kuswatun Khasanah, for their endless support. Special thanks to my advisor, Ns. Sodikin, M.Kes., and the examiners, Ns. Agus Santosa, S.Kep., M.Kep., and Ns. Susana Widyaningsih, S.Kep., MNS, for their guidance and feedback.
I also appreciate my friends, especially Riska Fajar Utami and Rizki Cahyani, and my classmates from the 2019 Nursing program. Finally, I am grateful for my own determination in completing this research.

REFERENCES

[1] Prasetyaningsih, Kurniawan. Stroke: Leading Cause of Death. Kemenkes RI; 2021.
[2] Kemenkes R1. Guidelines on Stroke Management. Jakarta: Kementerian Kesehatan Republik Indonesia; 2019.
[3] Suwaryo, Budi, et al. Physical Activity and Blood Pressure Control for Stroke Prevention. J Stroke Res. 2019;12(4): 102-110.
[4] Sonatha, Gayatri. The Role of Family Caregivers in Post-Stroke Rehabilitation. J Nursing Care. 2012;18(3): 45-50.
[5] Qaryati, Fitria, et al. Effectiveness of Audiovisual Media in Educating Family Caregivers of Stroke Patients. J Health Education. 2021;25(1): 34-41.
[6] Pietrzak, Cotea, Pullman. Enhancing Mobility for Stroke Patients Using Video Training. Rehab Journal. 2014;15(2): 67-75.
[7] Rosamry, Fitria. The Influence of Family Caregivers' Attitudes on Post-Stroke Patient Care. Stroke Care Review. 2020;10(5): 52-59.
[8] Tobi, H.E., Rochmawati, E. Effects of Joint Movement Exercises with Musical Video on Stroke Patients' Muscle Endurance. J Med Rehab. 2021;17(3): 44-51.