



INNOVATIVE NURSING CARE STRATEGIES FOR INDEPENDENT RECOVERY IN ISCHEMIC STROKE PATIENTS

Amalia S

Department of Nursing Sciences, Nursing Faculty, Airlangga University, Surabaya, Indonesia

Abstract

Ischemic stroke, a leading cause of disability, requires effective rehabilitation strategies to optimize patient recovery. This study introduces innovative nursing care strategies aimed at fostering independent recovery in ischemic stroke patients. The proposed model integrates evidence-based practices with personalized care plans to address the unique needs of each patient. Key components include comprehensive assessment protocols, individualized goal setting, and adaptive therapeutic interventions that promote physical, cognitive, and emotional recovery.

Through a multidisciplinary approach, the model emphasizes the role of restorative nursing care in enhancing functional independence and quality of life. The implementation of these strategies is supported by continuous education and training for nursing staff, ensuring adherence to best practices and improving patient outcomes. Preliminary results from a pilot study indicate significant improvements in patient mobility, self-care abilities, and overall satisfaction with care. This research highlights the critical role of innovative nursing care in the rehabilitation process and underscores the potential for these strategies to transform the standard of care for ischemic stroke patients.

Keywords

Ischemic Stroke, Restorative Nursing Care, Rehabilitation, Independent Recovery Innovative Nursing Strategies, Patient-Centered Care, Functional Independence, Multidisciplinary Approach, Evidence-Based Practice, Quality of Life.

INTRODUCTION

Ischemic stroke remains one of the leading causes of long-term disability worldwide, significantly impacting patients' quality of life and independence. Despite advancements in acute stroke management, the journey to recovery is often challenging, necessitating comprehensive and effective rehabilitation strategies. Traditional rehabilitation approaches, while beneficial, may not fully address the diverse and evolving needs of stroke survivors. This underscores the necessity for innovative nursing care strategies that promote independent recovery and enhance patient outcomes.

Restorative nursing care, a holistic approach focusing on patient-centered rehabilitation, offers a promising avenue for improving functional independence in ischemic stroke patients. By integrating evidence-based practices with individualized care plans, restorative nursing care aims to optimize physical, cognitive, and emotional recovery. This approach involves a multidisciplinary team working collaboratively to set realistic goals, tailor interventions, and continuously assess progress.

The proposed model of innovative nursing care strategies emphasizes the critical role of nurses in the rehabilitation process. Nurses are uniquely positioned to provide continuous, hands-on care and support, making them essential in facilitating patient recovery. By leveraging their expertise and fostering a supportive environment, nurses can significantly enhance patients' motivation, participation, and overall rehabilitation experience.

This study aims to explore and validate innovative nursing care strategies that foster independent recovery in ischemic stroke patients. It seeks to identify key components of restorative nursing care, evaluate their effectiveness, and provide recommendations for integrating these strategies into standard clinical practice. Ultimately, this research aspires to contribute to the development of more effective rehabilitation models that can transform the care and recovery journey of ischemic stroke patients.

METHOD

This study employs a mixed-methods approach, combining quantitative and qualitative data to evaluate the effectiveness of innovative nursing care strategies for independent recovery in ischemic stroke patients. The study consists of a randomized controlled trial (RCT) and a qualitative component involving patient and staff interviews. The study was conducted in a rehabilitation center specializing in stroke recovery. Participants included ischemic stroke patients admitted to the center and nursing staff involved in their care. Inclusion criteria for patients were: a confirmed diagnosis of ischemic stroke, aged 18 years or older, and able to provide informed consent. Patients with severe cognitive impairments or other conditions that would interfere with rehabilitation were excluded.

Initial and ongoing assessments covering physical, cognitive, and emotional aspects. Collaborative goal setting involving patients, families, and multidisciplinary teams. Tailored physical, occupational, and speech therapies based on individual needs and progress. Ongoing training sessions for nursing staff to ensure adherence to best practices and integration of new techniques. Creating a motivational and supportive environment through positive reinforcement and patient education. The control group received standard rehabilitation care, which included conventional physical and occupational therapy without the additional components of the innovative model.

Functional independence was measured using the Modified Rankin Scale (mRS) and the Barthel Index at baseline, 3 months, and 6 months post-intervention. Quality of life was assessed using the Stroke-Specific Quality of Life Scale (SS-QOL), and patient satisfaction was evaluated using a standardized satisfaction survey. Semi-structured interviews were conducted with patients from the intervention group to gather insights on their experiences and perceived impact of the nursing care strategies. Focus group discussions and individual interviews with nursing staff were conducted to understand their perspectives on the implementation and effectiveness of the intervention.

Statistical analysis was performed using SPSS software. Independent t-tests and chi-square tests were used to compare baseline characteristics between groups. Repeated measures ANOVA was used to assess changes in primary and secondary outcomes over time. Thematic analysis was conducted on the interview transcripts to identify common themes and insights. NVivo software was used to assist in coding and organizing the data. The study was approved by the institutional review board of the rehabilitation center. Informed consent was obtained from all participants. Confidentiality and anonymity were maintained throughout the study. Potential limitations include the single-center study design, which may limit generalizability, and the reliance on self-reported measures for some outcomes. Future studies should consider multi-center trials and objective measures of recovery.

RESULTS

A total of 120 ischemic stroke patients were enrolled in the study, with 60 patients randomized to the intervention group and 60 to the control group. Baseline characteristics, including age, gender, stroke severity, and comorbidities, were similar between the two groups. Patients in the intervention group showed significantly greater improvements in functional independence compared to the control group. At 3 months post-intervention, the mean Modified Rankin Scale (mRS) score for the intervention group was 2.1 ± 0.8 , compared to 2.7 ± 0.9 for the control group ($p < 0.01$). At 6 months, the intervention group's mean mRS score further improved to 1.8 ± 0.7 , while the control group's score was 2.5 ± 0.8 ($p < 0.01$). The Barthel Index scores also indicated better functional outcomes for the intervention group. At 3 months, the mean Barthel Index for the intervention group was 85.4 ± 12.3 , compared to 78.6 ± 14.7 for the control group ($p < 0.05$). At 6 months, the intervention group's mean score increased to 90.2 ± 10.5 , while the control group's score was 82.1 ± 13.8 ($p < 0.05$).

The Stroke-Specific Quality of Life Scale (SS-QOL) scores showed significant improvements in the intervention group compared to the control group. At 3 months, the mean SS-QOL score for the intervention group was 4.0 ± 0.6 , compared to 3.5 ± 0.7 for the control group ($p < 0.05$). At 6 months, the intervention group's mean SS-QOL score increased to 4.3 ± 0.5 , while the control group's score was 3.7 ± 0.6 ($p < 0.05$). Patient satisfaction was higher in the intervention group, with 92% of patients reporting being "very satisfied" or "satisfied" with their care, compared to 78% in the control group ($p < 0.05$).

Patients in the intervention group reported higher motivation levels due to personalized goal setting and continuous positive reinforcement from nursing staff. The tailored therapeutic interventions and supportive environment helped patients gain confidence in their abilities to perform daily activities independently. Patients appreciated the comprehensive approach that

addressed not only physical but also cognitive and emotional aspects of recovery. Continuous education and training sessions were reported to enhance staff confidence and competence in delivering restorative care. The collaborative approach facilitated better communication and coordination among healthcare providers, leading to more cohesive care plans. Staff recognized the value of individualized care plans in meeting the unique needs of each patient, contributing to more effective and satisfying patient care.

Statistical analysis confirmed that the observed differences in functional independence, quality of life, and patient satisfaction between the intervention and control groups were statistically significant. The results of the repeated measures ANOVA showed significant time $\times$ group interactions for both mRS ($F(2, 118) = 6.45, p < 0.01$) and Barthel Index scores ($F(2, 118) = 4.83, p < 0.05$), indicating greater improvements over time in the intervention group compared to the control group.

DISCUSSION

The results of this study demonstrate that innovative nursing care strategies significantly enhance the recovery of ischemic stroke patients. Patients receiving the intervention showed greater improvements in functional independence, quality of life, and overall satisfaction with care compared to those receiving standard rehabilitation. These findings underscore the potential of a comprehensive, patient-centered approach in stroke rehabilitation. The significant improvement in functional independence, as evidenced by the Modified Rankin Scale (mRS) and Barthel Index scores, suggests that personalized goal setting and adaptive therapeutic interventions play a crucial role in stroke recovery. By tailoring rehabilitation activities to the specific needs and progress of each patient, the intervention facilitated more effective and meaningful rehabilitation outcomes.

The enhanced quality of life observed in the intervention group indicates that restorative nursing care strategies not only address physical recovery but also contribute to cognitive and emotional well-being. The holistic approach, which includes continuous assessment and supportive environments, likely contributed to this improvement by providing patients with a sense of empowerment and hope. High levels of patient satisfaction in the intervention group highlight the importance of personalized and supportive care in the rehabilitation process. Patients valued the individualized attention and the positive reinforcement they received, which likely boosted their motivation and engagement in the recovery process.

This study highlights the critical role of nurses in stroke rehabilitation. By implementing comprehensive assessment protocols, individualized care plans, and continuous education, nurses can significantly impact patient outcomes. The findings support the integration of innovative nursing care strategies into standard clinical practice to enhance the effectiveness of stroke rehabilitation programs. The mixed-methods design of this study, combining quantitative and qualitative data, provides a robust evaluation of the intervention's effectiveness. The randomized controlled trial design enhances the validity of the findings, while the qualitative insights offer a deeper understanding of patient and staff experiences.

Potential limitations include the single-center study design, which may limit generalizability. Additionally, the reliance on self-reported measures for some outcomes could introduce bias. Future research should consider multi-center trials and incorporate objective measures of recovery to validate and extend these findings. Research should also examine the applicability of the model in diverse healthcare settings and among different populations. Investigating the cost-effectiveness of these strategies will be essential to support their broader implementation in clinical practice. By focusing on personalized, restorative care, nurses can play a pivotal role in improving functional independence, quality of life, and patient satisfaction. Integrating these strategies into standard rehabilitation programs holds promise for transforming stroke care and optimizing patient outcomes.

CONCLUSION

In conclusion, the implementation of innovative nursing care strategies plays a critical role in promoting independent recovery in ischemic stroke patients. These strategies, which include personalized rehabilitation plans, the use of technology-assisted therapy, and comprehensive patient education, significantly enhance the overall recovery process. Personalized rehabilitation plans tailored to individual patient needs ensure that each patient receives the appropriate level of care and attention, fostering better outcomes.

Technology-assisted therapy, such as virtual reality and robotic-assisted rehabilitation, provides patients with engaging and effective means to regain motor skills and cognitive function. These technological interventions have shown promising results in improving the speed and extent of recovery, offering new hope to patients and their families. Comprehensive patient education empowers patients with the knowledge and skills necessary to manage their condition and prevent future complications. By involving patients in their care and encouraging active participation, nurses can foster a sense of independence and confidence, crucial for long-term recovery.

Furthermore, the integration of multidisciplinary teams in the care process ensures a holistic approach, addressing the physical, emotional, and social aspects of recovery. This collaborative effort enhances the quality of care and supports patients in achieving

their maximum potential for independent living. Overall, the adoption of innovative nursing care strategies not only improves clinical outcomes but also enhances the quality of life for ischemic stroke patients. Continued research and development in this field will further refine these strategies, offering even greater benefits to patients and the healthcare system as a whole.

REFERENCES

1. Cowman, S., Royston, M., Hickey, A., Horgan, F., McGee, H., O'Neill, D., (2010) Stroke and Nursing Home care: a national survey of nursing homes BMC Geriatrics 2010, 10:4
2. Doenges, M.E., Moorhouse, M.F., &Geissler-Murr, A.C., (2002) Nursing Care Plans: Guidelines for Individualizing Patient Care (6th ed). Philadelphia, PA, F.A. Davis.
3. Legg, L., Avril Drummond, Leonardi-Bee, J., Gladman, J.R.F., Corr, S., Donkervoort, M., Judi Edmans, Gilbertson, L., Jongbloed, L., Logan, P., Sackley, C., Walker, M., Langhorne, P., (2007) Occupational therapy for patients with problems in personal activities of daily living after stroke: systematic review of randomised trials,
4. Lemeshow, S., Hosmer Jr., D. W., Klar, J. & Lwanga, S. K. (1997) In a large sample of Health Research, Interpreting:Pramono, D., Yogyakarta, Gadjah Mada University Press.
5. Lynch FL, Hornbrook M, Clarke GN, Perrin N, Polen MR, O'Connor E, et al. Cost-effectiveness of an intervention to prevent depression in at-risk teens. Archives of General Psychiatry 2005; 62:1241– 1248. [PubMed: 16275811]
6. Maclean, N., Pound, P., Wolfe, C., Rudd, A., (2000) Qualitative analysis of stroke patients' motivation for Rehabilitation, BMJ VOLUME 321 28 OCTOBER 2000.
7. Morris, J., Oliver, T., Kroll, T., and MacGillivray, S., (2012) Review Article; The Importance of Psychological and Social Factors in Influencing the Uptake andMaintenance of Physical Activity after Stroke: A Structured Review of the Empirical Literature, Stroke Research and Treatment, Volume 2012, Article ID 195249, 20 pages.
8. Ostir, G.V., Berges, I.M., Ottenbacher, M.E., Clow, A., andOttenbacher, K.J., (2008) Associations between Positive Emotion and Recovery of Functional Status Following Stroke Psychosom Med. 2008 May ; 70(4): 404–409.
9. Resnick, B., &Fleishell, A. (2002). Developing a restorative care program: A five-step approach that involves the resident. American Journal of Nursing, 102(7), 91–95.
10. Van der Ploeg, H.P., Streppel, K.R.M., Van der Beek, A.J., Van der Woude, L.H.V., Vollenbroek- Hutten, M.M.R., Van Harten, W.H., Van Mechelen, W., (2006) Counselling increases physical activity behaviour nine weeks after rehabilitation, Br J Sports Med 2006;40:223–229.
11. Vandermeulen, s., & Fahey, A., (2011) Testing and Expanding a Restorative Home Care Program (HIP), Home Independence Program (HIP).
12. WHO (2009) Self-care in the Context of Primary Health Care, Report of the Regional Consultation Bangkok, Thailand, 7– 9 January 2009.
13. HO (2008),the global burden of disease: 2004 update, World Health Organization.