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From concept to practice

Advancing self-management support in stroke rehabilitation

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Abstract

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Background: Stroke rehabilitation increasingly takes place at home, where individuals are expected to take a more active role in managing life after stroke. Internationally, self-management support has gained attention as an approach to strengthening confidence, autonomy and participation. However, in Sweden, this is not yet an established part of stroke rehabilitation and knowledge remains limited regarding how it is understood, experienced, implemented and evaluated in this context.

Aim: The overall aim of this thesis was to expand knowledge of self-management after stroke and to explore how self-management support can be understood, implemented and measured in Swedish stroke rehabilitation.

Methods: This thesis comprise four studies using multiple methods. Study I explored how people with stroke experienced and practised self-management in everyday life after discharge. Study II reviewed barriers and enablers related to implementing self-management support in stroke rehabilitation. Study III described the translation and cross-cultural adaptation of the Stroke Self-Efficacy Questionnaire into Swedish, including preliminary assessments of content and face validity. Study IV evaluated the implementation of the Bridges self-management programme in two Swedish stroke sites, using qualitative and quantitative data to examine the implementation process.

Results: Self-management after stroke was shaped by confidence, readiness, relationships, and context. Across the studies, self-management support emerged as relational and context-dependent rather than as an isolated individual activity. In Swedish stroke rehabilitation, introducing self-management support required not only changes in practice, but also conceptual clarification, since healthcare practitioners and people with stroke expressed varied understandings of self-management. The implementation of Bridges increased awareness among healthcare practitioners and contributed to small shifts in communication with patients, but patient-level impact remained limited. Implementation was influenced by leadership support, team engagement, organisational stability, and available time and resources. The Swedish version of the Stroke Self-Efficacy Questionnaire provided a culturally adapted instrument for future research and clinical evaluation.

Conclusions: The findings suggest that developing self-management support in Swedish stroke rehabilitation requires not only changes in practice, but also conceptual clarity, recognition of the relational and contextual nature of self-management, appropriate ways of evaluation and organisational support over time.

Keywords: Life after stroke, Stroke rehabilitation, Self-management support, Implementation science, Self-efficacy, Person-centred care

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Svensk sammanfattning (Swedish summary)

Den här avhandlingen bidrar med kunskap om hur personer som haft stroke kan få stöd att hantera livet efter stroke i vardagen och hur ett sådant stöd kan förstås, införas och utvärderas i svensk strokerehabilitering.

Internationellt används ofta begreppet self-management inom strokerehabilitering. Det handlar om stöd som ska stärka personens möjlighet att vara delaktig i sin rehabilitering och att hantera livet efter stroke utifrån sina egna behov, mål och förutsättningar och att bygga tilltro till den egna förmågan över tid. På så sätt är self-management ett sätt att konkretisera personcentrerad vård i rehabiliteringens vardagsarbete, till exempel genom att bygga partnerskap mellan personal och patient, gemensam planering, gemensamma mål och samtal som utgår från personens vardag och det som är viktigt för just den personen.

I Sverige finns ingen självklar, etablerad svensk motsvarighet till begreppet self-management i strokerehabilitering. Ett begrepp som ligger nära i betydelse är egenvård. Det associeras ofta till ett smalare och mer medicinskt eller administrativt innehåll, till exempel att sköta läkemedel eller följa instruktioner, jämfört med den bredare innebörden av self-management som handlar om hur personen, tillsammans med stöd från närstående och vårdpersonal, utvecklar strategier och får ökad tilltro till att hantera vardagen, fatta beslut och anpassa livet efter stroke. När begrepp är otydliga kan också olika tolkningar uppstå och avhandlingen visar att det är viktigt att ha ett gemensamt språk vid införandet av nya arbetssätt.

Avhandlingens fokus är viktigt eftersom stroke kan påverka livet på många olika sätt. När rehabiliteringen i allt större utsträckning sker i hemmet behöver personer som haft stroke ofta tillsammans med närstående hantera många utmaningar i vardagen själva. I Sverige har vi mindre erfarenhet av hur self-management förstås, används och kan införas i strokerehabilitering, vilket

gör det angeläget att utveckla kunskap om både begreppet och om hur stöd för self-management kan bli en meningsfull del av vården.

Avhandlingen bygger på fyra delstudier. Den första studien undersökte hur personer som haft stroke upplevde tiden efter utskrivning från sjukhus och hur de hanterade vardagen hemma. Den andra studien sammanställde forskning om hinder och möjligheter vid införande av self-management stöd i strokerehabilitering. Den tredje studien översatte ett frågeformulär som mäter tilltro till den egna förmågan efter stroke, Stroke Self-Efficacy Questionnaire, till svenska och anpassade det till en svensk kontext. Den fjärde studien undersökte vad som hände när self-management programmet Bridges infördes på två svenska strokeavdelningar.

Resultaten visar att tiden efter hemgång från sjukhus ofta är en sårbar period. Många personer beskrev att de kände sig osäkra, oförberedda och att det fanns ett glapp i stödet från vården. Livet efter stroke handlade inte bara om träning eller fysisk återhämtning, utan också om att försöka förstå sin nya situation, hantera vardagliga aktiviteter, hitta strategier och återfå tillit till sin egen förmåga. Samtidigt påverkades detta av flera faktorer, till exempel personens självförtroende, initiativförmåga, sociala stöd och livssituation.

Avhandlingen visar också att self-management inte bör förstås som att klara sig ensam. Tvärtom framträder self-management som något som formas i relation till andra människor och i det sammanhang där rehabiliteringen sker. Stöd från närstående och vårdpersonal var viktigt för att personer skulle kunna känna trygghet, motivation och delaktighet. Det var också i mötet mellan patient och vårdpersonal som self-management stöd blev synligt i praktiken, till exempel genom samtal, uppmuntran och ett mer personcentrerat arbetssätt.

Det svenska frågeformuläret som utvecklades i avhandlingen är ett viktigt steg för framtida forskning och utvärdering, men det behövs eftertanke kring vad som ska mätas, när det ska mätas och hur olika typer av resultat bäst fångas.

Studien om införandet av Bridges visade att utbildningen bidrog till ökad medvetenhet hos vårdpersonal och till små förändringar i hur de samtalade med patienter. Däremot sågs inga tydliga förändringar i patienternas skattningar av sin tilltro till den egna förmågan under den studerade perioden. Resultaten tyder på att införande av nya arbetssätt är en gradvis process.

Förändringar i vårdpersonalens förståelse och arbetssätt kan bli synliga innan effekter blir tydliga för patienter. Hur väl ett nytt arbetssätt kan bli en del av det dagliga arbetet i vården påverkades också av faktorer som ledningsstöd, personalomsättning, organisatorisk stabilitet, tid och resurser.

Ett viktigt resultat var att införandet av self-management stöd i svensk strokerehabilitering inte bara handlar om att implementera ett nytt arbetssätt. Det handlar också om att införa ett begrepp som ännu inte har en självklar plats i svensk vård. Både patienter och vårdpersonal tolkade innebörden av self-management på olika sätt. Begreppet kopplades ofta till att bli självständig eller att klara sig själv, medan den bredare betydelsen – att tillsammans med stöd från andra kunna hantera livet efter stroke – var mindre självklar. Detta visar att en gemensam förståelse av begreppet är viktig om self-management stöd ska kunna bli en meningsfull del av vården.

Sammanfattningsvis visar avhandlingen att self-management stöd är ett lovande men ännu inte fullt etablerat område inom svensk strokerehabilitering. För att personer som haft stroke ska få stöd att hantera livet efter stroke behövs inte bara nya metoder, utan också ett gemensamt språk och organisatoriska förutsättningar som gör det möjligt att arbeta på nya sätt.

List of Papers

This thesis is based on the following papers, which are referred to in the text by their Roman numerals.

I. Klockar, E., Kylén, M., Gustavsson, C., Finch, T., Jones, F., & Elf, M. (2023). Self-management from the perspective of people with stroke – An interview study. *Patient Education and Counseling*, *112*, Article 107740.

II. Klockar, E., Kylén, M., Gustavsson, C., Finch, T., Jones, F., & Elf, M. (2025). Barriers and enablers for implementing self-management support for stroke survivors: A mixed methods systematic review. Submitted for review.

III. Klockar, E., Kylén, M., McCarthy, L., von Koch, L., Gustavsson, C., Jones, F., & Elf, M. (2024). The Swedish Stroke Self-Efficacy Questionnaire: Translation and cross-cultural adaptation. *Journal of Patient-Reported Outcomes*, *Jun 5;8(1):55*.

IV. Klockar, E., Elf, M., Kylén, M., Wallin, L., Finch, T., Jones, F., & Gustavsson, C. (2026). Implementation and process evaluation of the Bridges self-management support programme in Swedish stroke care. Work in preparation.

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Contents

Svensk sammanfattning (Swedish summary) 3

Abbreviations 12

Preface 13

Introduction 14

Background 15
  Stroke and life after stroke 15
  Stroke rehabilitation 16
  Organisation of Swedish stroke rehabilitation 18
  Self-management as a concept 19
  Self-management support 20
  Implementation of self-management support 23
  Measuring self-management 24

Theoretical and conceptual frameworks 26
  Social cognitive theory 26
  Normalization process theory 27
  Consolidated framework for implementation research 27
  The Medical Research Council's guidance for process evaluation 28

Rationale 30

Aim and research questions 31

Methodological approach and assumptions 32

Methods 33
  Study I 35
    Design and setting 35
    Participants and recruitment 35
    Data collection 35
    Analysis 35
  Study II 36
    Design and setting 36

Data collection 36
Analysis 36
Study III 37
Design and setting 37
Participants and recruitment 37
Data collection 37
Analysis 39
Study IV 39
Design and setting 39
Participants and recruitment 40
Study procedures 42
Data collection 42
Analysis 44

Ethics 45

Results 47
Summary of the main results 47
Study I 48
Study II 49
Study III 50
Study IV 51

Discussion 58
Discussion of the results 58
Introducing self-management support in Swedish stroke rehabilitation 58
Self-management emerges in relationships and contexts 61
Implementation as a gradual process 63
Measuring self-management 66

Methodological considerations 69
Researcher pre-understanding and reflexivity 69
Methodological approach of the thesis 70
Sampling and participant considerations 70
Data collection in real-world contexts 72
Analytical considerations 72
Qualitative analysis 72
Quantitative analysis 73
Methodological quality and trustworthiness 73
Conclusions 74
Clinical implications 75
Implications for future research 75

Acknowledgments 77

Abbreviations

CFIR	Consolidated Framework for Implementation Research
MRC	Medical Research Council’s guidance for process evaluation
NPT	Normalization Process Theory
SSEQ	Stroke-Self-Efficacy Questionnaire
S-NoMad	Normalization Measure Development Questionnaire Swedish version

Preface

When I began working as a physiotherapist in inpatient care in 2008, I enjoyed the satisfaction of helping people recover physically - for example regaining physical functions and tasks they were previously unable to perform. Gradually, I learned that recovery does not end at discharge. Many individuals were expected to 'manage' a new life situation, yet we rarely discussed in depth what this meant in everyday life.

While rehabilitation services often focus on restoring function within structured care pathways, life after stroke includes challenges that extend beyond what can be addressed in the hospital setting. For some, the transition home may be experienced as a gap in support with a sense of being somewhat abandoned by health care. These experiences raise questions about how people manage and what kind of support may be helpful in life after stroke, as rehabilitation moves beyond the hospital setting. At the same time, expectations for individuals to take active a part in managing health and recovery are growing, creating a tension between policy ideals and lived experience.

When the opportunity arose to apply for a PhD position to explore self-management in stroke rehabilitation, it felt like a perfect match for me. The international, interdisciplinary research project SELMA (Elf et al., 2022) was designed to explore self-management in stroke rehabilitation using a multimethod approach, including the experiences of people with stroke, the perspectives of healthcare professionals, and the challenges of implementing and measuring self-management support in daily practice.

Introduction

Stroke is a major cause of long-term disability. Its consequences often persist beyond the acute phase and affect many areas of everyday life. Although stroke rehabilitation aims to support recovery, much of the work involved in adapting to life after stroke takes place outside formal healthcare settings. Managing life after stroke traditionally been recognised as part of stroke rehabilitation, but since recently it has received increased attention as an important domain in its own right, including in the Stroke Action Plan for Europe 2018–2030 (Christensen et al., 2026). This domain focuses on supporting individuals in coping with the long-term consequences of stroke through a holistic approach that includes individualised rehabilitation and psychological and social support, with the aim of enabling people to live the best lives possible – to transform 'surviving into thriving' (Christensen et al., 2026, p. 15). In line with this focus on life after stroke, self-management support has gained recognition in international stroke rehabilitation guidelines as an approach to improving life after stroke (Feigin et al., 2023; Lynch et al., 2025; Norrving et al., 2018). Its aim is often not only to support functional recovery, but also to strengthen health and well-being by increasing participation, autonomy and confidence in managing daily life (Kidd et al., 2022). In Swedish stroke rehabilitation, however, these approaches are not consistently embedded in routine practice, and both the terminology and the underlying definitions may vary. This thesis concerns self-management in life after stroke and the conditions for implementing self-management support in Swedish stroke rehabilitation, with the aim of contributing conceptually, methodologically and practically to the advancement of the field.

Background

Stroke and life after stroke

Stroke is one of the leading causes of disability and mortality worldwide (Feigin et al., 2023; Norrving et al., 2018). Each year, more than 17 million people experience stroke, and many live with long-term consequences (Platz, 2021). Stroke care has undergone substantial advances in acute management, including improved risk factor management, increased awareness of stroke symptoms and the successful implementation of reperfusion treatments, all of which have contributed to reduced mortality (Markle-Reid et al., 2023; Platz, 2021). At the same time, because stroke incidence increases with age, ageing populations are expected to contribute to a continued rise in the global burden of stroke (Feigin et al., 2023). Furthermore, incidence is increasing worldwide in younger people (<55 years), with this increase faster in low-income countries. Most of the burden (deaths and loss of disability-adjusted life years) is being seen to increase in low- and middle-income countries (Feigin et al., 2023).

In Sweden, approximately 26,000 people experience a stroke each year, and 5200 die from stroke (Socialstyrelsen, 2025). Although incidence and mortality have decreased, stroke remains a leading cause of long-term disability with a subsequent need for rehabilitation. The highest stroke incidence rates in Sweden are reported in areas with greater socioeconomic challenges (Socialstyrelsen, 2025). Stroke is more common among older adults and, in 2024, 75% of individuals who experienced a stroke were aged 70 years or older (Socialstyrelsen, 2025).

The consequences of stroke are complex, heterogeneous and often long-lasting. Impairments in sensorimotor function, language, cognition, vision, swallowing and psychological health are common (Feigin et al., 2023), which not only impact daily activities but can also affect family life and social relationships. In addition, stroke is often associated with depression, physical inactivity and reduced health-related quality of life (Forster et al., 2021).

Consequently, many stroke survivors live with persistent physical, cognitive and psychosocial limitations (Sadler, Wolfe, Jones, & McKevitt, 2017), and many have a long-term need for continued, individualised rehabilitation (Platz, 2021). In Sweden, two-thirds of individuals who experience a stroke have residual impairments one year later (Riksstroke, 2022). Recovery after stroke is affected by multiple factors, including the severity and location of the stroke, age and pre-stroke health status, socioeconomic conditions and the quality of rehabilitation (Feigin et al., 2023).

Stroke rehabilitation

Rehabilitation is defined by the WHO as 'a set of measures that assist individuals, who experience or are likely to experience disability, to achieve and maintain optimal functioning in interaction with their environments' (2011 p. 96). In stroke rehabilitation, the aim is often to improve function and support individuals in regaining the highest possible level of independence and participation in everyday life (Li et al., 2024; Norrving et al., 2018). Rehabilitation commonly involves multidisciplinary teams, including physiotherapists, occupational therapists, speech and language therapists, nurses and physicians (Li et al., 2024). Early supported discharge has been recommended, which aims to support earlier discharge from hospital while maintaining continuity of rehabilitation in the home setting (Langhorne et al., 2017). Reported benefits include more relevant goal setting, greater patient involvement, increased self-directed activity and rehabilitation in an everyday context (Langhorne et al., 2017). However, despite such developments, stroke rehabilitation often continues to take a biomedical approach focused on short-term functional outcomes. Although functional impairments are considered important by those affected by stroke, this narrow approach often overlooks long-term needs within a whole-person approach (McNaughton et al., 2023).

Motor recovery post-stroke is often most pronounced within the first 3–6 months (Ballester et al., 2019), and some stroke services are organised around this time frame. As a result, rehabilitation may become time-limited even though the restorative process for the person continues for much longer (Winstein et al., 2016). Research argues that meaningful improvements can be made in later stages of stroke and that rehabilitation should extend beyond acute and subacute phases (Ballester et al., 2019; Li et al., 2024; Norrving et al., 2018). This leaves many people with stroke with unmet needs and difficulties in reaching satisfying levels of health (Winstein et al., 2016). O'Neill et al. (2008) have suggested that stroke should be viewed as a long-term

condition with an acute event, to emphasise that rehabilitation and support need to continue over time. This highlights a tension between the short-term focus of some rehabilitation services and the longer-term demands of living with and adapting to stroke after formal rehabilitation has ended.

In stroke, rehabilitation needs often change over time, requiring support that is flexible, adaptive and responsive to the individual's evolving situation (Ansong & Gazarian, 2024). Designing and delivering such individualised and dynamic support can be challenging for healthcare systems that are typically structured around standardised interventions and fixed care pathways (Jones & Leggat, 2023). Furthermore, rehabilitation is needed on several care levels – in the acute phase as well as in outpatient settings or community rehabilitation (Norrving et al., 2018).

The availability and quality of stroke rehabilitation vary considerably between countries, with most countries providing only half or less of the recommended amount of rehabilitation (Feigin et al., 2023). Quality-related challenges include insufficient frequency and duration of rehabilitation, together with limitations in content and individual tailoring, as well as limited access to therapies that actively engage and challenge patients (Feigin et al., 2023). Studies have also revealed limitations in rehabilitation due to lack of resources or waiting times, which disrupts recovery (Fu et al., 2025). Improvements in function may also diminish over time due to unmet needs following discharge from hospital or community care (Boehme et al., 2021). In addition, access to evidence-based care and the organisation of stroke pathways – from acute care and multidisciplinary rehabilitation to early supported discharge and long-term community reintegration – differ both within and between healthcare systems (Feigin et al., 2023).

Previous studies have reported that a lack of support after discharge leaves patients feeling abandoned by the healthcare system (Clarke & Forster, 2015; Pindus et al., 2018). In addition, as post-stroke services are unevenly distributed, individuals with stroke and their families are themselves often required to coordinate rehabilitation and other services after discharge (Lindblom et al., 2020). The abrupt and unexpected onset of stroke, combined with increasingly short hospital stays, can limit individuals' opportunities to prepare for the transition from hospital to home (Almborg et al., 2009a, 2009b; Gallacher et al., 2019).

This issue is highlighted in Swedish care pathway guidance, which stresses the need for coordinated discharge, rehabilitation in the home setting through early supported discharge, and structured follow-up (Socialstyrelsen, 2020). This is consistent with European calls for stronger commitment to coordinated stroke care across the pathway (Christensen et al., 2026).

In summary, stroke services often focus on short-term functional outcomes and may be time-limited, whereas the consequences of stroke can be long-lasting and affect many areas of life. This creates a mismatch between the support provided and the realities people face after discharge, highlighting the need for broader support across the stroke pathway to help individuals and families manage the transition home and adapt to life after stroke over time (Fu et al., 2025; Markle-Reid et al., 2023, Morgan et al., 2017). How rehabilitation is organised and what support is available after discharge therefore play an important role in shaping the conditions for recovery and everyday life after stroke. The following section describes the organisation of stroke rehabilitation in the Swedish healthcare context.

Organisation of Swedish stroke rehabilitation

In Sweden, the stroke pathway typically starts in stroke units during the acute phase, followed by rehabilitation provided through outpatient services or municipal rehabilitation, depending on individual needs (Socialstyrelsen, 2020). Swedish stroke guidelines recommend multidisciplinary, team-based rehabilitation, either offered inpatient or by early supported discharge teams in a person's home, depending on the severity of the stroke (Socialstyrelsen, 2020). Rehabilitation is described as a patient-centred, goal-orientated process involving several professions (e.g. physicians, nurses, nursing assistants, occupational therapists, physiotherapists, speech therapists and psychologists) organised around the individual's needs and goals (Socialstyrelsen, 2020).

However, registry data indicate variations in access and delivery. For example, in 2024, 20% of stroke patients in Sweden did not receive care in a stroke unit during the first critical 24-hour period (Riksstroke, 2024). Many hospitals cannot offer early supported discharge, and there are also substantial differences in access to inpatient stroke rehabilitation that cannot be explained by variations in patients' needs. In 2024, only approximately half of people with stroke living at home in Sweden stated that they had received sufficient support from the region or municipality after homecoming (Riksstroke, 2024). The mean length of stay in a stroke unit was six days in 2024 (Riksstroke,

2024). These figures are likely to reflect several factors, such as planned early supported discharge or appropriate access to outpatient or municipal rehabilitation, but also insufficient access to stroke or geriatric inpatient care and a lack of adequately trained staff to work in stroke units (Riksstroke, 2024). These short lengths of stay reflect ongoing restructuring within Swedish healthcare but may also limit opportunities to prepare individuals for managing life after discharge.

Recently, government initiatives have been implemented in the Swedish healthcare system to organise care closer to patients. For example, the 'Good quality, local healthcare' (2019) reform aims to make primary care the hub of care for all patients, create more integrated and coordinated care closer to the patient's home, and decrease the load on inpatient care. While this reform aims to improve continuity and accessibility, it also implies a shift of responsibility towards individuals and primary care, increasing the importance of individuals' ability to manage their health and everyday life.

Overall, these factors point to a fragmented and unevenly distributed rehabilitation system in which continuity of care and long-term support cannot be taken for granted. Although stroke rehabilitation in Sweden aims to support recovery and participation, many patients report insufficient support after discharge. As a result, individuals often need to manage life after stroke outside the formal healthcare system, particularly in the period following discharge.

Self-management as a concept

Self-management is not a new concept, having been mentioned in healthcare since at least the mid-1960s and first appearing in paediatric asthma treatments (Creer, 2008). The use of the term then spread to different chronic disease education programmes, with important contributions by Corbin and Strauss (Corbin, 1998), who defined self-management according to three tasks needed when dealing with chronic conditions: medical management, role management and emotional management. This was expanded by Lorig et al. (2003), who developed five core management skills: problem-solving, decision-making, resource utilisation, development of a patient–healthcare provider partnership and taking action. Since then, a wide range of self-management definitions has emerged, varying in scope from broad and behavioural to skill-orientated and focusing on specific tasks, such as medical management. Some emphasise the individual and others emphasise the partnership between the

individual and caregivers/healthcare providers. One of the most commonly cited definitions is the following by Barlow et al. (2002, p. 178) :

> Self-management refers to the individual's ability to manage the symptoms, treatment, physical and psychosocial consequences and lifestyle changes inherent in living with a chronic condition. Efficacious self-management encompasses ability to monitor one's condition and to effect the cognitive, behavioural and emotional responses necessary to maintain a satisfactory quality of life. Thus, a dynamic and continuous process of self-regulation is established.

This thesis is guided by this definition of self-management, as it covers several important aspects, such as broad areas of consequences and responses to these consequences, describing self-management as a dynamic and continuous process aimed at achieving a satisfactory quality of life.

Self-management has long informed diagnosis-specific interventions, such as blood pressure measurements or blood glucose monitoring for individuals with hypertension or diabetes (Barlow et al., 2002). These interventions typically focus on clearly defined targets and standardised self-care behaviours. However, applying this concept to stroke rehabilitation presents particular challenges, as unlike many long-term conditions, stroke is characterised by a sudden onset and heterogeneous consequences, affecting physical, cognitive and psychosocial domains (Jones et al., 2012). This complexity makes self-management less predictable and more closely tied to individuals' everyday contexts and lived experiences. In addition, the focus in stroke care is often on the acute event rather than the long-term condition (O'Neill et al., 2008). As a result, increasing attention has been directed towards approaches that support individuals in managing life after stroke, including self-management support.

Self-management support

Self-management support has been identified as an important component of stroke rehabilitation by several key organisations, such as the World Stroke Organization and the World Federation for Neurorehabilitation, as well as international stroke guidelines in Australia, New Zealand, Canada and the United Kingdom (Feigin et al., 2023; Lynch et al., 2025). In Europe, a target has been set for all stroke patients to have access to self-management support on discharge from hospital by year 2030 (Norrving et al., 2018).

Self-management support aims to provide people with stroke with the tools, confidence and support needed to manage life after stroke, including adapting

to changes in everyday life, making decisions, solving problems and identifying ways of moving forward in relation to what matters to the person (Jones et al., 2016; Lisa Kidd et al., 2022; Sadler et al., 2017; Satink et al., 2015). Over time, understandings of self-management support have broadened from a primary focus on patient education or specific tasks – such as medication management – towards more collaborative and supportive approaches (Fu et al., 2025; Kidd et al., 2022). Contemporary perspectives often emphasise a whole-person approach that includes what matters in patients' lives and to their families over time (Fu et al., 2025). A trusting relationship between the patient and health care practitioners is central, in which both contribute their respective knowledge (Fu et al., 2025; Lucas et al., 2025). At the same time, interventions vary widely in scope: some programmes adopt the comprehensive, holistic and relational understanding of self-management support, whereas others focus more narrowly on specific areas, such as medication management or physical activity, depending on the aim of the intervention.

The varying definitions of self-management support, together with the lack of clear conceptual explanations or theoretical underpinnings in many programmes, make them difficult to evaluate and compare (Ellis et al., 2017; Fletcher et al., 2019; Van De Velde et al., 2019). Theory-informed interventions have therefore been suggested to strengthen both intervention development and evaluation (Lau et al., 2022). When theory is used, social cognitive theory – particularly the concept of self-efficacy (Bandura, 2007) – is among the most commonly cited frameworks informing self-management support (Jones & Leggat, 2023). At the same time, reviews have also highlighted that programme content does not always align clearly with components assumed to support self-efficacy (Lynch et al., 2025).

Self-efficacy refers to beliefs about one's capacity to organise and execute the actions required to achieve desired outcomes (Bandura, 2023). In stroke rehabilitation, self-efficacy has been associated with quality of life and functional independence (Jones et al., 2008). Furthermore, there is a correlation between the level of self-efficacy and mobility, activity and higher levels of performance in individuals with stroke (Hellström et al., 2003). Higher levels of self-efficacy have been linked to setting higher goals, reaching higher levels of success in performance and being more resilient in challenging situations (Szczepanska-Gieracha & Mazurek, 2020). Lower self-efficacy has been linked to reduced motivation and increased levels of depression and anxiety (Szczepanska-Gieracha & Mazurek, 2020). Since self-efficacy influences the

initiation of behaviour change (Bandura, 2023), it has also been seen as an important facilitator of self-management (Nott et al., 2021; Riazi et al., 2014).

Self-management support has beneficial effects across several domains in stroke rehabilitation. These include self-efficacy, quality of life, activities of daily living, social participation and emotional and functional recovery (Pedersen et al., 2020; Sahely et al., 2023; Warner et al., 2015). It has been criticised for excluding individuals with certain stroke-related complications, such as aphasia or cognitive difficulties, from participation in self-management support studies (Jones et al., 2017). Although this has traditionally been the case, recent years have seen improvements through several initiatives that specifically aim to include people with aphasia (Pieri et al., 2022; Wray et al., 2021). Furthermore, approaches such as self-management support, in which patients are invited to be more engaged in their rehabilitation, can also be burdensome, especially for older or frail patients, as they can be demanding in both time and effort (Gallacher et al., 2019).

In its strongest form, self-management support is about supporting autonomy, strengthening self-efficacy, enabling meaningful participation and recognising the person beyond the diagnosis. However, in some international research, it is also linked to system sustainability, reduced service utilisation and cost-containment pressures (Intercollegiate Stroke Working Party, 2023). This may imply that patients should manage on their own, as healthcare systems cannot carry the full burden, and that activation is assumed to reduce costs. This double-edged nature suggests that self-management support can strengthen patient agency or subtly redistribute responsibility (Jones & Leggat, 2023). Previous research has also shown that health care practitioners may expect patients to self-manage, which, according to Sadler et al. (2017), often implies being active and taking responsibility for their rehabilitation and recovery (Sadler et al., 2017). Such expectations have been problematised, as they may lead to the moralisation of patient behaviour, with individuals implicitly categorised as ‘good’ or ‘bad’ at self-management based on how active they appear to health care practitioners (Ellis et al., 2017; Lucas et al., 2025).

Several evidence-based self-management support programmes exist, building on peer learning, problem-solving strategies, individualised workbooks containing plans for the future and training for health care practitioners in areas such as communication and goal setting (Bridges, 2014; Fu et al., 2020; Fugazzaro et al., 2021; Kidd et al., 2022). Examples of evidence-based self-management support programmes include Take Charge, a community-based

self-directed rehabilitation programme that supports self-management after stroke, which has been shown to improve health-related quality of life and independence (Fu et al., 2020) and, of particular relevance to this thesis, the Bridges self-management programme (Bridges, 2014).

The Bridges self-management programme was developed in the UK in 2014 as an approach to supporting self-management and was initially evaluated in people with stroke (Bridges, 2014, Hancock et al., 2022). The programme is underpinned by social cognitive theory (Bandura, 2023), especially the concept of self-efficacy. Bridges is based on core principles that underpin personalised self-management support. Through staged interactive training, health care practitioners learn key strategies and ways of using language that reflect these principles and support their integration into everyday interactions and team practice. These strategies are designed to strengthen self-efficacy and thereby influence patients' confidence, knowledge and skills (Jones et al., 2016). Bridges have been adapted and contextualised to many different conditions and care pathways, including major trauma, brain injury, neuromuscular disease and, most recently, long-Covid (Harris et al., 2025; Makela et al., 2019). Bridges has also been applied in New Zealand, Estonia, Australia and Portugal and is currently being adapted for the Philippines (Buckingham et al., 2024; Hale et al., 2023; Pereira et al., 2024; Singer et al., 2018).

Although several interventions have been developed to support self-management after stroke, integrating these approaches into routine clinical practice remains challenging (Kidd et al., 2020). Successfully embedding self-management support in everyday practice therefore depends not only on the intervention itself, but also on how it is introduced, understood and sustained within its local context (Coles et al., 2020; Scholl et al., 2018).

Implementation of self-management support

Implementation can be defined as 'the process through which interventions are delivered, and what is delivered in practice' (Moore et al., 2015b p. 8). Implementing new ways of working in daily practice is rarely straightforward, even when the intervention is evidence based. Many efforts to implement new practices fail to become embedded in routine care, illustrating that evidence alone is not sufficient to change practice (Damschroder et al., 2009, May et al., 2016). This is particularly relevant for self-management support, which does not simply involve adding a new task, but often requires health care practitioners to work differently in their everyday encounters with patients. In this

way, self-management support interventions can be understood as complex, since they seek to influence professional behaviour, patient behaviour and organisational routines simultaneously (Moore, 2015a).

In stroke rehabilitation, self-management support is increasingly promoted, yet important questions remain about what works, for whom, and under what circumstances (Millar et al., 2022). One reason may be that self-management support is difficult to standardise and transfer directly between settings. Its impact depends not only on the intervention itself, but also on how it is understood, enacted, and sustained by health care practitioners within the local context (Kidd et al., 2022). Implementation therefore becomes closely tied to the conditions of practice.

This makes context particularly important. Context includes the organisational conditions, team processes, leadership, routines, and resources that shape what is possible in daily care (May et al., 2016; Nilsen & Bernhardsson, 2019). In real-world settings, these conditions are not static; they may both enable and constrain implementation, and they may change over time (Damschroder et al., 2022). Variations in outcomes between studies of the same intervention may therefore reflect not only differences in the intervention, but differences in the contexts into which it is introduced (May et al., 2016). These issues are particularly evident in stroke care, where rehabilitation often extends across several settings, from acute hospital care to inpatient rehabilitation and community-based services (Feigin et al., 2023). Such pathways may challenge coordination and continuity.

Taken together, implementing self-management support in stroke rehabilitation is not only a matter of introducing an evidence-based intervention, but also of understanding how it is perceived and delivered across contexts. This may help explain why implementation is challenging, why outcomes vary, and why careful attention must be paid to the interaction between the intervention, patients, professionals, and the context.

Measuring self-management

In addition to understanding how self-management support is implemented, it is also important to examine how its impact on patients is measured.
The heterogeneity of self-management support interventions has resulted in a lack of uniform evaluation methods. Some instruments aim to capture self-management as a broader construct, such as the Self-Management Behaviours

Scale (Lorig et al., 1996). There are also instruments that measure self-management in non-disease-specific populations, such as the Patient-Reported Inventory of Self-Management of Chronic Conditions (Kephart et al., 2022). In stroke rehabilitation, the Stroke Self-Efficacy Questionnaire (SSEQ) was developed to assess confidence in managing stroke-related activities and self-management (Jones, et al., 2008). For self-management support that aims to improve specific functions, outcomes aligned with that target (e.g. physical activity) may be used (Jones & Leggat, 2023).

The evaluation of self-management support interventions often includes patient-reported outcome measures (Boger et al., 2015). These measures are used to capture the patient perspective and often assess aspects that are not visible, such as health-related quality of life, symptoms, limitations in functioning or activities, satisfaction with treatments, pain or participation (Aiyegbusi et al., 2022; Frost et al., 2007). However, responses may be influenced by factors such as expectations, mood or social desirability (Kluzek et al., 2022). In addition, people with stroke may experience fatigue or cognitive difficulties that make questionnaires burdensome to complete (Aiyegbusi et al., 2022). Furthermore, factors such as ethnicity, socioeconomic background or low health literacy may lead some individuals to withdraw from studies involving patient-reported outcomes, which may introduce bias in the interpretation of these outcomes and potentially reinforce existing inequalities in care for underserved groups (Calvert et al., 2022).

It is also important to consider the timing of the outcome measurement. In implementation studies, it is common that changes in professional practice and intervention delivery precede measurable changes at the patient level, meaning that patient-reported outcomes may not reflect the intended effects during the early phases of implementation (Calvert et al., 2022).

Theoretical and conceptual frameworks

Given the complexity of self-management as both a behavioural and contextual phenomenon, no single theory, concept or framework is sufficient to capture its multiple dimensions. Therefore, several approaches are used in this thesis. First, social cognitive theory – especially the concept of self-efficacy – is the overarching theory that provides a lens for understanding individual self-efficacy across the thesis. Furthermore, to understand how a new practice is embedded in daily practice, normalization process theory (NPT) is used in Study IV. In addition, two frameworks are used: the consolidated framework for implementation research (CFIR), to organise and synthesise barriers and enablers identified in Study II, and the Medical Research Council's (MRC) guidance for process evaluation, to structure attention to context, implementation and mechanisms of impact in Study IV

Social cognitive theory

Several theoretical frameworks underpin self-management interventions; however, social cognitive theory – and particularly the concept of self-efficacy – is among the most commonly applied (Jones & Leggat, 2023)). Bandura (2023) defined self-efficacy as 'the belief in one's capabilities to organise and execute the actions required to achieve desired outcomes'. Self-efficacy is theorised to influence emotions, thoughts, motivations and behaviours related to health, for example by shaping the goals individuals set and their resilience in the face of challenges (Jones & Riazi, 2011; Ouyang et al., 2023).

In SCT, self-efficacy is shaped through mastery experiences, vicarious experiences, verbal persuasion and interpretations of physiological/affective states (Bandura, 2023). These sources are relevant to rehabilitation practice; interventions can support mastery through achievable tasks, provide modelling through peer or clinician examples, strengthen verbal persuasion through enabling communication and support reflection on bodily and emotional responses in challenging situations (Jones et al., 2011; Ouyang et al., 2023).

Self-efficacy is treated as a key construct throughout the thesis. It is reflected in how confidence in managing everyday life after stroke is understood, in how some self-management support interventions are conceptually framed, in the cross-cultural adaptation of a Swedish measure of stroke-specific self-efficacy, and in the evaluation of patient-level outcomes in the context of implementation. In this way, self-efficacy links conceptual, methodological and evaluative aspects of the thesis.

Normalization process theory

NPT is a middle-range implementation theory used to understand how new and complex practices become – or fail to become – part of routine, everyday work (May & Finch, 2009, May et al., 2018). Rather than focusing on attitudes or outcomes alone, NPT centres on the work people do to implement and sustain a new practice. NPT describes four key mechanisms that shape whether and how a new way of working becomes normalised in practice (May & Finch, 2009):

Coherence: Making sense of the change by understanding the meaningful qualities of a new practice.
Cognitive participation: Maintaining engagement in working in the new way, both by individuals and groups.
Collective action: Working together to integrate the new practice into the. existing way of working
Reflexive monitoring: Reflecting on the new practice to understand it.

In Study IV, NPT was used to inform data collection by guiding the focus of interviews and observations. It was also used in analysis as a lens for interpreting qualitative findings related to how Bridges was embedded in daily practice. The findings were examined in relation to the four mechanisms of NPT to understand variations in implementation across sites.

Consolidated framework for implementation research

CFIR is a widely used determinant framework in implementation research (Damschroder et al., 2022). Determinant frameworks provide concepts to identify and describe barriers and enablers (determinants) that may influence implementation processes and outcomes, particularly in real-world contexts where conditions can facilitate or hinder implementation (Damschroder et al., 2022). CFIR comprises five domains – intervention characteristics, outer

setting, inner setting, characteristics of individuals and process – with associated constructs and subconstructs (figure 1).
In Study II, CFIR was used to organise and synthesise extracted findings on barriers to and enablers of implementing self-management support in stroke care.

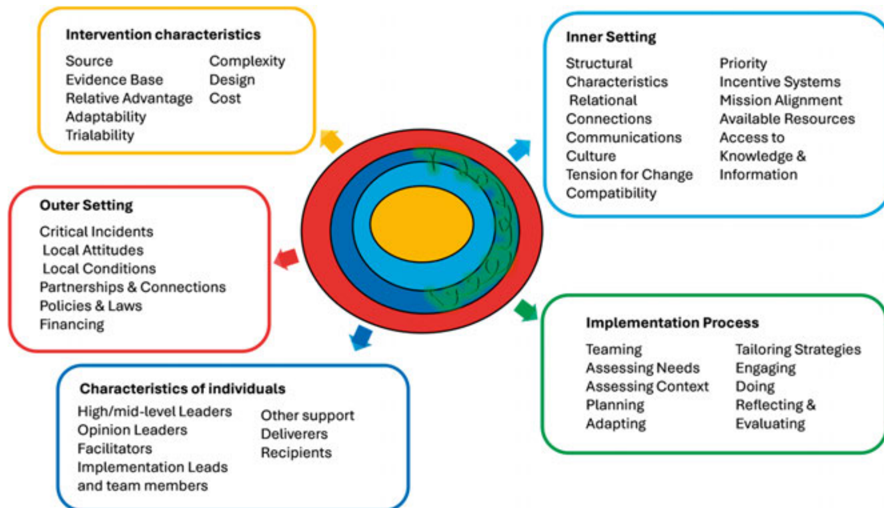

Figure 1. Consolidated framework for implementation research with domains and constructs

The Medical Research Council's guidance for process evaluation

The MRC's guidance for process evaluation provides a structure for understanding how complex interventions are implemented and how they produce impact in real-world settings (Moore, 2015a). The guidance focuses on four dimensions, of which three – context, implementation and mechanisms of impact – are considered key components, while the fourth, outcomes, can be separated from the process evaluation and reported separately if desired (Moore, 2015a).

Context describes factors that influence the implementation process or the effects of the intervention, either positively or negatively. *Implementation* concerns how the intervention is delivered, including the fidelity and dose of the intervention and any adaptations that may be needed to fit the context.

Mechanisms of impact describe how the effects of the intervention occur, such as which mechanisms create change.

In Study IV, the MRC's guidance for process evaluation was used to structure the process evaluation by organising data collection and findings in relation to context, implementation, mechanisms of impact and outcomes, see Figure 2.

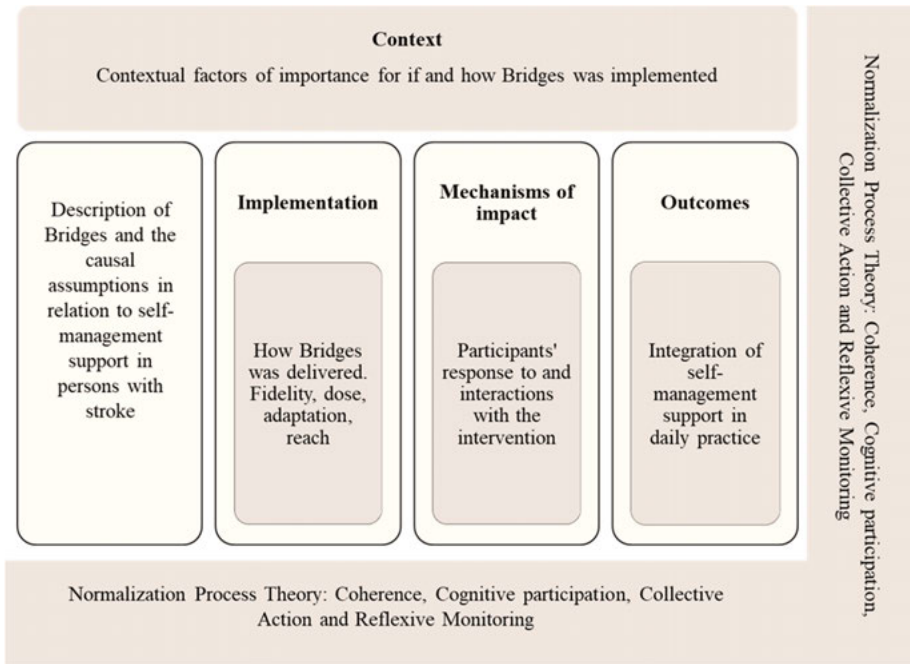

Figure 2. MRC guidance for process evaluation integrated with the Bridges self-management support intervention in Study IV.

Overall, these theories and frameworks offer complementary perspectives on self-management and self-management support as a multi-level phenomenon encompassing individual behaviour, professional practice, organisational context and implementation processes.

Rationale

As stroke rehabilitation increasingly takes place in the home, individuals and their families are often expected to take greater responsibility for managing care and everyday life. Self-management has gained solid ground in stroke rehabilitation as a way to support individuals in living with the consequences of stroke. In this thesis, self-management is understood as supporting health and well-being after stroke, encompassing autonomy, participation and navigating life with its consequences. This perspective extends beyond symptom control and functional recovery and aligns with person-centred care, where support is developed in partnership and tailored to what matters to the individual.

Although self-management support is well established in international stroke rehabilitation guidelines, it is not yet explicitly reflected in Swedish guidelines. There is limited knowledge about how people with stroke in Sweden experience and practice self-management in their daily lives at home. In addition, health care practitioners may hold varying understandings of self-management, which can influence how support is communicated and enacted in clinical practice.

While structured self-management support programmes have been developed, embedding such approaches in routine stroke rehabilitation remains challenging, particularly in contexts where the concept has not yet been fully established. Furthermore, appropriate outcome measures are needed to capture self-management in people with stroke. To address these challenges, research is needed that combines perspectives from lived experience, clinical practice, implementation processes and evaluation methods regarding self-management and self-management support.

Overall, these gaps highlight the need for a broader understanding of self-management in Swedish stroke care and for knowledge that can support its future development, implementation and evaluation.

Aim and research questions

The overall aim of this doctoral thesis is to explore how people with stroke understand and practise self-management, how it can be measured in this population and which factors influence the implementation process of self-management support. It also aims to evaluate the process of implementing a self-management support programme in Swedish stroke rehabilitation.

The specific aims are as follows:

I. Explore how people with stroke understand self-management and how they practise self-management post-discharge.

II. Explore barriers to and enablers of the implementation of self-management support interventions.

III. Translate and cross-culturally adapt a measurement for stroke self-efficacy into Swedish.

IV. Evaluate the process of implementing a self-management support intervention in a Swedish stroke rehabilitation context.

Methodological approach and assumptions

This thesis is situated within the discipline of care science, where health is understood from a biopsychosocial perspective that encompasses biological, psychological, and social influences (Brannon et al, 2014). This is particularly relevant in stroke rehabilitation, where self-management is shaped not only by stroke-related consequences, but also by how life is lived, interpreted, and supported across care settings and everyday contexts.

This thesis addresses self-management as both an experienced everyday practice by people with stroke and an approach intended to be implemented in routine stroke care. The studies were conducted in real-world settings and concerned questions that involved both subjective meanings and observable aspects of practice and the use of outcome measures. A pragmatic research paradigm was therefore adopted as the overarching philosophical stance of the thesis (Allemang et al., 2022). Pragmatism is particularly suitable when research seeks knowledge that is useful in practice and when the phenomenon under study cannot be adequately understood through a single methodological tradition alone. Rather than privileging either qualitative or quantitative approaches, pragmatism allows methods to be chosen according to the research question and the practical problem being addressed (Allemang et al., 2022).

Ontologically, this thesis assumes that reality is multifaceted. Some aspects of self-management after stroke can be observed and measured – for example, through patient-reported outcome measures – whereas other aspects concern socially and contextually constructed meanings, such as how self-management is understood and embedded in practice. Epistemologically, knowledge is viewed as situated, practice-orientated and developed through engagement with both lived experiences and empirical observations. Qualitative and quantitative approaches are therefore understood as complementary, contributing different valuable forms of knowledge about the phenomenon.

Methods

The thesis employs a multi-method research design within a pragmatic paradigm, including two exploratory qualitative studies, a mixed-methods cross-cultural adaptation of a measurement instrument and a multi-case process evaluation of implementing a self-management support intervention. An overview of study aims, design, participants, data collection and analysis are displayed in Table 1.

Table 1. Overview of included studies

	Study I	**Study II**	**Study III**	**Study IV**
Aim	Explore how persons with stroke experience and practice self-management in the post-acute phase	Identify barriers and enablers for implementation of self-management support interventions for people with stroke	Translate and cross-culturally adapt the Stroke Self-Efficacy Questionnaire (SSEQ) to Swedish and to evaluate psychometric properties	To evaluate the implementation of Bridges self-management support system in two Swedish stroke sites.
Design	Qualitative	Systematic review	Cross-sectional	Process evaluation, multiple methods
Participants	N:18 persons with stroke	N/A	Persons with stroke N:43 Expert panels N: 16 Interviews: N:5	HCP:s N:22 Persons with stroke N:46
Data collection	Semi-structured interviews		Questionnaire, interviews	Questionnaires, observations, interviews
Analysis	Content analysis	Narrative synthesis	*Qualitative:* Content analysis, *Quantitative:* Floor-ceiling, internal consistency	*Qualitative*: Thematic analysis *Quantitative:* descriptive statistics

Study I

Design and setting

Study I was a qualitative study that used semi-structured interviews to explore the experiences of self-management of people with stroke and how they practise self-management after discharge. Participants were recruited from an acute stroke ward in the centre of Sweden and were interviewed by telephone in their homes between 29 and 44 days after their stroke. The study was conducted during the Covid-19 pandemic.

Participants and recruitment

Criteria for eligibility were age over 18 years, having received a clinical diagnosis of stroke and the ability to speak Swedish without an interpreter. A total of 18 patients were included. Participants were recruited by a research assistant who also worked on the ward and had access to it despite the ongoing pandemic. Participants were recruited via purposive sampling, in which individuals of different sexes, ages and degrees of impairment were sought.

Data collection

Data collection was carried out between May and December 2021. An interview guide was developed within the research group and pilot tested before use. This consisted of open-ended questions that encouraged participants to answer freely and stimulated reflections. The interviews were recorded and transcribed verbatim. Baseline characteristics of the participants were also collected.

Analysis

Inductive content analysis, as described by Elo and Kyngäs (2008), was used to analyse the interviews. The purpose of using content analysis was to systematically describe experiences and examples of self-management practices rather than to explain any relationships between the different aspects of self-management. An inductive approach was chosen because existing knowledge of experiences of self-management in people with stroke in Sweden has not previously been thoroughly described (Elo, 2020). The process was iterative and interpretative, with multiple discussions within the research group in the

analysis phase, and involved identifying meaning units, words, phrases or sentences that had significance to the aim of the study. The meaning units were then analysed (coded) and formed subcategories, which were further grouped into categories.

Study II

Design and setting

Study II was a systematic review of qualitative, quantitative and mixed-methods studies on self-management support with long-term follow-up in any type of stroke care setting.

Data collection

The search strategy was developed together with an information specialist. The population, exposure and outcome framework formed the inclusion criteria for the search strategy (Bettany-Saltikov, 2012). The search targeted studies conducted between 2009 and 2024, focusing on self-management in any stroke setting that included long-term (>6 months) follow-up. A total of 7272 studies were screened for inclusion, and 37 were included in the review. A data extraction form was constructed using Covidence data software to extract information on the included studies. In addition to data describing the studies' characteristics, data on findings related to enablers and barriers to implementation were extracted from the results and discussion sections of the studies.

Analysis

Qualitative, quantitative or mixed-methods studies were included in the review, and all types of outcomes were considered. Given that the heterogeneity of the studies and their outcomes made it impossible to compare them statistically, narrative synthesis was used, as described by Popay et al. (2006). Narrative synthesis has been recognised as a method for summarising and explaining findings from multiple study types by telling a trustworthy story of the findings and is especially suitable for answering research questions regarding the implementation of interventions (Popay et al., 2006; Rodgers et al., 2009).

Data were extracted and grouped into barriers and enablers using expressions and terminology from the original papers. In the second step, the narrative synthesis was conducted using CFIR as a guiding framework to organise and

interpret the extracted data (Damschroder et al., 2022). This included mapping the extracted barriers and enablers to one of the five domains and related constructs or subconstructs of the CFIR framework through discussions within the research team.

Study III

Design and setting

Study III followed the standardised procedure of Beaton et al. (2000) to translate and cross-culturally adapt the SSEQ into Swedish. The study was conducted in the county of Dalarna and at two multidisciplinary stroke units in southern Sweden.

Participants and recruitment

The participants consisted of two expert panels, an interview group and a patient group recruited to pre-test the questionnaire. The first expert panel consisted of three people with stroke, two health care practitioners in stroke care and five stroke researchers recruited from a reference group connected to the SELMA research project. The second expert panel consisted of six people with stroke recruited from a local stroke association. In addition, five people with stroke were recruited from a local stroke association to participate in interviews. All participants were recruited using purposeful sampling. For the pre-test, the cohort of patients from Study IV was used.

Data collection

Stroke Self-Efficacy Questionnaire

The original instrument, the SSEQ, was developed in the United Kingdom (Jones et al., 2008) and is a self-reported questionnaire that consists of 13 items – eight assessing self-efficacy for different areas of post-stroke functioning and five assessing self-efficacy for self-management post-stroke. A four-point Likert scale is used for participants to rate their self-efficacy in these areas.

The instrument has been translated into 13 languages (Arabic, Brazilian, Chinese, Danish, Hausa, Italian, Portuguese, European Portuguese, Persian, Turkish, Urdu and Vietnamese), representing four continents (Ali et al., 2021;

Almalki et al., 2023; Dallolio et al., 2018; Deon et al., 2022; Figueira et al., 2026; Arkan et al., 2019; Kristensen & Pallesen, 2018; Lo et al., 2016; Makhoul et al., 2020; Nguyen et al., 2026; Pedersen & Pallesen, 2022; Riazi et al., 2014; Saberi et al., 2024; Topçu & Oğuz, 2018; Uroose et al., 2024). SSEQ has been analysed through various psychometric tests, including Rasch analysis. Minimal detectable change and minimal clinically important difference were established in a recent study by Wu et al. (2024). The results from these evaluations have overall indicated acceptable results, except in a Danish study that raised doubts regarding test–retest reliability (Pedersen & Pallesen, 2022).

The SSEQ-SWE was distributed to the patient cohort in Study IV, and floor and ceiling effects and internal consistency were analysed using Cronbach's α.

Translation and back-translation

Two researchers with clinical backgrounds as physiotherapists, whose native language was Swedish, performed two independent translations of the original SSEQ from English to Swedish. Several discussions were held with the research group to agree on concepts and appropriate language that captured the original meaning as accurately as possible. The agreed version was then back translated by a bilingual translator with English as mother tongue. This person was blinded to the original instrument. A comparison was made between the back-translated version and the original SSEQ, followed by further discussion of conceptually difficult items until consensus was reached on a new version.

Cognitive interviews

A semi-structured interview guide with open-ended questions was developed to explore participants' understanding of the SSEQ-SWE and their views on the relevance and suitability of the items in the instrument. Interviews were conducted item by item to identify unclear wording and potential cultural or contextual mismatches. All interviews were conducted via telephone due to the Covid-19 pandemic.

Content validity index

The content validity index (CVI) was used to evaluate the relevance of the items' content (Polit, Beck, & Owen, 2007). Item-level content validity (I-CVI) and average scale-level content validity (S-CVI (ave)) were calculated based on ratings provided by the expert panels. Free-text answers from CVI forms were included in the analysis.

Analysis

Qualitative content analysis at the manifest level was used to analyse the cognitive interviews and free-text answers in the CVI forms (Kleinheksel et al., 2020), aiming to identify and organise the material into categories and constructs. The analysis was conducted by two researchers, with categories and constructs discussed until consensus was reached. The I-CVI was calculated for each item as the proportion of experts who rated the item as either relevant or highly relevant. The S-CVI (ave) was calculated by averaging the I-CVI values across the number of items. Relevant cut-off scores were determined prior to rating.

The psychometric analyses followed earlier translation processes (Kristensen & Pallesen, 2018; Makhoul et al., 2020). Floor and ceiling effects and internal consistency were calculated, with a predetermined value of 0.7–0.95 considered acceptable (Terwee et al., 2007).

Study IV

Design and setting

Study IV was a process evaluation of the implementation of the Bridges self-management support programme among the staff at two multidisciplinary stroke sites in southern Sweden. The inclusion criteria for participation were access to home rehabilitation and multidisciplinary care. Furthermore, as Swedish stroke care was affected by reorganisations due to the Covid-19 pandemic and staff shortages (SKR, 2021), sampling was based on convenience, including interest in and capacity to participate despite the disruptions.

Participants at Site 1 were recruited at the height of the pandemic. The site, which operated at half-capacity (11 of 22 beds) due to staff shortages, offered acute stroke treatment and early rehabilitation and had a home rehabilitation team co-located on the ward. Participants at Site 2 were recruited when pandemic restrictions began to ease. It offered 22 beds divided into three orientations: acute stroke, rehabilitation and orthopaedic/medical (non-participating part of the site).

Participants and recruitment

All physiotherapists, occupational therapists and rehabilitation assistants (hereinafter referred to as health care practitioners) from the included sites were invited to take part in the Bridges workshops. All agreed to participate, thereby also agreeing to be interviewed and to complete a questionnaire for the study. Except for some health care practitioners who had terminated their employment after implementation, the participants at the two sites were the same before and after implementation. A total of 22 health care practitioners were included in the study.

Patients diagnosed with stroke were recruited into two groups at each site: one before the intervention and one after its implementation. This resulted in four smaller groups comprising 46 patients. The group recruited before the intervention acted as a historical cohort used to describe the context in which the intervention was implemented. Patients were recruited by the health care practitioners in accordance with the inclusion criteria described in the study protocol (Elf et al., 2022).

Intervention

Bridges was implemented as a structured training intervention for healthcare professionals, intended to be integrated into routine clinical encounters rather than delivered as a separate patient intervention. The training comprised a series of workshops delivered over a six-month period. Workshops were facilitated by a Bridges-trained clinician together with a person with lived experience of stroke or a long-term condition.

The workshops introduced core components of the Bridges training, including self-management support in a flexible, person-centred, and inclusive way. This involved tailoring support to individual needs and circumstances, starting from the person's own story and priorities, and building collaborative relationships that supported autonomy. It also emphasised strengthening existing resources and social support, integrating self-management support into everyday interactions, and fostering confidence through reflection, peer support, and learning from both successes and setbacks. The aim was to apply Bridges in everyday interactions on the ward and reflecting on experiences over time. Between workshops, participants were encouraged to test the approach in clinical practice and identify examples for discussion and reflection. Figure 3 describes the implementation process of Bridges.

Bridges self-management – 5 Stage Process

Discovery
- Discussion with Team Lead; understand service and contextualise approach
- Agree outcome measures – what does success look like to the team and the organisation - how will they measure this?
- Agree schedule of online training (Knowledge Zone 1, 2 and Sustainability *

Knowledge Zone 1
- **5 x 60 minute 'power hour' sessions**
- Interdisciplinary training in theory, practice and self-management skills: covering self-efficacy; navigating goals, hopes and risk; action planning and evaluation
- Sessions co-delivered with lived experience associate
- Access to Bridges self-management Toolbox

Transforming
- **8-10 Week transformation period**
- Embed principles into individual practice
- Demonstrate reflection using Bridges Toolbox resources
- Remote coaching from Bridges team**
- Access to Community of Practice

Knowledge Zone 2
- **2 x 60 minute sessions**
- Review of barriers/successes
- Review team and organisational aims
- Shared learning from transformation stage
- Embed Bridges principles into team processes
- Introduction of Bridges Books/Apps

Sustainability
- **2 x 60 minute sessions**
- Review and discussion of case examples
- Implementing sustainability plans
- QI Tools and methods
- Remote coaching from Bridges team*
- Bridges practitioner certification
- Bridges Champions certification

5- stages to sustainable change

*Since March 2020, all training is delivered online, schedule is agreed with service leads during Discovery stage
** usually 5 hours of coaching per group

@bridgesselfmgmt

Figure 3. Implementation process of Bridges

Study procedures

The study was conducted in three phases: pre-implementation, implementation and post-implementation.

Pre-implementation – Discovery phase

Before the implementation of Bridges, data were collected through discovery interviews conducted by the Bridges team with health care practitioners and managers to characterise the sites. Interviews with health care practitioners and patients and observations of their interactions conducted by the research team were used to describe baseline perspectives on routine care. The data were also used to adapt Bridges to the Swedish context through the translation of educational materials and to align the workshops to the sites' workflows.

Implementation phase

Bridges workshops were delivered via Zoom by the Bridges team. Researchers from the Swedish research team also assisted with translation, if needed, as the workshops were conducted in English. The workshops were recorded and field notes were collected on delivery and related information (attendance, discussion topics, etc.).

Post-implementation – Evaluation phase

After the implementation, data were collected to evaluate the implementation of Bridges through observations of health care practitioners –patient interactions, interviews with health care practitioners and patients and questionnaires.

Data collection

Several data sources were used to describe the Bridges implementation process and to understand variations between the two sites. To guide the data collection, the MRC's guidance for process evaluation was used (see Table 2).

Table 2. Data collection structured around MRC's guidance for process evaluation

Key component of MRC guidance	Description	Data source
Context	Contextual factors of importance for whether and how the intervention was implemented.	Discovery interviews by the Bridges team; on-site observations; interviews with health care practitioners; interviews and SSEQ-SWE with patients
Implementation	What the intervention consisted of and how it was delivered. Fidelity, dose, adaptation, reach.	Field notes from the Bridges and SELMA teams during the education sessions; interviews with health care practitioners; observations
Mechanisms of impact	Participants' responses to and interactions with the intervention.	Interviews with health care practitioners and patients
Outcomes	Integration of self-management support in daily practice.	On-site observations; interviews and S-NoMad questionnaire with health care practitioners; interviews and SSEQ-SWE with patients

Characteristics

Baseline characteristics of patients and health care practitioners were collected during interviews.

Interviews

Interviews were conducted with both health care practitioners and patients. The interview guide for health care practitioners was developed to explore their views on the concept of self-management and to describe different aspects of their daily work.

Patients were given two short, open-ended questions to reflect on their experiences of the self-management support and decision-making they had participated in on the ward. The rationale for using only two shorter questions was that the patients also completed a lengthy questionnaire, and it was not appropriate to also require a longer interview, due to possible post-stroke fatigue.

All interviews were conducted via telephone due to the Covid-19 pandemic, except for three interviews with health care practitioners that were conducted

face-to-face (during data collection with observations at the sites). The interviews were recorded and transcribed verbatim.

Observations

Observations of the work at the sites were conducted by three researchers (EK and MK at site 1, MK and a research assistant at site 2). The observations followed the guide developed by Spradley (2016), including baseline data of the observation (time, date, length, participants, type of activity observed and its intended purpose) and reflections of the activity by the observers. Observations were made of different activities, including informal meetings between health care practitioners and interactions between health care practitioners and patients (assessments, rehabilitation sessions), both in hospital and at home.

Field notes

Field notes from each Bridges workshop were collected by two researchers. Notes were taken on the content of the workshops, their attendance and the topics of discussion.

Questionnaires

The SSEQ-SWE was administered to patients, while the S-NoMAD was distributed to health care practitioners (Elf et al., 2018). The S-NoMAD is the Swedish version of the NoMAD, a 23-item self-reported questionnaire that uses NPT to assess activities related to the implementation, embedding and integration of complex interventions in healthcare settings (Finch, 2015).

Analysis

Thematic analysis

Study IV used a theory-driven reflexive thematic analysis to develop the analysis in relation to NPT (Braun, 2022). Using an existing theory to guide the analysis can bring complexity and richness to the dataset (Braun, 2022). Data were initially analysed inductively and then interpreted through the lens of NPT. The aim of using NPT as an analytical lens was to explore *how* it was evident – or absent – within the data. By first coding inductively, the risk of excluding data that did not fit into NPT was minimised.

Descriptive statistics

Quantitative data from the S-NoMAD and SSEQ-SWE instruments were analysed descriptively using SPSS (v. 28.0).

Ethics

Ethical approval was given by Ethical Review Authority (2020-02116, 2021-03476 and 2022-03099-02). Participants were informed about study procedures and purpose before accepting to join the study. Verbal consent was collected before participating. Participants were anonymized using numbers instead of names and the translation key was stored apart from the data. Data was stored in alignment with General Data Protection Regulation (GDPR) and guidelines of The Declaration of Helsinki was followed (2024).

There were some specific issues to consider in this research project. The project included persons with stroke, some of whom may have aphasia, cognitive difficulties or other stroke-related consequences that can affect how study information was received and understood. This required particular attention to ensuring that information was accessible and that participation was genuinely informed and voluntary. These persons were asked to participate by the research groups contacts at the wards (study I) or health care practitioners treating the patients (study IV), which meant that the participants were to some extent known to the recruiting person. This could mean that the recruiting persons could better identify signs of involuntary participation, but it could also have introduced a potential power imbalance. When recruitment takes place through individuals already involved in care, participation may be perceived as connected to treatment, even if this is not intended. In such situations, voluntariness cannot be fully taken for granted, as patients may feel hesitant to decline participation due to dependency on care, gratitude, or uncertainty about what refusal might imply. Professional judgement and discussions within the research group if needed were therefore used to assess suitability for participation. The researchers conducting the interviews needed to be attentive to signs of post-stroke fatigue or other discomfort that the interview might cause, and to the possibility that participants might hesitate to express a wish to pause or end the interview.

For the health care practitioners, the participation was voluntary and the possibility to withdraw without consequences was clearly stated. However, implementation research conducted within workplaces cannot be assumed to be free from structural pressure. When a ward manager has agreed to participate in a project, staff may still feel an implicit expectation to contribute out of loyalty, collegial responsibility, or professional obligation. The researchers aimed to thoroughly explain that their participation was truly voluntary, and they were informed about the possibility of dropping out without consequences.

Confidentiality required particular attention, as both patient and health care practitioners samples were relatively small. Even when names were removed, there was a risk that individuals could be recognised through professional role, contextual details, or specific experiences. Care was therefore needed in the presentation of quotations and findings to avoid indirect identification. At the same time, this created a tension between protecting anonymity and preserving the richness and credibility of the data. In addition, interviews about stroke, recovery, work experiences, or challenges in practice may evoke emotional discomfort, frustration, or vulnerability, which made sensitivity during data collection essential.

Results

Summary of the main results

In Study I, many participants felt unprepared after discharge and managed many post-stroke challenges on their own. Personal experiences and confidence played an important role in practising self-management, and social support was emphasised as important.

In Study II, barriers to and enablers of the implementation of self-management support were identified. The findings showed that implementation was context-sensitive and highlighted the need for an individualised approach recognising the cognitive, cultural and physical diversity among individuals with stroke. The intervention needed a clear design that could align with different contextual factors, and support for both those delivering the intervention and to those receiving it needed to be ongoing. Appropriate outcome measures of both the intervention as well as the implementation process were important.

In Study III, the translation and cross-cultural adaptation resulted in a Swedish version of the SSEQ- the SSEQ-SWE. Expert panels rated acceptable content validity and interview participants described the items as relevant and understandable. Internal consistency was acceptable. The SSEQ-SWE was subsequently used in Study IV to pre-test the questionnaire.

In Study IV, a theory-driven process evaluation examined how Bridges was implemented in two Swedish stroke settings. Following training, health care practitioners described increased awareness of self-management support and how they communicated and interacted with patients. Observations indicated small shifts towards more purposeful dialogue. Integration into daily practice varied between sites and was described in relation to contextual conditions such as organisational stability with teams affected by Covid-19-related disruptions and high staff turnover, leadership support, resources, protected time for reflection and competing priorities. Patient-level self-efficacy was unchanged, and patient interviews suggested that self-management was often understood as basic independence and that involvement in care decisions was limited.

Study I

Study I explored how 18 stroke patients (13 women, ages 44–87 years) described and practised self-management after discharge. They were interviewed between 29-44 days since their stroke. Eleven of them lived together with someone and seven lived alone. Two had received inpatient rehabilitation before discharge, fifteen had received rehabilitation at home and one had not yet received any rehabilitation.

Three main categories were identified. The first, *taking care of yourself*, relates to the concept of self-management and what it meant to the participants. It captures the activities that participants considered important when thinking about self-management – such as cooking, personal hygiene and household tasks – as well as their strong desire to manage these activities independently. The desire for independence was twofold: to avoid burdening others and to maintain autonomy. Confidence building emerged as an important aspect of self-management, as managing tasks independently contributed to increased confidence. Participants emphasised that both health care practitioners and family members needed to respect this by not offering unsolicited help.

The second category, *take action – self-management in practice*, describes how participants made use of self-management strategies in everyday life. Many highlighted the importance of being active, taking responsibility and problem-solving when difficulties arose, and reported high confidence in managing on their own. Their strategies were often self-initiated rather than suggested by health care practitioners. In contrast, some participants became more passive, describing a fear of falling, a lack of energy and low confidence in performing tasks.

For many participants, challenges became apparent only after returning home, which often came as a surprise to them. Homecoming was described as both familiar and unexpectedly difficult. At the same time, being at home forced participants to try things on their own, making the home a key arena for practising self-management.

For some participants, the ability to manage was influenced by previous life experiences, particularly challenges that they had successfully handled and could transfer to the stroke context. Others felt that stroke was fundamentally different and that previous experiences offered little support.

The final category concerns *personal attributes* that influence daily self-management. These include an inner drive and trust in one's own abilities (e.g. high self-efficacy), supporting active engagement in self-management. Participants lacking these attributes tended to describe a more passive approach.

Although many participants described a strong drive to manage independently, support from family or friends was still considered necessary, particularly after discharge. Participants often related this to a perceived gap in healthcare support when transitioning from continuous hospital care to home, where feelings of abandonment and unanswered questions were described.

Individual differences in confidence, prior experiences, fear and support from family illustrated the variations in post-discharge challenges and resources. Self-efficacy was one aspect that played an important role in individuals to manage challenges and engage in self-management.

Study II

Study II synthesised barriers to and enablers of the implementation of self-management support after stroke across interventions with long-term follow-up, defined as more than 6 months. From the original 7275 articles identified in the screening process, 37 were included in the review, comprising studies of self-management support for persons with stroke across stroke care settings, across study designs and outcomes.

Barriers and enablers were mapped to the CFIR and identified across all domains and 26 of the 39 constructs. Several important enablers of the implementation of self-management support interventions were mapped to the CFIR domain 'Innovation'. Enablers commonly related to a clear and inclusive intervention design, being theoretically anchored and incorporating social support components. Aspects of the 'Inner setting and Outer Setting' domains were also described as enabling, such as publicly funded care and clear care pathways. In the individuals domain, peer support and motivational health care practitioners were enabling factors. Enablers further related to the 'Implementation Process' domain, such as the training of those delivering the intervention as well as those receiving it. Implementation strategies in the form of local champions and the use of implementation frameworks were also reported as beneficial.

Barriers included whether the intervention was too burdensome or generated a cost. Challenges related to evaluation were also reported, including a lack of evaluation methods to assess outcomes as well as the implementation process. In addition, barriers such as limited intensity, lack of ongoing support, limited resources, complicated technical solutions, disruptions due to the Covid-19 pandemic, increased workload or misalignment with professional roles were identified as barriers to implementation. Figure 4 provides an overview of the most prominent barriers and enablers.

Innovation	Inner and outer setting	Individuals	Implementation
• Enablers Social support Theoretically anchored Clear design, inclusive for individual differences and cultures • Barriers Treatment burden and cost Lack of evaluation methods Limited intensity and lack of ongoing support	• Enablers Public-funded healthcare Clear care pathways Access to information • Barriers Covid-19 pandemic Limited resources Fragmented care Funding issues Competing interests Complicated technical solutions	• Enablers Peers Practitioners as motivators • Barriers Low self-efficacy Depression Motivation Fatigue Cognitive impairments	• Enablers Tailored strategies for implementation Comprehensive training Ongoing support • Barriers Low motivation or confidence in Practitioners Lack of evaluation methods

Figure 4. The most prominent barriers to and enablers of the implementation of self-management support.

Study III

A three-phase translation procedure was conducted following the standardised process outlined by Beaton et al. (2000). In the first phase, forward- and back-translation generated several versions before consensus was reached, alongside important discussions on cultural and linguistic equivalence.

The next phase considered content validity assessment using two expert panels and interviews with stroke patients. The first expert panel provided CVI ratings and free-text comments. This resulted in three items requiring further work to improve clarity, as well as a minor reformulation of other items. Interviewees described the items as relevant and understandable.

The second expert panel rated the final version of the SSEQ-SWE, and CVI scores were calculated at 1.0 on both subscales; no further revisions were required at this stage.

Finally, a pre-test of the SSEQ-SWE was conducted with 46 patients who also participated in Study IV. Participants characteristics can be viewed in Table 4.

Ceiling effects were apparent in both subscales. No floor effects were detected. Internal consistency for the total SSEQ-SWE was 0.902, with values of 0.861 (activities subscale) and 0.818 (self-management subscale). One item showed an item–total correlation of 0.511; however, its removal resulted in only a marginal increase in overall internal consistency (from 0.861 to 0.867). Therefore, the decision was made to retain the item. All psychometric calculations are presented in Table 3.

Table 3. Mean score, Cronbach's α and ceiling effects

Scale	**Completed (n)**	**Items (n)**	**Mean score**	**Cronbach's α**	**Ceiling effect**
SSEQ-SWE total	43	13	2.30	0.902	50%
SSEQ-SWE act.	43	8	2.45	0.861	62%
SSEQ-SWE sm.	43	5	2.06	0.818	30%

Study IV

Participant characteristics

In total, 22 health care practitioners were recruited, 12 from Site 1 and 10 from Site 2. Participants worked as physiotherapists, occupational therapists and research assistants. Due to staff shortages, nurses and physicians were unable to attend the workshops.

A total of 46 patients receiving care for acute stroke at the participating sites were recruited (45% female), with a mean age of 70 years. The participant characteristics are presented in Table 4.

Table 4. Participants characteristics

Site	Group (patients/staff)	Age (mean)	Male/female	Days spent at ward (mean)[a]/ Years at site (mean)[b]	Days between stroke and interview (mean)	Employment	Highest education	Living arrangements	Requires home service	SSEQ-Swe (mean) 0-39
Site 1 pre										
N =18	Patients	72	61% male	11.4	81	72% retired	University >3 years 11%	Living alone 44%	No 83%	30
N=12	Staff: PT (N=7), OT (N=5)	41	100% female	6.5	N/A	N/A	N/A	N/A	N/A	N/A
Site 1 post										
N=7		68	43% male	16	60	71% retired	University >3 years 14%	Living alone 57%	No 85%	30
Site 2 pre										
N= 13		67	46% male	33	71	61% retired	University >3 years 46%	Living alone 31%	No 69%	20
N=10	Staff PT (N=4), OT (N=3), RA (N=3)	44	20% male	3.6	N/A	N/A	N/A	N/A	N/A	N/A
Site 2 post										
N=8		74	62% male	30	54	62% retired	University >3 years 13%	Living alone 38%	No 75%	30

Patients[a], staff[b]

Bridges implementation

Eight workshops (10 hours in total) were delivered at each site over a six-month period. Participating health care practitioners attended a median of seven sessions each. Reach was 100% among eligible health care practitioners. Adaptations of Bridges to fit the Swedish context were documented.

The results were structured using the MRC's guidance for process evaluation and analysed using NPT. This guidance was applied to categorise the findings into context, implementation, mechanisms of impact and outcomes. Qualitative data were analysed thematically using NPT as an analytical lens for exploring how Bridges was integrated into daily practice through its four constructs: coherence, cognitive participation, collective action and reflexive monitoring. Examples of themes, illustrative quotes, corresponding MRC guidance domains and NPT constructs are presented in Table 5.

Table 5. Examples of themes mapped to MRC guidance for process evaluation and NPT

Theme	Illustrative Quote	MRC Domain	NPT Construct
Reframing roles and renewed commitment	*"It changed how I ask questions. I ask more open questions now – like, what do you think is most important today?"*	Context, Implementation	Coherence and Cognitive participation
Doing things differently	*"Before I used to plan everything. Now I start by asking what the patient wants to work on."* *"He seemed more motivated when I let him choose. Even if he didn't speak much, you could tell."*	Mechanisms of Impact, Outcomes	Collective action (enactment) and Reflexive monitoring
Limits to Integration and Sustainability	*"We still want to work like this, but everyday stress makes it hard. And not everyone on the ward was trained."*	Context, Implementation, Outcomes	Collective action och Reflexive monitoring
Patient perspectives in context	*"They told me what would happen. I just went along with it." / "I suppose it means doing things for yourself…"*	Outcomes	(Not directly mapped)

Theme 1. Reframing roles and renewed commitment

Although many health care practitioners perceived their work as person-centred, they noted that time pressure and the need to prioritise tasks often narrowed patient interactions to functional assessments and discharge

preparation, and participating in the workshops served as a reminder to maintain this approach:

> Well, I feel like I've had a bit of an awakening, you know, … and when you've received confirmation that what you've done [in work] has been good, it's given me new energy to keep working in that way. Things that I perhaps – in the beginning, when I was new – fought harder for and then maybe drifted away from a bit. (ID4, Site 2, post)

In addition, several participants also described that elements of Bridges prompted new reflections and alternative ways of working. Their understanding of self-management broadened from a narrow focus on discharge readiness or functional tasks to a relational process grounded in dialogue, shared goals and patient agency:

> But I still think that, well, some things we've really taken to heart. I do think we already work quite a lot in a person-centred way, starting from what the patient wants and so on. But still, what I've been thinking a lot about is that you really start from what the patient actually wants and wants to be able to do. Because their goals don't necessarily have to be the ones we think they should have — it can be something completely different. So that's something I've been reflecting on a lot, really asking, what is most important for you to be able to do? (ID9 Site 1, post)

Within the MRC framework, these findings can be understood as reflecting a mechanism of impact, whereby health care professionals began to develop a clearer understanding of Bridges and to reconsider their professional role. From an NPT perspective, this suggests strengthened coherence and the beginnings of cognitive participation. These interpretations were supported by observational data, which pointed to a move towards more dialogic interactions, with HCP:s taking on a more facilitative rather than directive approach, and with signs of greater patient agency in some encounters. The S-NoMAD results aligned with this pattern, showing higher scores for coherence and moderate levels of cognitive participation across sites. Together, this indicates that the training and facilitation supported staff sense-making and engagement, which may in turn have created favourable conditions for changes in everyday practice. S-NoMAD scores can be viewed in table 6.

Theme 2. Doing things differently

This theme captured how the components of Bridges were operationalised in clinical practice. Interview data from health care practitioners were triangulated with observations, showing increased use of open and reflective questions and attempts to involve patients more actively in goal setting and rehabilitation plans:

> Before I used to plan everything. Now I start by asking what the patient wants to work on. (ID 5, site 2, post)

From an NPT perspective, these patterns indicated emerging collective action, as staff incorporated self-management principles into assessments and goal-setting, and early reflexive monitoring, as patients were increasingly invited to reflect on their own progress. Within the MRC framework, these patterns can be interpreted as mechanisms of impact, reflecting small but potentially meaningful changes in interactional routines that made self-management support more visible in everyday practice.

At the same time, enactment appeared uneven and was often influenced by individual and local conditions. Partial training coverage, particularly the absence of nurses and physicians, appeared to limit uptake across the wider team. In line with this, S-NoMAD scores for collective action and reflexive monitoring were lower than those for coherence. Observations showed that while some encounters moved towards increased participation, others remained more directive, particularly under time pressure or when patients had more severe impairments. Observations further suggested that changes in communication were not evident among health care practitioners who had not participated in the workshops, indicating that implementation was uneven and strongly shaped by individual engagement

Theme 3. Limits to integration and sustainability

The extent to which Bridges was implemented varied and was influenced by several factors. Key barriers included the Covid-19 pandemic, which led to organisational restructuring at Site 1, high staff turnover and insufficient time for collective reflection. Participants also expressed the need for a designated leader to keep the newly acquired knowledge on the agenda. In addition, incomplete staff participation was described not only as a limitation to implementation but also, by some participants, as having a negative impact on the ward climate, contributing to increased discrepancies between professional groups:

> As I see it, the majority haven't had training. So compared to the other staff, there's almost an increased discrepancy in how we view rehabilitation and self-management. (ID3, Site 2, post)

In NPT terms, many staff members appeared to have achieved coherence and some level of cognitive participation and had started to enact elements of Bridges in practice, indicating emerging collective action. However, limited

opportunities for joint reflection, lack of champions, and organisational instability appeared to restrict reflexive monitoring and wider normalisation. Within the MRC framework, these findings indicate that contextual and implementation factors shaped the extent to which the mechanisms of impact were able to develop further.

Table 6. S-NoMAD results from site 1 and site 2.

S-NoMAD	**Site 1 N=8 (mean)**	**Site 2 N=9 (mean)**
When you use Bridges, how familiar does it feel?[a]	7.50	7.11
Do you feel that Bridges is currently a normal part of your work?[a]	6.75	7.67
Do you feel that Bridges will become a normal part of your work?[a]	9.00	8.89
I can see how Bridges differs from usual ways of working[b]	2.38	2.00
Staff in this organisation have a shared understanding of the purpose of Bridges[b]	5.00	1.89
I understand how Bridges affects the nature of my own work[b]	2.00	1.56
I can see the potential value of Bridges for my work[b]	1.38	1.33
There are key people who drive Bridges forward and get others involved[b]	4.38	2.33
I believe that participating in Bridges is a legitimate part of my role[b]	1.63	1.33
I'm open to working with colleagues in new ways to use Bridges[b]	1.38	1.22
I will continue to support Bridges[b]	2.00	1.67
I can easily integrate Bridges into my existing work[b]	2.25	2.11
Bridges disrupts working relationships	4.25	4.22
I have confidence in other people's ability to use Bridges[b]	2.38	2.00
Work is assigned to those with skills appropriate to Bridges[b]	2.75	2.63

Sufficient training is provided to enable staff to implement Bridges[b]	3.38	2.56
Sufficient resources are available to support Bridges[b]	3.88	2.56
Management adequately supports Bridges[b]	4.38	2.11
I am aware of reports about the effects of Bridges[b]	3.25	2.11
The staff agree that Bridges is worthwhile[b]	2.62	2.00
I value the effects that Bridges] has had on my work[b]	1.38	1.56
Feedback about Bridges can be used to improve it in the future[b]	1.63	1.89
I can modify how I work with Bridges[b]	1.63	1.89

a(1-10, 1=not at all, 10=completely), b(1-5, 1=agree completely, 5=disagree completely)

Theme 4. Patient perspectives

Patient experiences of self-management support varied and were strongly influenced by the specific care context they encountered. Although health care practitioners who participated in Bridges described efforts to involve patients more actively, patients continued to report limited involvement in their care.

This finding is consistent with health care practitioners' reflections that full implementation was unlikely when not all staff had participated in the training. The quantitative findings were consistent with this pattern. No meaningful change in SSEQ scores was observed between pre- and post-implementation overall. Although the mean SSEQ score was higher in the post-implementation group at Site 2, this finding should be interpreted with caution in light of the small sample sizes, the use of four separate cohorts, the relatively short implementation period and the uncertainty as to whether patients had been exposed to staff who had participated in the Bridges training (see Table 4).

Discussion

This thesis shows that self-management after stroke is shaped not only by stroke-related consequences, but also by the realities of everyday life after discharge and the support available within and beyond healthcare. It also shows that implementing self-management support in stroke rehabilitation requires more than introducing a new intervention; it depends on shared understanding, professional engagement and supportive organisational conditions. In addition, the thesis contributes a Swedish version of the Stroke Self-Efficacy Questionnaire through translation, cross-cultural adaptation and preliminary evaluation, while also drawing attention to the challenges of evaluating self-management support during implementation.

Discussion of the results

Introducing self-management support in Swedish stroke rehabilitation

Across the studies, variations were seen in how self-management was understood by health care practitioners and patients, as well as in how the concept could be translated into and communicated in Swedish practice.

Without a shared understanding, there is a risk that self-management support is interpreted through already familiar ideas in stroke rehabilitation, such as independence, functional recovery or managing on one's own. Although these aspects may form part of self-management, they do not fully capture the broader meaning of self-management support as understood in this thesis, where the aim is to support people in navigating life after stroke through collaborative, person-centred and confidence-building processes (Jones et al., 2016; Lisa Kidd et al., 2022; Sadler et al., 2017; Satink et al., 2015). The findings therefore suggest that conceptual clarity is not a secondary issue but a foundation for meaningful implementation and embedding in practice

Conceptual and linguistic translation of self-management

One important challenge in this thesis is that self-management has no direct or established equivalent in the Swedish language. During the Bridges workshops in Study IV, the English term was used, which may have helped preserve the intended meaning during the educational phase.

However, in the interviews throughout this thesis, the concept needed to be communicated in Swedish, and this raised further challenges. The term *egenvård* was used as a pragmatic translation, supported by the fact that it is familiar in Swedish healthcare and has also been described in a broader sense as corresponding to self-management (Vård- och omsorgsanalys, 2018). At the same time, this familiarity may also have contributed to ambiguity, as *egenvård* also may be associated with other meanings in practice that often have a narrower and more medical meaning, as well as being used in the Swedish legal context (Lag 2022:1250).

This suggests translation is not merely a linguistic issue but also a cultural and organisational matter. A familiar term may facilitate communication, but it may also influence how a concept is understood by linking it to existing assumptions. In this thesis, the use of *egenvård* may have made self-management more accessible while at the same time directing interpretations towards personal responsibility, symptom management or practical independence. This is important because the meaning attached to a concept influence how it is enacted in practice. According to NPT, to have meaning attached to a concept that is collectively shared by all contributes to embedding the practice (May et al., 2009), which highlights the need to have a shared understanding of self-management in the context it is being implemented in. If self-management support is translated into terms that primarily evoke coping alone, it may risk being adopted in form without fully carrying its intended content.

Making sense of self-management

Across the studies, both health care practitioners and stroke patients appeared to draw on personal or professional frames of reference when making sense of self-management (Studies I and IV). Health care practitioners described varying understandings depending on previous experiences and clinical contexts, but many also saw the value of integrating core self-management support principles into their work (Study IV). This echoes previous research in which health care practitioners often viewed self-management as important yet struggled to clearly define it (Boger et al., 2015), and in which understandings of self-management may vary depending on the clinical context in which

they work (Sadler et al., 2017). This suggests that the main challenge was not opposition to self-management support, but that its meaning was not self-evident. Rather than entering a conceptually neutral context, self-management support seemed to be interpreted through already established understandings of rehabilitation and professional support (Study IV). This was also reflected in Study II, where difficulties in understanding the purpose and goals of self-management interventions emerged as barriers to implementation.

The meaning of self-management was likewise not self-evident among participants in Study I. Many primarily related self-management to health behaviours, physical activity, independence, or managing everyday problems on their own, and it was often understood as an individual responsibility that arose after discharge. At the same time, some participants described a broader meaning, linking it to confidence, autonomy, and managing everyday life after stroke in ways that align more closely with how the concept is understood in this thesis.

International studies have shown similar challenges in using the term 'self-management' in stroke patients. In a Dutch study, participants struggled to relate to this term, finding it confusing, overly difficult or associated with managerial job roles rather than life after stroke (Satink et al., 2015). Although the word itself felt unfamiliar, they understood the underlying idea. Participants described self-management as 'organising your life', 'sorting things out' or 'doing it yourself', emphasising independence and solving problems on their own while seeking help only when necessary (Satink et al., 2015). Furthermore, stroke patients may not always be familiar with the term overall or aware that self-management can be an integral part of stroke rehabilitation (Sadler et al., 2017).

In summary

The findings suggest that when health care practitioners and patients attach different meanings to self-management, there is a risk that implementation becomes superficial. Self-management support may then be perceived as something already being done, or too connected to independence, while its more characteristic features such as partnership, reflection, confidence building and a focus on what matters to the person become less visible. Implementation and conceptual clarification therefore need to proceed in parallel.

Self-management emerges in relationships and contexts

The findings of this thesis suggest that self-management after stroke is not best understood as an individual act carried out in isolation. Rather, it emerges in relation to other people and is shaped by the contexts in which rehabilitation and everyday life unfold. Across the studies, self-management appeared to depend not only on the person's own efforts, but also on the support, interactions and conditions that made those efforts possible.

The relational nature of self-management support

Although many participants in Study I described striving for independence and autonomy, and sometimes avoiding burdening others with their problems, they simultaneously highlighted the importance of social support in managing life after stroke. At first glance, this may appear contradictory. However, the findings suggest that self-management is not best understood as independence from others but rather as a form of supported autonomy in which relationships enable people to manage life after stroke. In this sense, the role of others does not undermine self-management but may instead be a condition that makes it possible. The value of social support is well recognised in stroke rehabilitation and has been associated with improved participation and function (Elloker & Rhoda, 2018; Erler et al., 2019; Tsouna-Hadjis et al., 2000). This challenges narrow interpretations of self-management support as simply encouraging people to cope alone and as solitary independence. Instead, the findings point towards a more relational understanding in which self-management involves the person's own efforts but also depends on support from health care practitioners and social networks, consistent with previous literature as well (McNaughton et al., 2023). In this sense, independence is not irrelevant but becomes too dominant and focused if separated from collaboration and support.

In study II, the findings also highlighted the importance of social support. Those involved appeared to act as enablers by creating opportunities for dialogue, encouragement, and accountability, which could support participants' engagement and efforts to manage change.

Study IV further showed that self-management support was not expressed primarily through tools or written materials, even though these could support the approach. Rather, the most noticeable expressions appeared through small shifts in dialogue and interaction between health care practitioners and patients. This suggests that self-management support is not simply something that is delivered, but something that is enacted in everyday encounters. The

importance of a trusting relationship between health care practitioners and patients may therefore be understood as a central component of self-management support, as has also been discussed in previous research (Lucas et al., 2025). Supporting a person in taking an active role after stroke requires trust, dialogue and sensitivity to the person's situation and preferences. In this way, self-management support may involve changes not only for patients, but also in professional practice, including shifts away from more directive or professionally dominant ways of working (Lucas et al., 2025; Norris & Kilbride, 2014).

Context shapes how self-management is understood and supported

The findings suggest that self-management is shaped by context at several levels. At the individual level, Study I showed that self-management was practised in different life situations after discharge. Although ethnicity and socioeconomic background were not collected, it is important to recognise that self-management takes place under different life conditions, which may influence both opportunities to engage in self-management and how support is received. This was also evident in Study II, where self-management support interventions needed to be adapted to individual and sociocultural circumstances in order to be perceived as relevant and acceptable. This suggests that support cannot be understood as one-size-fits-all but must be responsive to the circumstances in which people live.

An important contextual issue in this thesis was the period after discharge. Study I showed that several persons with stroke experienced a vacuum in support between returning home and planned follow-up from healthcare services. This period was marked by insecurity, a sense of being unprepared with unanswered questions about recovery and prognosis. Study II likewise identified continuity and coordination of care as factors that could influence the implementation and delivery of self-management support. Similar experiences have been reported previously and appear to remain a persistent vulnerability in stroke rehabilitation (Lindblom et al., 2020). The findings therefore suggest that self-management is influenced not only by what people are capable of doing themselves, but also by how care is organised around them during transitions between services and home. From this perspective, the gap after discharge is not only a practical service issue, but also directly related to self-management. When expectations of an active role in managing life after stroke are not matched by timely and responsive support, self-management risks becoming equated with having to manage alone. This is especially important in a rehabilitation context in which support may be reduced as soon as the person

leaves hospital, even though many challenges only become fully visible once everyday life resumes at home (Gallacher et al., 2019). In this way, the findings highlight how organisational conditions and care transitions shape the possibilities for self-management support in practice.

In summary

The findings suggest that self-management support is best understood as a relational and context-sensitive practice rather than as an individual intervention targeted only at patient behaviour. Strengthening self-management after stroke therefore involves more than encouraging individuals to be active or confident. It also requires attention to the relationships, transitions and organisational conditions that shape whether self-management becomes possible in everyday life.

Implementation as a gradual process

The findings of this thesis suggest that the implementation of self-management support through Bridges was best understood as a gradual process rather than an immediate transformation of routine practice. In Study IV, introducing self-management support appeared to generate early shifts in health care practitioners' awareness, understanding and communication, with limited impact on patient level during the implementation period. Similar patterns were also reflected in Study II, in which training and professional engagement were seen as important enablers of implementation even though measurable patient-level effects were often difficult to demonstrate.

Changes in practice before changes in patients?

In Study IV, training in Bridges appeared to increase health care practitioners' awareness of self-management and led to small but noticeable shifts in communication with patients. These changes suggest early engagement with the key principles of self-management support and incorporating them, at least to some extent, into daily encounters. One interpretation of these findings is that increased professional awareness represents an early stage of normalisation. In real-world settings, it is common for shifts in mechanisms – such as changes in professional understanding and practice – to occur before changes in outcomes become detectable (Proctor et al., 2011). In NPT terms, early sense-making and engagement may emerge earlier in an implementation process, whereas collective action and reflexive monitoring may require more time to develop (May et al., 2018). Thus, although Bridges includes a sustainability phase designed to support longer-term integration, the results suggest that this period was not sufficient to secure patient-level change within the study

timeframe. From this perspective, the lack of meaningful patient-level outcomes in Study IV do not necessarily indicate that Bridges lacked value, but may instead suggest that implementation had not progressed far enough for such effects to become visible, that local conditions constrained its integration into routine practice, or that the timing and scope of measurement were not well suited to capturing early change.

Embedding new practices depends on local context

A central finding in Studies II and IV was that implementation was highly dependent on the organisational context in which Bridges was introduced. This suggests that implementation is not the simple delivery of a programme into a neutral setting. Rather, it involves ongoing negotiation with the practical realities of the clinical environment. This was particularly visible in Study IV, in which the path from site inclusion to implementation proved longer and more complex than anticipated. The six-month training period required both space for the intervention to begin embedding into practice and sufficient stability to support recruitment and evaluation. In the Swedish setting, this was complicated by structural conditions such as summer vacation periods, which reduced staff availability and temporarily altered ward routines. This narrowed the window for recruitment and contributed to smaller patient cohorts than expected. The Covid-19 pandemic further intensified these challenges, particularly at Site 1, by affecting patient flow, staffing and ward organisation. Such circumstances illustrate how fragile implementation processes can become when introduced into unstable care environments and how strongly progress depends on contextual conditions needed to sustain change.

Organizational stability, leadership, and champions matter

As a multiple-case process evaluation, two sites with differing organisational conditions were included, allowing an examination of how context influenced the uptake of Bridges (Elf et al., 2022). Differences between the two sites reinforced the importance of local context as the sites were not equivalent in terms of organizational stability, staffing, or implementation conditions, and these differences appeared to shape how Bridges could be taken up in practice (May et al., 2016).

Site 1 was particularly affected by instability during the pandemic, with stroke patients temporarily relocated and staffing shortages, making it difficult to involve the wider team. As a result, important professional groups – such as nurses, assistant nurses and physicians – could not participate in the training. Several health care practitioners described this as a major barrier, since it limited the development of a shared language and reduced the likelihood that self-

management support could become integrated across the entire care pathway. Some even expressed that discrepancies in views on rehabilitation had increased, as some had participated in Bridges training and some had not.

Turnover in staffing levels also influenced implementation at both sites. Although the number of turnovers was not extensive, the teams were already small, which meant that turnover affected continuity in meaningful ways. New colleagues were informally introduced to Bridges, but this could not fully replace participation in the structured training programme. These findings suggest that implementation in small clinical teams may be particularly vulnerable to change, as even relatively minor disruptions can undermine continuity in shared understanding and practice, and thereby hinder the collective work needed to sustain changes in practice.

Leadership engagement also appeared to matter. At Site 2, stronger managerial support helped legitimise the time and effort needed to engage with Bridges, and leaders' visible involvement signalled that this way of working was valued. The presence of a local champion similarly seemed important for maintaining attention to Bridges in everyday practice. Where it was absent, implementation seemed more reliant on individual health care practitioner's informal efforts and motivation. These findings echo previous literature (Bunse et al., 2020) as well as findings from study II, that implementation benefits not only from initial training but also from local structures that keep the intervention present in daily work and protect it from being displaced by competing demands.

Time and resources

A recurring issue was the lack of time and resources. During periods of stress or high workload, health care practitioners described reverting to familiar ways of working rather than using Bridges principles. This suggests that new practices may remain fragile for some time after introduction, particularly when they require reflection, dialogue and changes in communication rather than simply the addition of a concrete task or tool. In such situations, established routines may continue to dominate not because staff reject the intervention but because the organisational conditions do not sufficiently support practice change. This has also been discussed in previous research (Barchéus et al., 2024).

This is relevant for understanding how a new way of working becomes embedded in practice. Limited time and resources may reduce opportunities for

ongoing reflection and appraisal of the new way of working over time (May & Finch, 2009). The findings also highlight the importance of supportive local conditions, such as adequate resources, leadership support, and team stability, together with processes such as whole-team engagement and local facilitation, for embedding self-management support in routine stroke rehabilitation (Damschroder et al., 2022; Moore, 2015a). Without such support, implementation may begin but remain uneven and vulnerable, with small shifts visible at the professional level but limited spread across clinical encounters and limited impact at the patient level.

In summary

Taken together, these findings suggest that the implementation of self-management support in stroke rehabilitation is a gradual and context-sensitive process. Early signs of change may be seen in professional awareness and communication before they can be detected in patient outcomes. From this perspective, successful implementation may require not only a well-designed intervention but also sufficient organisational readiness and continued support for practice change over time. This thesis therefore suggests that introducing self-management support is less about achieving rapid transformation and more about creating the conditions under which small changes can accumulate, stabilise and eventually become embedded in ordinary rehabilitation practice.

Measuring self-management

The findings of this thesis suggest that measuring self-management in stroke rehabilitation is not straightforward. Evaluating self-management requires alignment between the intention of the intervention (what should we measure, when and why?), as well as the phase of implementation in which the outcomes are assessed.

Looking beyond physical function upon discharge

Study I showed that stroke patients differed in how confident and proactive they felt when facing challenges after returning home. Some described an active approach to everyday difficulties, while others expressed greater uncertainty and passivity despite being regarded as relatively well-functioning upon discharge. This is important because many of the challenges related to self-management became visible only once participants had returned home, where the demands of everyday life could no longer be buffered by the structure of inpatient care. In this sense, the home emerged as an important arena in which self-management was tested in practice.

A person who appears physically well recovered may still feel uncertain about handling life after stroke, while others may be better equipped to navigate difficulties even when impairments remain (e.g. higher self-efficacy) (Horne et al., 2014). From this perspective, measuring self-management-related resources, such as self-efficacy, may offer a broader understanding of rehabilitation needs during the transition home.

These findings suggest that discharge assessments may need to capture more than physical function alone. Identifying impairments remains important, but it may be equally relevant to consider the person's confidence, readiness and perceived ability to manage activities and challenges in life after stroke.

Measuring a complex and heterogeneous phenomenon

As highlighted in Study II, self-management interventions are highly heterogeneous. They differ in content, theoretical assumptions, intended mechanisms, and scope: some adopt a broad, relational, and person-centred understanding of self-management support, whereas others focus more narrowly on areas such as physical activity or medication management. This diversity makes it difficult to identify a single outcome measure that is appropriate across all forms of self-management support, as highlighted in previous research as well (Jones & Leggat, 2023).

In some cases, intervention-specific outcomes may therefore be more suitable than generic measures of self-management. If an intervention primarily aims to improve physical activity, participation, or confidence in a particular area, the outcome strategy may need to reflect this focus (Jones & Leggat, 2023). At the same time, such flexibility creates challenges for comparison across studies. When different interventions are evaluated using different outcomes, it becomes more difficult to synthesise findings and build a cumulative evidence base (Boger et al., 2015).

Transparent reporting of intervention content, implementation processes, contextual conditions, and the rationale for selected outcomes has therefore been emphasised as particularly important in this field (Jones & Leggat, 2023). From this perspective, measurement in self-management research may be less about identifying the single "best" instrument and more about making explicit what kind of change an intervention is intended to produce, for whom, and under what circumstances.

The value and limits of self-efficacy as an outcome

Within this thesis, self-efficacy was treated as conceptually relevant to self-management, as it concerns confidence in managing challenges and engaging in everyday life after stroke. The Swedish version of the SSEQ was translated and cross-culturally adapted using established methods (Beaton et al., 2000), including assessments of content and face validity. These procedures were appropriate within the pragmatic conditions of the study, but they do not eliminate the need for continued psychometric evaluation.

At the same time, the findings also point to the limits of self-efficacy as an outcome, particularly in early implementation. Although self-efficacy is relevant to self-management, patient-level changes in self-efficacy may be difficult to detect when implementation is still at an early stage and changes are more visible in professional practice, communication, or interactional routines, which has been discussed in previous studies as well (Pallesen et al., 2024). In this sense, unchanged patient-level outcomes do not necessarily mean that no meaningful change has occurred, but may reflect the timing of measurement, limited implementation progress, or a mismatch between what is changing and what is being measured.

In summary

This thesis suggests that measuring self-management requires more than selecting a validated instrument. It is important that measurements of self-management relate to the programme theory or theory of change – that is, understanding the underpinning mechanisms and behavioural outcomes.

Future studies may benefit from combining measures, including implementation outcomes, patient outcomes and qualitative exploration of lived experiences. Such an approach may provide a more balanced basis for understanding both whether self-management support works and how it becomes meaningful in practice.

Methodological considerations

Researcher pre-understanding and reflexivity

My experience working clinically in stroke rehabilitation allowed me to enter this research project with knowledge of stroke and its impact on individuals, stroke care in general and its possible challenges within a multiprofessional, highly specialised care context. In addition to equipping me with tools to facilitate access to the field, it also required me to be aware of my previous experiences to prevent them from blurring the view.

In Study I, I had previous experience working on the ward from which the participants were recruited. I used this experience in interviews to interpret implicit references to routines or practices in the ward described by the patients and could meet these references with relevant follow-up questions. The preconceptions of the participants as a group were also relevant when developing the interview guide. To avoid an 'expert interpretation' in the interview situation that could override the participants' experiences, was involved in reviewing a selection of interviews and reflecting on how the interviews had been conducted.

Other risks with preconceptions may be that attention is drawn to data confirming existing beliefs or experiences and that negative or unexpected findings are ignored (Dahlberg & Ekman, 2017 s 28-32). This could create a narrower lens in the analytic work. To avoid these kinds of risks, the data analysis was discussed on several occasions with researchers without experience working at the included units or in stroke care overall. The manuscript was reviewed by external reviewers at research seminars at Högskolan Dalarna. Participants in Study I also had the opportunity to comment on the material before the analysis was finalised. To avoid confirmation bias regarding interviews with health care practitioners and observations in Study IV, half of the interviews and observations were conducted by a researcher without clinical experience working with stroke, and interview content was compared afterwards.

Methodological approach of the thesis

This thesis draws on a pragmatic methodological approach that enables the integration of qualitative and quantitative methods to address the complexity of self-management in stroke rehabilitation. Given that the research topic has been relatively under-studied in the Swedish stroke context, an initial emphasis on breadth was considered appropriate. A strength of this thesis is that the research topic was explored from several perspectives, including the experiences of stroke patients, implementation processes and measurements. This contributed to a broader understanding of self-management support in stroke rehabilitation.

A broad methodological approach can contribute to a more comprehensive understanding of complex phenomena. At the same time, combining several methods may limit the depth that can be achieved within each individual study due to constraints related to time, resources and the expertise required to apply multiple methodological approaches (Fielding, 2012). In this thesis, qualitative data constitute the dominant component, while quantitative data play a more supporting role. The different forms of data were considered together during interpretation, and the use of established theoretical frameworks helped provide a coherent structure and supported the interpretation of the findings.

Sampling and participant considerations

Overall, the participants were sampled based on convenience or purpose. These types of sampling – particularly convenience – limit generalisability but can also enable the inclusion of information-rich participants with relevant experience of the phenomenon under study. This approach strengthened the relevance and depth of the collected data in relation to the research questions, but the results should be interpreted with the sampling method in mind (Moser & Korstjens, 2018). Across studies, the participating stroke survivors were generally well functioning. This limits the transferability of the findings to persons with more severe disabilities or aphasia.
Sampling considerations differed between studies due to differences in study design and research aims.

In Study I, variations in participant characteristics were sought and achieved in terms of age and sex. However, data were not collected regarding ethnicity or socioeconomic background, making it difficult to assess whether the sample reflected diversity in these respects.

In Study III, participants with lived experiences were recruited through stroke associations. The main inclusion criterion was lived experience of stroke, regardless of the time since stroke, stroke severity or other characteristics. These factors were therefore not controlled for in the sampling process, partly due to privacy considerations. In one of the expert panels, participants were unanimous in their assessment of content validity. In retrospect, it would have been valuable to relate these assessments to more detailed participant characteristics to better contextualise the CVI scores and inform sampling considerations for future psychometric studies.

In Study IV, the patient cohorts were smaller than initially planned. Recruitment at one site took place in the context of organisational instability, which made participant inclusion challenging. The decision was made not to prolong the inclusion period, as the upcoming summer was expected to further affect staffing and ward structures in Swedish healthcare.

The patients in Study IV were recruited by the participating health care practitioners. This was a pragmatic solution due to the geographical distance between the researchers and participating sites as well as visitor restrictions during the Covid-19 pandemic. Health care practitioners received written instructions regarding the recruitment procedure and were asked to invite all patients who met the inclusion criteria, regardless of whether they believed the patient had been exposed to the intervention. While it is difficult to fully assess how this was carried out in practice, records were kept on the reasons for declining participation, and ongoing discussions were held between researchers and health care practitioners when questions about recruitment arose.

The health care practitioners accepted participation by discussing and agreeing as a group. However, participation in the Bridges training was voluntary, and it was possible to decline involvement in the interviews or questionnaires. As all eligible health care practitioners chose to participate, it is important to consider the potential influence of social desirability or implicit pressure to participate within small professional groups. In addition, health care practitioners who agreed to participate may have had a particular interest in self-management or professional development, which could have influenced how the intervention and training were perceived.

Data collection in real-world contexts

Data collection was influenced by contextual factors such as organisational instability, staff turnover, long distances between researchers and participating sites, summer vacation periods and the Covid-19 pandemic, which affected both access to clinical sites and the sites' accessibility to patients. These factors created practical challenges during recruitment and data collection.

At the same time, these conditions reflect the realities of conducting research in real-world healthcare settings, where organisational instability and external pressures are inherent features rather than exceptions, and may therefore provide valuable insight (May et al., 2016). These contextual influences should be considered when interpreting the findings and understanding the conditions under which the studies were conducted.

Analytical considerations

Across studies, data analysis followed established methodological approaches appropriate to each design. The overall analytical considerations are discussed below.

Qualitative analysis

In Study I, qualitative content analysis was used to explore how stroke patients described experiences of self-management in everyday life (Elo & Kyngas, 2008). This approach allowed the data to be organised into codes, subcategories and categories reflecting patterns in the participants' descriptions. Examples of the analytical process are presented in the manuscript to enhance transparency. Both interviewers had experience working on the ward from which participants were recruited, either currently or previously, and had extensive experience in healthcare and stroke care. While this background may have facilitated an understanding of the clinical context, it also required an awareness of potential pre-understandings. To reduce the risk of interpretations being overly shaped by prior experiences, analytical discussions were held within the research team, and a selection of interviews were reviewed together with researchers who did not share the same clinical background.

In Study IV, thematic analysis was used to explore health care practitioners' experiences of implementing self-management support (Braun & Clarke, 2022). This approach was considered suitable for identifying patterns of meaning across the data while allowing flexibility in interpretation. The

analysis was conducted iteratively and involved several researchers, which allowed interpretations to be discussed and refined throughout the analytical process. The analysis was further informed by the theoretical lens of NPT, which helped focus attention on aspects related to implementation processes.

Quantitative analysis

In Study III, the translation and cross-cultural adaptation of the SSEQ followed the procedure described by (Beaton et al., 2000). This approach is used when adapting instruments for use in new linguistic and cultural contexts and has also been followed by other research groups translating the SSEQ.

The preliminary psychometric properties assessed in this study included internal consistency as well as floor and ceiling effects. Given the number of stroke survivors available for participation, these analyses were considered appropriate as an initial evaluation of the Swedish version of the instrument. More advanced psychometric analyses were not conducted at this stage, as such analyses would require larger samples. Therefore, the methodological focus was primarily on translation and cross-cultural adaptation. Further research is needed to conduct a more comprehensive psychometric evaluation of the SSEQ-SWE.

In Study IV, descriptive statistics were used for the quantitative analyses. The aim of the study was to describe patterns in the data during the implementation process rather than to test hypotheses or detect statistically significant differences.

Methodological quality and trustworthiness

Different strategies were used across the studies to enhance credibility, dependability, confirmability and transferability.

Across studies, established methodological guidance and theoretical frameworks were used to strengthen the rigour and transparency of the research process as described earlier. The use of established frameworks helped ensure that the research processes were systematic and aligned with recognised methodological standards.

Several strategies were used to strengthen the credibility of the qualitative analyses included in this thesis. In Studies I and IV, qualitative data were

analysed by multiple researchers, and several discussions were held during the various phases of analysis. This collaborative and iterative process was used to reduce the influence of individual researcher perspectives and support the credibility and confirmability of the findings. In addition, established analytical approaches – including content analysis and thematic analysis – were used to provide a systematic structure for the data analysis. Credibility was further strengthened by grounding the findings in the participants' experiences. In Study I, member checking was used to ascertain whether the interpretations echoed the participants' perspectives. Quotations were used to support authenticity by illustrating different perspectives on self-management among the participants.

Despite these strategies, it is important to acknowledge methodological considerations. The studies were conducted within specific contexts, primarily within Swedish stroke rehabilitation, which may influence the transferability of the findings to other settings. In Study III, the psychometric evaluation of the translated instrument was limited to preliminary analyses, and further validation is needed. In addition, the implementation study (Study IV) was conducted during the early phase of the intervention's integration into practice, meaning that longer-term normalisation of the intervention could not be fully assessed.

Conclusions

Across the four studies, self-management emerged as a concept that is still evolving within Swedish stroke rehabilitation, where its meaning, practical application and measurement require continued negotiation and development among patients, healthcare practitioners and organisations. The findings suggest that self-management is not simply an individual capacity, but something shaped by everyday life after stroke, by relationships, and by the context in which rehabilitation and daily life unfold. At the same time, the thesis shows that implementing self-management support is complex and context-dependent, requiring conceptual clarity, adaptation to local conditions, and sustained organisational support. Bridges training appeared to initiate early shifts in professional awareness and communication, but integration into routine practice varied across contexts. Taken together, the findings suggest that continued conceptual, practical and methodological development is needed before changes in patient-level outcomes can reasonably be expected. In this way, the thesis provides a foundation for the further development of self-management support in Swedish stroke rehabilitation.

Clinical implications

The transition from hospital to home appears to be a particularly important phase for self-management support. Clinical assessments may benefit from focusing not only on physical function but also on the person's confidence, readiness and perceived resources for handling challenges in life after stroke.

This thesis highlights self-management support as a meaningful approach in stroke rehabilitation. In clinical practice, this points to the importance of supporting not only functional rehabilitation needs, but also confidence, autonomy, participation, and the person's ability to manage everyday life after stroke.

The findings also indicate a need for greater conceptual clarity regarding self-management support in Swedish stroke care. Without a shared understanding among health care practitioners, there is a risk that self-management will be reduced to independence or to managing alone. Creating space for reflection, shared language and team-based understanding may therefore be important for more consistent practice.

Finally, successful integration of self-management support is likely to require organisational support in addition to staff training. Leadership engagement, whole-team involvement, champions and stable working conditions appear important for embedding new ways of working into routine stroke rehabilitation.

Implications for future research

- Continue to explore how self-management support can be implemented and sustained in Swedish stroke rehabilitation over time through longitudinal studies.
- Further examine the conceptual and linguistic understanding of self-management by patients and health care practitioners in the Swedish context and how shared understanding can best be developed in practice.
- Expand the psychometric evaluation of the Swedish SSEQ and clarify its suitability for use in different stroke rehabilitation and implementation contexts.

- Explore how individual life circumstances influence self-management in the Swedish stroke population, including ethnicity, socioeconomic conditions and stroke-specific factors such as aphasia or cognitive impairment, and how these factors shape perceptions of self-management and the support needed to best meet individual needs.

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