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Effectiveness of Telehealth for Self-Care in Stroke Survivors: A Systematic Review

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ABSTRACT

Declining self-care ability in stroke survivors impairs recovery and lowers long-term quality of life. This systematic review evaluates the effectiveness of telehealth interventions in improving self-care capacity. Based on the PRISMA framework, five databases: PubMed, Science Direct, Scopus, Sage Journals, and ProQuest were searched for literature published between 2020-2024. This search returned 387 results, of which 10 randomized controlled trials were selected and evaluated according to a critical checklist. The results of this review suggest that self-care telehealth interventions significantly improve physical (mobility and muscle strength, performance of daily activities) and psychological components (self-efficacy, depression and anxiety) that constitute a better quality of life. Telehealth technologies promote autonomy in stroke survivors by remote health monitoring, and lessen dependence on direct care. Yet, technological barriers and lower digital literacy in older and/or marginalized populations are challenges that must be overcome to achieve fair access and impact.

Penurunan kemampuan perawatan diri pada penyintas strok menghambat pemulihan dan menurunkan kualitas hidup jangka panjang. Tinjauan sistematis ini mengevaluasi efektivitas intervensi telekesehatan dalam meningkatkan kapasitas perawatan diri. Berdasarkan kerangka kerja PRISMA, penelusuran literatur dilakukan pada lima basis data: PubMed, Science Direct, Scopus, Sage Journals, dan ProQuest untuk artikel yang dipublikasikan antara tahun 2020-2024. Penelusuran ini menghasilkan 387 artikel, di mana 10 artikel randomized controlled trials (RCT) dipilih dan dievaluasi berdasarkan daftar periksa kritis. Hasil tinjauan ini menunjukkan bahwa intervensi telekesehatan untuk perawatan diri secara signifikan meningkatkan komponen fisik (mobilitas dan kekuatan otot, pelaksanaan aktivitas sehari-hari) dan psikologis (efikasi diri, depresi, dan kecemasan) yang berkontribusi pada kualitas hidup yang lebih baik. Teknologi telekesehatan mendorong otonomi pada penyintas strok melalui pemantauan kesehatan jarak jauh, dan mengurangi ketergantungan pada perawatan langsung. Namun, hambatan teknologi dan rendahnya literasi digital pada populasi lansia dan/atau terpinggirkan merupakan tantangan yang harus diatasi untuk mencapai akses dan dampak yang adil.

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Introduction

A stroke is an acute neurological disorder. It occurs when blood vessels in the brain become blocked or ruptured, which causes brain tissue to die. A stroke's acute nature presents the risk of permanently impairing an individual's quality of life or becoming fatal (Kariasa, Nurachmah, Setyowati, & Koestoer, 2022; Shamshiev et al., 2024). The Global Stroke Fact Sheet 2025 published the World Stroke Organization presents data highlighting stroke as a major global health issue, being the second leading cause of deaths, and the third leading cause of deaths and permanent disabilities associated with non-communicable diseases (Feigin et al., 2025).

There has been a significant rise in the global burden of stroke from 1990 to 2021: incidence 70% rise, mortality 44%, prevalence 86%, and 32% increase in disability-adjusted life years (DALYs). Most of this burden is in low- and middle-income countries (LMICs) (Feigin et al., 2025). The 2023 Indonesian Health Survey (SKI) revealed that in Indonesia, the incidence of stroke is 8.3 per 1000 people, showing that stroke continues to be one of the leading causes of disability and long-term chronic conditions (Kementerian Kesehatan Republik Indonesia, 2023).

There are severe and complex long-term impacts for survivors of a stroke. Survivors struggle to perform some basic daily activities (activities of daily living/ADLs) such as eating, dressing, and moving about, which contribute to a loss of independence and a lower quality of life (Hwang, Park, & Chang, 2021). Moreover, strokes affect psychosocial dimensions too. Survivors experience a loss of role within their families and communities, leading to social isolation, lowered self-esteem, and mental health issues like depression and anxiety. The resulting emotional distress further complicates recovery and social reintegration (Ignacio et al., 2023).

Self-care approaches have begun to gain importance regarding the challenges that come with the aftermath of a stroke. Attending to chronic conditions like stroke requires survivors to practice self-care by monitoring their symptoms and modifying their behaviors according to their health status (Griffiths, Kontou, & Ford, 2023; Xi et al., 2025). Riegel's self-care model consists of maintenance, monitoring and management, and serves as the basis for recognizing the active role of survivors in self-care, as noted by (Riegel, Jaarsma, & Strömberg, 2012). Despite this, studies indicate that while effective self-care implementations exist, they often face ongoing difficulties among stroke survivors concerning consistency, motivation, scarcity of educational materials, and insufficient professional support (Fryer, Luker, McDonnell, & Hillier, 2016; Patola & Tridiyawati, 2022).

The challenges mentioned above can indeed be positively addressed by the use of digital technology, especially telehealth. Telehealth services, including online consultations, health education, remote monitoring, and telerehabilitation, can enhance patient access and continuity of care (Park, Yeom, & Kim, 2023). According to Hwang et al., (2021) and (Kariasa et al., 2022), real-time digital nursing interventions can boost survivors' independence in performing self-care at home.

Nevertheless, studies specifically exploring the effectiveness of telehealth in improving stroke survivors' self-care behaviors based on the 3 domains of the Riegel model are still limited (Park et al., 2023; Riegel et al., 2012). Therefore, this study aims to identify various telehealth interventions that support stroke survivors' self-care in line with these 3 domains. Through this study, it is hoped that it will provide a strong foundation for the development of more adaptive and integrated telehealth-based nursing strategies to improve their self-care in a more effective and sustainable manner.

Research Methods

The researcher used the PICO approach (Population, Intervention, Comparison, Outcome) to formulate the focus of the literature search: (P) stroke survivors over 18 years old, (I) telehealth-based self-care, (C) usual care, (O) components, types, and impacts of self-care. The inclusion criteria for the journals to be selected and analyzed in this study include: 1) articles published between 2020 and 2024; 2) original research articles using a randomized controlled trial (RCT) design; 3) studis implementing telehealth-based interventions aimed at improving self-care in stroke survivors; 4) studies specifically measuring outcomes such as quality of life, self-efficacy, social participation, or adherence to therapy; 5) articles with accessible abstracts and full text that are relevant to the topic. The exclusion criteria include: 1) articles that do not align with the topic of review; 2) studies without accessible full texts; 3) articles that do not meet the methodological standards required for inclusion in this review.

The literature search encompassed the years 2020 to 2024 for databases PubMed, Sage Journals, Scopus, Science Direct, and ProQuest. The search phrases which were utilized were: ("Telehealth" OR "Telecare" OR "Mobile Health" OR "Mobile App" OR "Virtual Medicine") AND ("Self-care" OR "Self-monitoring" OR "Self management") AND ("Stroke" OR "Stroke Survivor" OR "Transient ischemic Attack"). In the first search, 92,870 articles were identified. These were then narrowed down based on the year of publication and the inclusion and exclusion criteria. After the screening and feasibility assessment, 10 articles were chosen for deeper analysis. The selection and assessment of the articles were carried out independently by 2 researchers. Any differences were resolved through discussion or by the inclusion of the third and fourth researchers. The study selection followed PRISMA guidelines and the five-step process outlined by (Moher, Liberati, Tetzlaff, & Altman, 2009). The methodological quality for all selected RCT articles was evaluated using the JBI Critical Appraisal system (Tufanaru, Munn, Aromataris, Campbell, & Hopp, 2020). The extracted data were compiled in a synthesis table. Data were extracted which included: Citation: author, year & title, research design, type of telehealth delivery, implementation, study findings/results, and the effectiveness of telehealth.

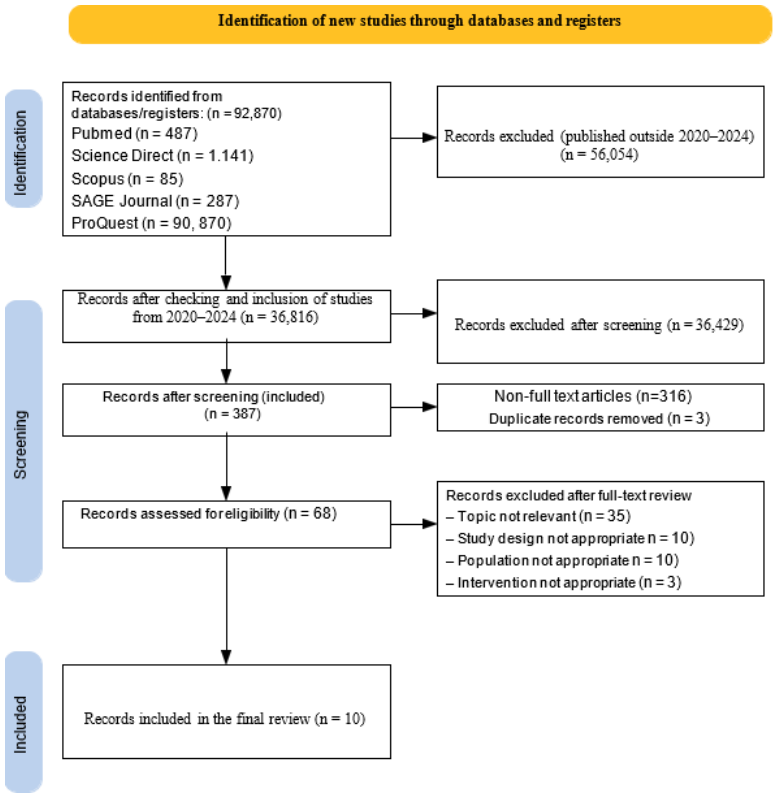

Figure 1. PRISMA flow diagram illustrating the study selection process (Moher et al., 2009)

Results

The review focuses on 10 randomized controlled trials conducted from 2020 to 2024, in locations including Hong Kong, China, New Zealand, the UK, the Netherlands, South Korea, Canada, Australia, Ghana, and the USA. The length of the interventions varied from 4 weeks to 12 months and comprised the various telehealth delivery methods of mobile apps, online platforms, video calls, telephone coaching, and SMS reminders. The findings confirm the positive impact of telehealth on improving the physical functioning of stroke survivors, specifically on mobility and muscle strength, and the psychological dimension of self-efficacy while decreasing depression and anxiety. Telehealth also supports social reintegration and caregiver well-being, particularly in studies involving telerehabilitation mediated by caregivers. These findings affirm the effectiveness of telehealth in supporting the physical, psychological, and psychosocial recovery of stroke survivors. The 10 articles that meet the criteria are shown in Table 1.

Table 1. Data Synthesis: Description of Study Characteristics and Self-Care Interventions with Their Outcomes (N = 10).

Citation: Author(s), Year & Title	Research Design	Type of Telehealth Delivery	Implementation	Findings/ Study Results	Effectiveness of Telehealth
(Lo, Chau, Lau, et al., 2023)	RCT	VMSCC (Telephone, video call, Zoom, Website)	Implemented 6 times per month. Video calls/month (30-45 minutes). Educational videos and platform access	Self-efficacy (SSEQ) 95% CI: 0.16–9.05; p = 0.042; social participation 95% CI: 0.61–9.53; p = 0.026 increased; depression decreased 95% CI: -4.06 to -0.61; p = 0.008; self-management behavior not significant 95% CI: -0.87 to 7.77; p = 0.117	Increased self-efficacy, social participation, and decreased depression in stroke survivors.
(Yan et al., 2021)	RCT	SINEMA (Application, voice record, telephone, video call, Zoom)	Implemented in 50 villages with high fidelity; follow-up for 12 months.	Systolic blood pressure decreased (95% CI: -4.8 to -0.9; p = 0.005); diastolic pressure 95% CI: -3.2 to -1.3; p < 0.001); and quality of life (EQ-5D-5L) 95% CI: 0.01 to 0.06; p = 0.008); physical activity (IPAQ-SF) increased (p < 0.001); medication adherence increased (p = 0.003); mobility function improved (RR = 0.87; p = 0.022); disability decreased based on mRS (95% CI: 0.53–0.79).	Decreased blood pressure, improved quality of life, physical activity, and medication adherence.
(Saywell et al., 2021)	RCT	Telephone, text message	Implemented at the beginning and end of the intervention (6 months), and 12 months later.	Stroke Impact Scale (SIS) (95% CI: -0.46 to 9.48; p = 0.07, not significant); Self-efficacy Questionnaire (SSEQ) (95% CI: -1.37 to 13.67; p = 0.11); EQ-5D Visual Analogue Scale (VAS): 95% CI: 0.53 to 19.65; p = 0.04.	Prevents physical function decline and improves quality of life.
(McManus et al., 2024)	RCT	Application (BP Together) smartphone, website, or SMS	Self-monitoring of blood pressure, then data sent via app, web, or SMS.	Blood pressure reduction occurred in 93% of stroke survivors.	Reduces blood pressure in post-stroke/TIA stroke survivors.
(Lo, Chau, Choi, et al., 2023)	RCT	Telephone and COMBO-KEY application (website)	Program duration: 8 weeks. 4 home visits, 5 telephone calls, and video calls.	Self-efficacy increased (95% CI: 0.87–14.73; p = 0.027); self-management satisfaction increased (95% CI: 0.40–12.41; p = 0.037); SSQOL increased by 9.69 points (95% CI: 1.32–18.06; p = 0.023); social reintegration increased significantly by 12.89 points (95% CI: 6.18–19.60; p < 0.001).	Increased self-efficacy, self-management satisfaction, HRQoL, and community reintegration.
(Mulder et al., 2024)	RCT	Web platform tele-rehabilitation	Blended care program for 8 weeks	Patient mobility was not significant (SIS, 95% CI: -6.8 to 8.5; p = 0.826); quality of life (CarerQoL-7D: p = 0.013; VAS: p = 0.042) and depression symptoms reduction (HADS-Depression: p = 0.025).	Did not improve patient mobility but improved caregiver well-being and patient activity.
(Kim, Kim, Kim, & Song, 2024)	RCT	Speech therapy application, Smartphone	Implemented 1 hour/day, 5 days/week, for 4 weeks	Speech intelligibility ($F_{1,30}$ = 34.35; p < 0.001); dysarthria severity significantly decreased ($F_{1,30}$ = 21.18; p < 0.001); quality of life increased (EQ-5D-3L) ($F_{1,30}$ = 13.25; p < 0.001) and EQ-VAS ($F_{1,30}$ = 7.74; p = 0.009); Self-efficacy of the application increased significantly ($F_{1,30}$ = 10.81; p = 0.003).	Improved speech clarity and articulation in post-stroke dysarthria stroke survivors.

(Sakakibara et al., 2022)	RCT	Telephone (for coaching sessions)	Stroke Coach Intervention: 7 coaching sessions via telephone (30-60 minutes/session) 5 brief "check-in" sessions (5-10 minutes). Total duration: 6 months	Lifestyle behavior (HPLPII): not significant (95% CI: -8.03); HRQoL – Physical Component (SF-36): physical quality of life decreased (95% CI: -5.88 to -0.21; p = 0.035); mental quality of life (SF-36 MCS): (95% CI: 0.24 to 4.14; p = 0.027); Glucose control (HbA1c): (95% CI: 0.01 to 0.32; p = 0.034).	Improved health-related quality of life and glucose control in stroke survivors.
(Fakes et al., 2024)	RCT	Web-based portal (EnableMe), SMS	Access to the EnableMe web portal, SMS reminders if no login occurs within 7 & 14 days, letter reminders if no login occurs within 21 days.	Quality of Life (SF-12 PCS) improved. PCS score improved (95% CI: -0.32 to 6.28). Depression (PHQ-9) decreased. Unmet Needs (LUNS) significantly reduced, rate ratio 0.65 at 3 months (BF = 13.05; posterior probability = 92.9%).	Improved quality of life (physical and mental), reduced depression, and decreased unmet needs in stroke/TIA survivors.
(Gauthier et al., 2022)	RCT	Telephone, web, video	Intervention duration: 3 weeks. SG & TG: 5 hours of behavioral sessions in clinic + 15 hours independently.	Arm Use (MAL) increased (95% CI 0.8 to 1.3). The self-gaming group showed slightly slower times compared to CI therapy (+0.18 log unit; 95% CI: 0.00 to 0.37), while tele-gaming showed comparable results (+0.13 log unit; 95% CI: -0.05 to 0.32).	Motor exercises through rehabilitation gaming improved motor function in stroke survivors.

*ACTIV (Telerehabilitation After Stroke Using Readily Available Technology), BF (Bayes Factor), BP (Blood Pressure), COMBO-KEY (Coaching and Motivational Boosting for Key Self-Management Behaviors), EnableMe (Web-based portal for stroke survivors), EQ-5D-3L (EuroQol 5 Dimensions 3 Levels), EQ-5D-5L (EuroQol 5 Dimensions 5 Levels), EQ-VAS (EuroQol Visual Analogue Scale), GAD-7 (Generalized Anxiety Disorder – 7 Item), GP (General Practitioner), HADS (Hospital Anxiety and Depression Scale), IPAQ-SF (International Physical Activity Questionnaire – Short Form), LUNS (Longer-term Unmet Needs after Stroke Scale), MAL (Motor Activity Log), mRS (modified Rankin Scale), OR (Odds Ratio), PHQ-9 (Patient Health Questionnaire – 9 Item), RCT (Randomized Controlled Trial), RR (Risk Ratio), SG (Self-Gaming), SINEMA (Stroke INtervention using Evidence-based digital Management Approach), SIS (Stroke Impact Scale), SMS (Short Message Service), SSEQ (Stroke Self-Efficacy Questionnaire), SSQOL (Stroke-Specific Quality of Life), TASMIN5 (Telemonitoring and Self-Management in Hypertension Trial 5), TG (Tele-Gaming), TIA (Transient Ischaemic Attack), TUG (Timed Up and Go), VAS (Visual Analogue Scale), VMSCC (Video-Mediated Self-Care Coaching), WMFT (Wolf Motor Function Test).

Table 2. Classification of the Impact of Intervention Types/ Technology Use on Self-Care Components.

Domain Self-care	Self-care Components	(Lo, Chau, Lau, et al., 2023)	(Yan et al., 2021)	(Saywell et al., 2021)	(McManus et al., 2024)	(Lo, Chau, Choi, et al., 2023)	(Mulder et al., 2024)	(Kim et al., 2024)	(Sakakibara et al., 2022)	(Fakes et al., 2024)	(Gauthier et al., 2022)
Maintenance	Medication/ Therapy Adherence	Ø	√ (+)	Ø	√ (+)	Ø	√ (+)	Ø	√ (+)	√ (+)	Ø
	Physical Activity/ Rehabilitation Exercise	Ø	√ (+)	√ (±)	Ø	Ø	√ (+)	Ø	Ø	Ø	√ (+) (WMFT)
	Mental Health/ Well-being	√ (+)	√ (+)	√ (+)	Ø	√ (+)	√ (+)	√ (+)	√ (-)	√ (+)	√ (+)
	Increase in Self-Efficacy	√ (+)	Ø	Ø	Ø	√ (+)	Ø	√ (+)	Ø	Ø	√ (+)
	Media/Technology Use	√ (+) (Telephone, video call, Zoom, Website)	√ (+) (Application, voice record, telephone, Zoom	√ (+) (Telephone, SMS)	√ (+) (Smartphone application, website, or SMS)	√ (+) (Telephone and website)	√ (+) (Web Platform)	√ (+) (Smartphone Application)	√ (+) Telephone	√ (+) (Web-based Portal (EnableMe), SMS)	√ (+) (video)
Monitoring	Self-monitoring of Vital Signs (BP, Activity, etc.)	Ø	√ (+)	Ø	√ (+)	Ø	Ø	√ (+) (Real-time)	√ (+) (Pedometer)	Ø	Ø
	Health Data Reporting	(*)	(*)	(*)	√ (+) (Report to GP)	(*)	(*)	√ (+) (Real-time)	(*)	(*)	(*)
Management	Symptom Recognition	(*)	Ø	Ø	√ (+) (Medication Escalation)	Ø	Ø	Ø	Ø	Ø	(*)
	Behavior/Medication Adjustment								√ (-)	√ (+)	

Legend:
√ (+ = Positive effect proven through intervention
Ø = No proven effect or not measured
(*) = Effect implied but not measured directly
√ (–) = Negative effect or contraindication identified

Discussion

Telehealth Intervention

Clearly, self-care during recovery is essential and helps prevent complications after a stroke, as noted by (Riegel et al., 2012). These elements are conceptualized as maintenance self-care, which is taking care of health on a routine basis; self-care monitoring, which is keeping an eye on symptoms; and self-care management, which is taking action when symptoms worsen, as also suggested by (Kariasa et al., 2022). Various constraints may restrict independent self-care practices due to limited mobility and the availability of services (Babkair & Dickson, 2017; NICE, 2023). Telehealth offers educational services, monitoring, coaching, and remote rehabilitation all tailored for one's personal convenience and access (Hwang et al., 2021; Kariasa et al., 2022).

As indicated by a systematic review of ten RCT studies, telehealth strategies for stroke survivors have been adapted in the form of mobile applications, websites, video conferencing, phone calls, and text messaging. Such an approach has been shown to support advancements in self-care and continue improving survivors' quality of life. Telehealth self-care interventions have effectively contributed to medication adherence, physical activity, self-monitoring of vital signs, self-efficacy and psychosocial management, all of which significantly enhance a stroke survivor's quality of life (Gauthier et al., 2022; Kim et al., 2024; Mulder et al., 2024). Mobile apps and telemonitoring can reduce systolic blood pressure and risk of heart complications. Telehealth coaching improves self-management skills and helps with depression (Sakakibara et al., 2022) and behavior/medication adjustment (Gauthier et al., 2022; Sakakibara et al., 2022).

The effectiveness of telehealth interventions is undeniable; however, issues such as low digital literacy, limited access to technology, and the need to adopt more personalized approaches continue to be challenges, especially for the elderly and people who live in isolated regions (Norman Burrell, 2024; Senja Shafira, Ramadhani, & Rachman, 2024). Considering the tight available resources, addressing these challenges makes the hybrid model, which combines digital and in-person services, the most relevant approach. In the case study on Stroke Coach, telephone lifestyle coaching combined with scheduled in-person sessions augmented quality of life and improved glucose control (Sakakibara et al., 2022). At the same time, using the internet, self-education, integrated with SMS reminders and reminders through mini letters, has been shown by EnableMe to increase patient engagement, enhance quality of life, and alleviate symptoms of depression, as documented in several patient reports (Fakes et al., 2024). The COMBO-KEY model improves self-efficacy and community reintegration and combines coaching via phone and apps with home visits (Lo, Chau, Choi, et al., 2023). In addition, Digital literacy training for survivors and their family members is suggested to enhance the effectiveness and sustainability of the interventions (Kim et al., 2024; Lo, Chau, Choi, et al., 2023). This blended strategy can form the basis of stroke rehabilitation in the digital age, right now and in the future, aided by policy backing and cross-field collaboration (Li, He, Wang, & Rezaei, 2024).

Effectiveness Of Telehealth Use In Stroke Patient Self-Care

Self-Care Maintenance

Rehabilitation for stroke survivors should still include keeping self-care maintenance for health preservation and recurrence prevention. Psychosocial support is the most important component. This was the case in 8 out of 10 studies and contributed to the reduction of depression and anxiety. This support also helped to increase motivation and adherence (Gauthier et al., 2022; Kim et al., 2024; Lo, Chau, Choi, et al., 2023; Lo, Chau, Lau, et al., 2023; Mulder et al., 2024; Sakakibara et al., 2022; Saywell et al., 2021; Yan et al., 2021). Although this support is important, its most significant impact lies in its specific ability to decrease depression and anxiety and increase patient motivation and adherence to medication (Biswal et al., 2024). In five studies, the main focus became "medication and therapy adherence," achieving notable success regarding survivor compliance (McManus et al., 2024; Sakakibara et al., 2022). In 4 of the studies, the focus was on mobility of survivors and improvement of motor function, activities such as physical activity and rehabilitation exercises

were introduced (Roesner et al., 2024). Even though just a few studies mentioned health education, it's still crucial for improving understanding and awareness (O'Callaghan et al., 2022; Sun et al., 2022).

Self-Care Monitoring

When it comes to managing chronic conditions like strokes, diabetes, and hypertension, patients need to be involved in keeping an eye on self-care routines. This includes checking and recording a patient's blood pressure, diet, glucose level, and emotional state (Sakakibara et al., 2022; Yan et al., 2021). Research shows that self-monitoring of one's blood pressure records impactful results in one's ability to lower blood pressure, to gain control of hypertension, and to do so even better if coupled with tele-monitoring and management of one's medication (McManus et al., 2024).

Self-monitoring also improves confidence, fosters independence in long-term care, and encourages lifestyle changes, while also advocating for medication adherence. In stroke survivors with multiple chronic conditions, its effectiveness tends to diminish, necessitating culturally and individually tailored additional interventions (Falaiye, Okobi, Ndoh, & Ubajaka, 2025). Self-monitoring is assisted with education, reminders, and real-time feedback via mobile apps, wearable devices, and computers (Yang, Xu, Chang, Li, & Cao, 2024). Using telemedicine has helped survivors with better early detection, communication with their providers, control of their blood pressure, and even physical functioning (McManus et al., 2024; Sakakibara et al., 2022). Also, with the integration of this technology, decision-making in real-time and improving clinical outcomes with the use of data in virtual consultations is possible (Perez et al., 2025).

Self-Care Management

Self-care management provides stroke survivors with important skills in recognition of symptoms, assessment of situations, and management of their own care decisions (Rahman, Peng, Adams, & Sibbritt, 2023). Telehealth has proven effective in supporting stroke survivors autonomous decision-making, with the study by (McManus et al., 2024), demonstrating that automated medication adjustments through digital tools can greatly enhance control of hypertension . The *Stroke Coach* program (Sakakibara et al., 2022) showed improvement as well; telecoaching focused on lifestyle changes to assist stroke survivors in controlling blood sugar levels and enhance their overall quality of life.

In managing chronic conditions, Perceived Self-Care Ability (PSCA) is conceptualized as how stroke survivors view their self-care capabilities. This concept is closely related to survivors' self-efficacy and involves the application of maintenance (self-maintenance), monitoring (self-monitoring), and management (self-management) strategies in managing their health conditions (Jafari-Golestan et al., 2023; Rasyid et al., 2023; Tan, Oka, Dambha-Miller, & Tan, 2021). Virtual interventions developed by (Lo, Chau, Choi, et al., 2023; Lo, Chau, Lau, et al., 2023), showed increased self efficacy through educational videos and telephone/zoom sessions. Similarly, the study by (Kim et al., 2024). demonstrated comparable results through smartphone-based speech therapy for post-stroke dysarthria survivors. Furthermore, the international study by (Gebreheat, Goman, & Porter-Armstrong, 2024) supported the effectiveness of Virtual Multidisciplinary Stroke Clinics (VMSCC) in enhancing survivors' confidence in self-management.

Adherence to medication and control of risk factors are also important in studies (Kim et al., 2024; McManus et al., 2024; Yan et al., 2021) which highlighted how mobile apps and telemonitoring systems helped patients take their medications on time. One meta-analysis points out that telemedicine has helped lower stroke recurrence and death rates by improving control over the blood pressure and encouraging healthy living (Cheng et al., 2024). These results support that the use of technology in stroke survivors' self-care results in positive clinical outcomes. But, when it comes to making treatment decisions, things like uneven access, low digital literacy, and remote areas, pose significant challenges (Gauthier et al., 2022). A study by (Agarwal et al., 2025) emphasizes the need to limit content to the fundamentals to avoid overwhelming learners and focuses on user-friendly interfaces and adaptable technology. Additionally, authors encourage flexible psychosocial backing,

viewing it as a 'no-hassle' social support initiative when integrating telehealth (Elliott, Bogard, & Kohlhoff, 2024).

Study Limitation

Despite the accomplishments of telehealth technology on self-care support of stroke survivors, the current study is limited by poorly executed self-management, limited technology, restricted digital literacy, range of intervention, and small population sizes. Attempts to diminish bias through thorough revision processes have limitations with the lack of relevant literature. As this is a review study, the assessment and the results drawn are inherently tied to the quality and standards of the reports. Thus, the findings need to be interpreted considering the bias and heterogeneity of the results. Future studies should be designed in the form of randomized controlled trials with a greater scale, longer duration, and consistent intervention to improve self-care support.

Conclusions

Continuously assessing a survivor's physical and mental health facilitates the ongoing delivery of psychosocial support, which strengthens the survivor's ability to self-support independently via telehealth. With the self-care level of stroke survivors improving, the strain of direct care on the families of the stroke survivors is lessened, thereby improving the quality of life for the stroke survivors. Although telehealth is a promising avenue for expanding the reach and improving the efficiency of digital health services, potential inequity in the distribution of its benefits across the population due to limited access and low digital skills, especially for older adults, must be addressed.

Conflict of Interest

The authors declare that during the course of the study, no financial or commercial conflicts of interest existed, and all parties involved remained committed to the integrity of the research.

Credit Author Statement

Dewi Sartika Sinaga : Conceptualization, Methodology**,** Formal analysis, Validation, Project administration, Writing – review & editing and Original draft.
I Made Kariasa **:** Investigation, Supervision, Resources.
Riri Maria **:** Investigation, validation, Data curation.
Liya Arista **:** Validation and Supervision of visualization.

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