Nurse-led Patient Empowerment Interventions for Rehabilitation Services

A literature review

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Abstract:
The purpose of this literature review is to identify characteristics of effective nurse-led patient empowerment interventions. The aim is to answer the question: What are the characteristics of effective nurse-led patient empowerment interventions for a diverse group of patients with varying health conditions? In 2020 The World Health Organization reported a global need for rehabilitation services. The COVID-19 pandemic contributed to the demand for rehabilitation services (WHO, 2020). This thesis suggests that empowerment interventions could be implemented into conventional rehabilitation. It is hypothesized in this thesis that empowered patients would have an enhanced recovery through self-care behaviors, thus promoting patient flow in rehabilitation centers.

The theoretical framework chosen to guide this thesis is the Health Empowerment Theory. Literature is reviewed to identify unifying codes and categories in different empowerment interventions. The data collection process through databases PubMed, CINAHL, Science Direct, and Google Scholar is demonstrated. Articles are chosen based on a predetermined inclusion criterion. Ultimately nine scientific articles are chosen evaluating the effectiveness of nurse-led patient empowerment interventions. The findings of content analysis reveal five unifying components of empowerment interventions seen in all nine articles. The most significant finding is the educational aspect to patient empowerment. These findings can be implemented into conventional rehabilitation of patients with a range of health conditions.

Keywords:	Empowerment intervention, Rehabilitation, Health Empowerment Theory
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CONTENTS

Tables

Acronyms

ADL – Activities of Daily Living

BP – Blood Pressure

CG – Control group

Et al. – Et alia meaning “and others”

IG – Intervention group

LOS – Length of Stay

Pt. – Patient

QoL – Quality of Life

RCT – Randomized control trial

Vs. – Versus

WHO – World Health Organization

FOREWORD

An enormous thank you to all my friends and family that gave me feedback on this thesis. Without their support and push, I wouldn't have been able to create a thesis I am proud of. I am grateful for all the advice given by supervising teachers Lotta Eronen, Pauleen Mannevaara, Heikki Paakkonen and Terese Sjölund. The thesis supervision lessons gave me valuable tools to advance my academic writing. Thank you to Pamela Gray for teaching me theory in research methodology and the years of guidance she has provided during my nursing studies. She has sparked my interest in research and enthusiasm to further my knowledge.

A special thanks to my sister Kestra. My passion for nursing started with caring for Kestra and for that I owe her everything.

1 INTRODUCTION

Medical rehabilitation is a set of clinical interventions to support the recovery of a patient. Rehabilitation can range from inpatient to outpatient healthcare services. Most commonly individuals receive rehabilitation services after a traumatic injury, fracture or when recovering from infection or disease (WHO, 2019). An intervention in healthcare services gaining popularity, for its self-management aspects, is the empowerment intervention (Rappaport 1987; Kieffer, 1984). Multiple variations of empowerment interventions exist and differ in theory as well as practice. Empowerment interventions are defined by a set of action to promote the sense of control in an individual over their lives. Empowerment can affect an organization, community or individual level (Perkins & Zimmerman, 1995). The main purpose of incorporating empowerment interventions into healthcare services is to promote patient's sense of control over their health journeys, autonomy in daily living activities and self-care behaviors (Adolfsson et al., 2007; Shearer, 2004; Wong et al., 2004).

Varying nurse-led patient empowerment interventions are reviewed to gain an understanding of the unifying characteristics. Understanding the key components of empowerment interventions allows for implementing them into rehabilitation services, instead of adopting existing interventions. Many of the existing nurse-led patient empowerment interventions target specific patient groups with a similar health condition. By reviewing multiple interventions, which target diverse patient groups, the similarities in empowerment intervention characteristics can be highlighted.

Patient empowerment is important to allow patients to take action in changing their health journeys positively. Patient empowerment allows for patient's beliefs, wishes and needs to be heard. Empowered patients are able to make educated decisions on their health journeys. Instead of being in a passive role in their recovery, empowerment enables patients to take an active role. Discovering unifying characteristics and implementing them into rehabilitation could enhance the recovery process for patients, increase patient flow in rehabilitation, thus catering to the need of rehabilitation services globally. This thesis will therefore focus on existing nurse-led patient empowerment interventions that can be implemented into conventional rehabilitation. Further, this thesis aims to

answer what are the characteristics of effective nurse-led patient empowerment interventions.

The background chapter will cover the significant global need for rehabilitation based on existing research and define key concepts. The theory chosen to guide the literature review is the Health Empowerment theory, which will be covered in the theoretical framework chapter. The aim of this literature review thesis will be defined along with the research question. A detailed description on data collection and analysis will be presented in the Methodology chapter. The literature review will analyse and present nine articles from peer reviewed, scientific journals. The chosen articles are presented in chronological order for the purpose of simplification and order. Findings of chosen articles are presented in order to provide a summary of the unifying characteristics of different empowerment interventions. Further, the discussion chapter will present the interpretations, limitations and strengths of the literature review findings. To conclude, the thesis will finish with a conclusion chapter where the recommendations for further research will be highlighted.

2 BACKGROUND

There is a significant lack of rehabilitation services on a global scale (WHO, 2020). In 2019, one in three individuals world-wide would have benefited from rehabilitation due to a health condition (Cieza et al., 2020). The need for rehabilitation services increased drastically during the COVID-19 pandemic, further contributing to the problem (Wade, 2020; WHO, 2020). As people live longer globally, the prevalence of chronic health conditions and demand for long-term health care increase (Shearer, 2009; WHO, 2017). According to World Population Prospects (2019) in the past three decades, the share of over 65 year olds worldwide has increased from 6 per cent to 9 per cent in 2019. An increasing percentage of the population is elderly and living with a chronic condition or disability, further contributing to the need for rehabilitation services (Shearer, 2009; WHO, 2019; United Nations, 2019).

The length of stay in hospitals and rehabilitation centers has decreased in the past two decades due to advancements in medical science and care science (Eastwood et al., 1999; Huusko et al., 1999; DeVivo, 2007; Al-Ani et al., 2008; Cogan et al., 2020). Despite these advancements, waiting lists for rehabilitation services grow and many individuals with health conditions go without receiving rehabilitation. The problem is noticeably worse in low- and middle-income countries, where over half of the population with health conditions go without sufficient rehabilitation (WHO, 2019) Moreover, according to The World Health Organization report (2019) this unmet need for rehabilitation services is partially due to lack of financial resources, adequate planning, trained health care professionals and long waiting times.

The author of this thesis has proposed exploration of nurse-led patient empowerment to promote the recovery time and efficiency of patients in rehabilitation. Patient empowerment through interventions allows for patients to feel a sense of control over their lives, rehabilitation recovery journey, and health conditions (AOA, 2007; Toofany, 2006, 2007; Adolfsson et al., 2007; Wong et al., 2004). Various studies have demonstrated the outcomes of patient empowerment in rehabilitation and its effects on patient recovery as well as the length of rehabilitation stay (Löfgren et al., 2014; Sit et al., 2016). As suggested in an article by Toofany (2006) empowerment can promote patients' participation in health-related decision making and enhanced health outcome. This thesis

examines and analyzes various empowerment interventions for diverse patients with varying health conditions, such as those seen in rehabilitation. Health condition patients range from diabetic patients, schizophrenic patients, sensory impairment patients to stroke survivors. Through review of multiple different existing empowerment interventions, they may be compared and critiqued. To gain a broad view of differences in empowerment interventions, studies in chosen articles each examine a unique patient group or uniquely designed intervention. In order to gain a developmental perspective, chosen articles date back to the year 2007. The aim is to discover the critical components of empowerment interventions' processes and outcomes. The unifying characteristics of nurse-led patient empowerment interventions are sought after in this literature review. This chapter displays definitions of the terms used in this thesis, to gain a uniform understanding of key concepts.

2.1 Rehabilitation and Intervention

Rehabilitation is defined directly by the World Health Organization (2020) as "*a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment*".

The goal of rehabilitation is to aid patients in becoming as independent as possible in daily living activities (ADL) and managing their health condition (WHO, 2020). Physical, occupational and speech therapy are the most common types of rehabilitation (National Rehabilitation Association n.d.). Rehabilitation services can occur in outpatient and inpatient settings following an injury, surgical operation, disease, or illness. It could also be due to decreased functioning or acute health conditions (Moroz, 2017; WHO, 2020). Disabling conditions may be reversed with adequate rehabilitation (National Rehabilitation Association n.d.). The rehabilitation staff consists of a multidisciplinary team, including rehabilitation doctors, registered nurses, practical nurses, physiotherapists, cleaning staff, and others (John Hopkins Medicine n.d.).

The aim of discovering empowerment interventions' key characteristics is for them to be applied to inpatient rehabilitation, thus contributing to rehabilitation efficiency and

improving patient flow. This thesis will be focusing on empowerment interventions that can be used by nursing staff.

In a caring context, an intervention is an action taken by someone, such as a nurse, on behalf of or with an individual, such as a patient, resulting in a health outcome (Resing, 2016). An intervention as quoted by Butcher et al. (2018) is defined as '*any treatment, based upon clinical judgment and knowledge, performed by a nurse to promote patient outcomes.'* Rehabilitation interventions are defined as non-surgical and non-pharmacological interventions (McGlinchey et al., 2020).

2.2 Empowerment

Empowerment was widely used during the civil rights movement in the 1960s and later by the self-help movement in the 1970s and 1980s (Rappaport 1987; Kieffer, 1984). The modern definition of empowerment is '*giving authority or power to someone to do something*' (Oxford University Press, 2021). In the past decades empowerment has evolved from a paradigm-challenging concept to a celebrated and accepted term (Kuhn, 1970). The concept aims to promote individual autonomy and brings power to an oppressed group of people (Kieffer, 1984). Empowerment urges us to think in terms of wellness and health, instead of illness or disability (Perkins & Zimmerman, 1995; Rappaport, 1981). An individual's and community's strengths, capabilities and power are highlighted through empowerment (Baltes, Lindenberger, & Staudinger, 1998; Perkins & Zimmerman, 1995). Certain actions taken can be considered empowering processes and the outcomes result in a level of empowerment (Swift & Levin, 1987). There are multiple perspectives to view empowerment from, such as a feminist perspective (Kane & Thomas, 2000; Shearer & Reed, 2004), self-efficacy perspective (Bandura, 1992, 1994) or a critical societal perspective (Shearer & Reed, 2004). In chapter 3, theoretical framework, approaches to understanding empowerment will be reviewed.

3 THEORETICAL FRAMEWORK

A common healthcare approach for understanding empowerment is from a lifespan development perspective (Lerner, 2001). The belief that human beings are equipped with inherent strengths is derived from the lifespan development perspective. This approach focuses on the power of the patient, individual strengths, and wishes for health outcomes rather than those of the healthcare professional (Baltes, Lindenberger, & Staudinger, 1999). Empowerment also allows patients to play an active role in their recovery, instead of taking a passive role, where health promotion is in the hands of the healthcare professionals (Castor et al., 2016).

The World Health Organization (1998) defines empowerment in relation to health promotion as "*a process through which people gain greater control over decisions and actions affecting their health*". Empowerment was applied as a health promotion tool, to allow for the patient's opinion to be heard and to support a patient in gaining control over his or her healthcare journey (WHO, 1986; Castor et al., 2016). Understanding a patient's perspective is important to promote a patient-centered approach and to enhance quality of life (WHO, 1998). Moreover, patient empowerment is an effective tool for understanding the patient's perspective because it enhances the patient's ability to make decisions about their health (WHO, 1998).

From a socio-political perspective, empowerment is a theoretical construct that connects individual strengths, well-being, and competencies to a broader socio-political environment and socio-political change (Rappaport, 1981; 1984). Empowerment acts as a model for understanding the processes and outcomes of efforts to influence decisions that affect an individual's personal life (Perkins & Zimmerman, 1995; Rappaport, 1981).

Perkins and Zimmerman (1995) emphasize the importance of understanding empowerment processes and consequences. Leyshon (2002) defines the empowerment process as a transfer of power between individuals resulting in shared power. The interpretation of empowerment processes and outcomes changes with the perspective. The level of empowerment may also affect the interpretation of empowerment. Zimmerman and Warschausky (1998) categorize levels of empowerment into individual,

community, and organizational empowerment. This thesis will be focusing on individual empowerment or patient empowerment.

3.1 Health Empowerment Theory

The framework chosen to guide this thesis is the health empowerment theory, developed partially by Rogers (1992) and emphasized as an intervention practice by Shearer (2004). This approach to the empowerment theory emphasizes the intentional participation of individuals in the process of positively changing their health outcomes and wellbeing (Shearer, 2004). This perspective to empowerment is characterized by innovative purposeful change while protecting personal values of an individual and working towards health goal achievements (Shearer, 2009). In essence, health empowerment is the process of gaining control over one's health with the outcome of change and a sense of control (Rogers, 1992; Shearer, 2004; Perkins and Zimmerman, 1995).

The health empowerment theory was chosen as a theoretical framework for this thesis because of its health promotional aspects to empowerment. The notion of a patient participation in changing their health outcomes is sought after in rehabilitation, which is emphasized in the health empowerment theory (Shearer, 2004). The chosen theory resonates with the notion of taking action into one's own hands, to allow for patient independence and self-care behaviors, which is a part of a rehabilitation (WHO, 1998; Shearer, 2004).

This thesis examines and analyzes various empowerment interventions, developed to promote patient health and aid in the recovery process of patients in healthcare settings. Interventions were categorized as a health empowerment intervention, if it corresponds with the health empowerment theory, in essence patient's gain a greater sense of control over their health and life. Understanding the health empowerment theory's perspective to empowerment is vital to deciding which empowerment intervention are chosen for review in this thesis.

4 AIM AND RESEARCH QUESTIONS

This thesis examines various nurse-led patient empowerment interventions for a diverse group of patients with varying health conditions, such as those seen in rehabilitation. The aim is to identify characteristics of existing effective nurse-led empowerment intervention. The research question for this thesis goes as follows:

What are the characteristics of effective nurse-led patient empowerment interventions for a diverse group of patients with varying health conditions?

5 METHODOLOGY

This thesis is a literature review. Literature is searched for from databases. The aim of this search is to discover, analyze, critique and compare existing literature to answer the research question. This chapter demonstrates the methods used to collect and analyze data. Before data was collected, criteria for data inclusion were established. The inclusion criteria can be found as a subchapter under the Methodology chapter.

5.1 Data Collection

Data for this literature review was collected through articles between January and March of 2021. Databases on the internet were searched with Boolean search moderators. Key words (“empowerment” OR “empower” OR “empowered” OR “power” OR “self-management” OR “self-efficacy”) AND (“nurse-led” OR “nurse-supported” OR “registered nurse”) AND ("randomized controlled" OR "randomized control" OR "quasi-experimental" OR "experimental") AND ("rehabilitation" OR "medical rehabilitation") were applied to databases PubMed, SAGE Journals, Science Direct, and Google Scholar. Slight alterations were made to key words to cater to the databases guidelines. A detailed search is illustrated in table 1. The search was narrowed to studies from 2000 to 2020. To gain a developmental perspective, articles up to twenty years old were considered. The articles were displayed by most relevant first and again by most recent first. Articles with full free text available were considered and the search was further narrowed through such.

Titles of articles were reviewed and articles which fit the inclusion criteria were further investigated through reading of abstracts. The following figure demonstrates the number of hits each search database produced. The snowball method was applied to discover more articles, but none were chosen for this literature review. Ultimately 9 studies were chosen for the purpose of this thesis. Chapter 5, section 3 (List of Chosen Articles) shows the articles chosen to be reviewed for this thesis. Each study represents one intervention, which fits the components of the health empowerment theory, in essence, the process of gaining control over one’s health with the outcome of positive change (Rogers, 1992; Shearer, 2004; Perkins and Zimmerman, 1995).

Table 1. Illustration of data collection process.

Database	**Sorted by:**	**Key Words**	**Number of hits**	**Number of articles and abstracts read**	**Chosen articles**
PubMed	2000-2020 Full PDF text	("self-management" OR "empowerment" OR "self-control" OR "patient empowerment") AND ("intervention" OR "nursing intervention") AND ("rehabilitation" OR "medical rehabilitation") AND ("registered nurse" OR "nurse") AND ("experimental study" OR "control trial" OR "randomized control" OR "randomized controlled")	34 hits	9 abstracts read	1 chosen Roets-Merken
SAGE	2000-2020 Research Articles	("randomized controlled" OR "randomized control" OR "quasi-experimental" OR "experimental") AND ("empowerment" OR "self-efficacy" OR "efficacy" OR "self-management" OR "management")	88214 hits	23 abstracts read	1 chosen Hasan & Musleh
Science Direct	2000-2020	("patient" OR "patients" OR "nurse-led" OR "nurse-supported") AND ("empowerment" OR "self-management") AND ("randomised controlled trial" OR "quasi-experimental study")	3,273 hits	36 abstracts read	1 chosen Messina
		("randomized controlled" OR "randomized control" OR "quasi-experimental") AND ("empowerment" OR "self-efficacy" OR "efficacy" OR "self-management" OR "management")	193,353 hits	6 abstracts read	1 chosen Sol
Google Scholar	2000-2020	("randomized controlled" OR "randomized control" OR "quasi-experimental" OR "experimental") AND ("patient education" OR "nurse-led" OR "nurse led") AND ("self-efficacy" OR "efficacy" OR "self-management" OR "management") AND ("empowerment" OR "empower" OR "power" OR "empowered")	16500 hits	17 abstracts read	3 chosen Chang; Adolfsson; Sit.
		("nurse-led" OR "nurse led") ("empowerment" OR "empowered" OR "self-management" OR "management" OR "self-efficacy" OR "efficacy")	18 200 hits	12 abstracts read	2 chosen Smeulders; Löfgren

5.1.1 Inclusion criteria

The inclusion criteria were established prior to data collection, which narrowed down the search. The articles chosen for this thesis are based on the following criteria. The article must be experimental studies, qualitative or quantitative studies. All articles should include one or more interventions, which reflect the health empowerment theory. All articles chosen should be published in a peer reviewed, scientific journal, further the articles should not be over twenty years old and preferably less than ten years old. This thesis reviews nurse-led patient empowerment interventions which can be applied to rehabilitation, yet the articles chosen do not have to be focused on rehabilitation, nor specifically using an intervention labeled as an empowerment intervention. The interventions must be nurse-led but can also include other professionals alongside a nurse. The interventions must be targeting a patient group and have clear results for better comparison.

5.1.2 List of chosen Articles

The following 9 articles are listed in chronological order. The following articles have been chosen based on inclusion criteria.

1. Adolfsson, et al. (2007) *Patient education in type 2 diabetes, a randomized controlled 1-year follow-up study,* Diabetes research and clinical practice, 76 (3), 341-350.
2. Sol, et al. (2008) *The role of self-efficacy in vascular risk factor management: A randomized controlled trial,* Patient education and counseling, 71 (2), 191-197.
3. Smeulders, et al. (2010) *Nurse-led self-management group programme for patients with congestive heart failure:* randomized controlled trial, Journal of advanced nursing, 66 (7), 1487-1499.
4. Chang, et al. (2012) *Nurse-led empowerment strategies for hypertensive patients with metabolic syndrome,* Contemporary nurse, 42 (1), 118-128.
5. Löfgren, et al. (2014) *Power to the patient: care tracks and empowerment a recipe for improving rehabilitation for hip fracture patients,* Scandinavian journal of caring sciences, 29 (3), 462-469.
6. Sit, et al. (2016) *Do empowered stroke patients perform better at self-management and functional recovery after a stroke?* A randomized controlled trial. Clinical interventions in aging, 11, 1441-1450.
7. Hasan & Musleh (2017) *The impact of an empowerment intervention on people with schizophrenia. Results of a randomized controlled trial,* International Journal of Social Psychiatry, 63 (3), 212-223.
8. Roets-Merken, et al. (2018) *Effectiveness of a nurse-supported self-management programme for dual sensory impaired older adults in long-term care: a cluster randomised controlled trial,* BMJ open, 8 (1).
9. Messina, et al. (2020) *The Look After Yourself (LAY) intervention to improve self-management in stroke survivors: Results from a quasi-experimental study,* Patient Education and Counseling, 103, 1191-1200.

The following table illustrates key characteristics of the chosen articles. The author and year of publication are listed on the left of the table. Study design and intervention used in the study is listed in the table below. The health conditions of the patients are mentioned, as well as the number of patients from the patient population divided into the intervention group and control group. The patients in an intervention group received either a unique care plan with intervention implemented, or conventional care with an implemented intervention. The patients in the control group received conventional care. Acronyms are listed below.

Table 2. Details of chosen articles.

Author and year	Study design	Intervention	Patient population	Outcomes (+) and (-)
Adolfsson, et al (2007)	Randomised controlled trial	Empowerment group education	Type 2 diabetes patients. 42 pt. in IG 46 pt. in CG	Higher level of confidence in IG (+). No significant difference in self-efficacy and satisfaction in QoL between IG and CG (-).
Sol, et al (2008)	Randomised controlled trial	Self-management intervention	Symptomatic vascular diseases patients. 83 pt. in IG 70 pt. in CG	IG choose healthier food option and exercise after intervention compared to CG (+) No change in self-efficacy in IG compared to CG (-).
Smeulders, et al (2010)	Randomised controlled trial	Nurse-led self-management group programme	Congestive heart failure patients. 186 pt. in IG 131 pt. in CG	Higher levels cognitive symptom management, self-care behaviour & cardiac specific QoL in short-term results in IG vs. CG (+). No changes in long-term result (-).
Chang, et al (2012)	Quasi-experimental, design	Nurse-led empowerment strategies	Hypertensive metabolic syndrome patients. 30 pt. in IG 22 pt. in CG	Prevalence of metabolic syndrome decreased among IG (+).No difference in HDL-C and FBG between IG and CG (-). No difference in empowerment in IG (-).
Löfgren, et al (2014)	Quantitative design	Individualized rehabilitation empowerment programme	Hip fracture patients. 285 pt. in IG 218 pt. in CG	4 day shorter LOS in IG vs. CG (+). 90% IG vs. 80% in CG returned to original living before hip fracture (+).
Sit, et al (2016)	Randomised controlled trial	Health empowerment intervention	Stroke survivors. 105 pt. in IG 105 pt. in CG	Higher self-efficacy in illness management and functional recovery in IG vs. CG (+).
Hasan & Musleh (2017)	Randomised controlled trial	Empowerment intervention	Schizophrenia patients. 56 pt. in IG 56 pt. in CG	Improvement in helplessness score in IG (+). Gradual negative change in CG (-).
Roets-Merken, et al (2018)	Randomised controlled trial	Nurse-supported self-management programme	Dual sensory impaired patients. 34 pt. in IG 24 pt. in CG	Instrumental ADL improved in IG (+). No positive effect on social participation in IG (-).
Messina, et al (2020)	Quasi-experimental design	Look after yourself intervention	Stroke survivors. 56 pt. in IG 90 pt. in CG	Higher self-efficacy, better mental health and improved ADL in IG vs. CG (+).

(+) positive outcomes, (-) negative outcomes, ADL - activities of daily living, BP - blood pressure, CG - control group, IG - intervention group, LOS - length of stay, pt. - patient, QoL - quality of life, vs. - versus.

5.2 Content Analysis

The content analysis for this thesis began by gaining physical copies of all nine articles which were then read repeatedly, objectively and thoroughly. The first observation made, was that all articles' studies had clear processes and outcomes to their empowerment interventions. Furthermore, each article was meticulously reviewed, and the specific processes of interventions used were highlighted. With a separate color, outcomes were highlighted and the processes and outcomes maintaining information on the original source of each note, were noted on a separate document. The empowerment intervention process and goals are labelled as the categories, under which codes and content fit. The list of processes and outcomes were read thoroughly and similarities between the different studies' processes and outcomes were noted. Codes emerging from the evaluation of these notes consist of characteristics such as educational, skill building, goal setting, plan execution and reflective. A detailed explanation of the findings can be found in the findings chapter of this thesis. To avoid mistakes and inconsistencies, content was reviewed multiple times. Further, all content was taken into account and careful consideration was given to the definition of each code and category.

5.3 Ethical Consideration

Ethics, as defined by the Cambridge dictionary, is a set of moral principles. This thesis abides by the Finnish National Board Research Integrity Guidelines (2019) to follow proper research ethics and research integrity. The thesis format follows the Arcada, University of Applied Sciences, Writing Guide 2018, Version 3.0 (3.10.2018). Only articles published in scientific journals were considered for this literature review. Good research ethics were applied by citing all sources to acknowledge the original author. Sources used in the thesis have been critically evaluated and Harvard referencing has been applied throughout. Deep consideration was given to avoid plagiarism of any text.

6 FINDINGS

The aim of this thesis is to identify the key characteristics of an effective nurse-led patient empowerment intervention. Therefore, nine different articles measuring the outcomes of empowerment interventions were reviewed to identify the common characteristics of each intervention and a content analysis was performed to discover codes and create categories. The chosen articles' empowerment interventions all shared key themes which are educational, skill building, goal setting, plan executing and reflection. These themes could be divided into their processes and outcomes. This chapter of the thesis answers the research question 'What are the characteristics of effective nurse-led patient empowerment interventions?'. The chapter is further divided into subchapters based on categories and codes discovered through content analysis, a direct answer to the research question and a summary of the findings.

All interventions in the chosen articles' studies are nurse-led. Six out of nine studies use a randomized control trial (RCT) (Adolfsson et al., 2007; Sol et al., 2008; Smeulders et al., 2010; Sit et al., 2016; Hasan & Musleh, 2017; Roets-Merken et al., 2018). The studies using RCT divided their sample population into an intervention group (IG) and a control group (CG). The intervention group has an empowerment intervention implemented into care and the control group has conventional care. The results of either group are compared to measure the effectiveness of the empowerment intervention.

Two out of nine studies use quasi-experimental design, where the participating patients are exposed to an empowerment intervention (Chang et al., 2012; Messina et al., 2020). The remaining study by Löfgren et al. (2014) uses a quantitative approach, where participating patients have empowerment interventions implemented into their rehabilitation. Outcomes of this study are compared to statistical data of conventional rehabilitation.

Detailed information on the number of participants in each group in each study can be found in table 2 under chapter 5 of this thesis. Participants for each study are referred to as patients in this thesis. Patients referred to in this chapter are from the intervention group of each study, undergoing rehabilitation or other healthcare treatments with an implemented empowerment approach. Table 2 under chapter 5 also reveals the health

conditions of patients in each study. A diverse range of health conditions can be included in this thesis, because a diverse group of patients with varying health conditions can be found in conventional rehabilitation.

The following table briefly illustrates the two categories identified from content analysis. Codes and content were gathered from chosen articles and noted in the table below. An elaboration of each category and code can be found under the table.

Table 3. Content categorization.

Content	**Code**	**Category**
Educating patient on health condition, risk associated and treatment opportunities	Education	Process
Teaching patient ADL skills, monitoring skills and exercise techniques	Skill building	
Planning care and setting goals with patient	Planning and goal setting	
Aiding and encouraging patient to achieve goals	Execution	
Patient reflecting on care process and actions taken	Reflection	
Confidence in knowledge, awareness of limitations	Education	Outcome
Enhanced self-care behaviors and functional recovery	Skill building	
Heightened sense of control over recovery process	Planning and goal setting	
Enhanced confidence and self-care behaviors	Execution	
Critical awareness of own capabilities	Reflection	

6.1 Patient empowerment process

A clear process of patient empowerment through nurse-led interventions could be identified in all studies. The following subchapters demonstrate different codes identified during content analysis, which fit under the empowerment process category.
All codes of the empowerment process align with the health empowerment theory, because they emphasize purposeful change while protecting a patient's values and beliefs (Shearer, 2009). Through the following processes, patients can gain a sense of control over their health, which corresponds to the health empowerment theory's perspective (Rogers, 1992; Shearer, 2004; Perkins and Zimmerman, 1995).

6.1.1 Education

All empowerment interventions in studies chosen for this thesis started with an educational phase. Patients were given sufficient information on their own health condition, treatment and risks associated. In studies conducted by Adolfsson et al. (2007) and Sol et al. (2008), information was specifically tailored to meet the patient's needs. In comparison, in the study by Sit et al. (2016) a more generalized level of "know how" information was delivered for patients with similar health conditions.

Education was delivered verbally by the nurse to a specific patient (Löfgren et al., 2014; Roets-Merken et al., 2017) or in a group setting (Adolfsson et al., 2007; Sol et al., 2008; Chang et al., 2012; Sit et al., 2016). Booklets, books, PowerPoint presentations and information packages were utilized alongside verbal education (Smeulders et al., 2010; Chang et al., 2012; Löfgren et al., 2014; Hasan & Musleh, 2017). In Smeulders's et al. (2010) study modelling techniques were used to influence change in behavior to patients by the nurse or by members of a support group. Education on lifestyle modification was delivered to patients participating in the study by Chang et al. (2012).

6.1.2 Skill building

Skill building was a common aspect of the empowerment interventions in the chosen studies. General knowledge on physical activity, healthy dietary habits and self-care

behaviors were taught by nurses to patient in studies by Adolfsson et al. (2008), Sol et al, (2008), Chang et al. (2012), Sit et al. (2016), Hasan & Musleh (2017), Roets-Merken et al. (2017) and Messina, et al. (2020). Skill building could include practicing activities of daily living, such as ones taught to stroke survivors () or monitoring of a vital sign (Sit et al., 2016), such as blood glucose monitoring taught to diabetic patients (Adolfsson et al., 2007).

In the study by Smeulders, et al. (2010) patients were taught how to actively manage symptoms associated with the health condition in question. Hasan's & Musleh's (2017) study's empowerment intervention included self-care skill building specially adapted for schizophrenia patients. The study by Messina, et al. (2020) incorporated teaching of how to prevent falls and allowed patients to practice how to get up in case of a fall.

6.1.3 Goal planning and setting

Patients having received knowledge on their health condition, treatment alternatives and risks associated, as well as having sufficient skills for practicing towards functional recovery, could plan out realistic goals for their rehabilitation recovery journey. Goal planning and setting were key components of the studies' empowerment interventions found in chosen articles. Achievable short-term and long-term goals were set taking into consideration the patient's priorities, beliefs, wishes and healthcare guidelines (Adolfsson et al., 2007; Sol et al., 2008). These goals could be an enhanced skill set to allow for autonomy, such as in the studies by Smeulders et al. (2010) and Messina, et al (2020).

In Chang's, et al. (2012) study, nurses encouraged patients to write down goals for behavioral change and display the written goals somewhere visible, as a constant reminder. In the study by Sit et al. (2016) goals were set based on identified areas in need of change or problem areas, to enhance personal action taking and problem solving (Roets-Merken et al., 2018). Hasan's and Musleh's (2017) study focused more on exploring routes to recovery and health promotion than direct goal setting.

In comparison, Löfgren et al. (2014) used individualized rehabilitation programs with empowerment, where the goal was already set to reduce rehabilitation length. The

empowerment intervention in this study did not take note of the patient's individual goals, rather focused on a fast recovery (Löfgren et al., 2014).

6.1.4 Plan execution

Among chosen articles, common phases of plan execution or implementation of new skills and knowledge were found in the process of empowerment. According to chosen articles, this phase is a part of the rehabilitation or health promotion process that contributes to empowerment. In the study by Sit et al. (2016) nurses verbally encouraged patients to take action for positive change. In many studies, a plan execution phase could happen multiple times throughout the study. For example, in the study by Smeulders et al. (2010), patients attended weekly group sessions and after each session, what they had learned could be implemented into their daily activities. In comparison, the study by Roets-Merken et al. (2018) where patients executing an action plan was a step in the empowerment intervention, patients were able to autonomously apply what they had learned to daily living.

6.1.5 Follow-up, discussion and reflection

The final phase of empowerment interventions identified in the empowerment process was reflection. Various studies include reflection or a follow-up discussion in the empowerment intervention. In studies conducted by Adolfsson et al. (2007), Smeulders et al. (2010) and Roets-Merken et al. (2017), patients were interviewed at the end of the rehabilitation or health promotion, which allowed a chance for the patients to reflect upon changes in behavior and sense of control during the empowerment intervention.

Patients were able to share achievements and discuss health and behavioral changes in a group setting, thus allowing for peer support (Chang et al., 2012). Nurses provided positive reinforcement for further change and allowed patients to identify problems they faced during plan execution in the study by Sit et al. (2016). Discussion allowed for patients to consult nurses when new solutions for problems needed to be explored (Sit et al., 2016). Roets-Merken et al. (2017) labeled reflection as a step of the empowerment intervention. Questions were asked to the patient by a nurse, such as "what were the

results of your actions and did they contribute to your happiness?" and "what changes in your actions would you make in the future?" (Roets-Merken et al., 2017).

6.2 Patient empowerment outcomes

In this subchapter of the thesis, the common outcomes of empowerment interventions for patients of the studies are presented. Firstly, education on health conditions resulted in a higher level of confidence in health condition knowledge, risk management and treatment alternatives (Adolfsson et al., 2007; Sol et al., 2008). Similar results were found in studies by Smeulders et al. (2010), Chang et al. (2012), Sit et al. (2016), Roets-Merken et al. (2018) and Messina et al. (2020), but came to this result based on behavioral changes. Patients in these studies showed that they had gained sufficient knowledge on their health conditions, which could be seen through their enhanced self-efficacy and self-management.

An enhanced functional recovery was noted as an empowerment outcome in studies by Löfgren et al. (2014), Sit et al. (2016) and Messina et al. (2020). In the article by Löfgren et al. (2014) patients in rehabilitation with empowerment interventions implemented into care, had a shorter recovery time compared to patients in conventional rehabilitation. The study also proved empowered patients were able to return to their original form of living in 90% compared to 80% in conventional rehabilitation (Löfgren et al., 2014).

Patients in the studies by Smeulders et al. (2010) and Chang et al. (2012) showed an increase of physical activity in daily life. The waist circumference decreased in the intervention group patients compared to the control group patients in the study by Chang et al. (2012), due to increased exercise and incorporation of healthy dietary habits. Levels of helplessness reduced in the study by Hasan & Musleh (2017) after patients underwent empowerment interventions. Studies by Smeulders et al. (2010) and Hasan & Musleh (2017) show patients participating in empowerment interventions feel a greater sense of control over their health.

In the study by Sol et al. (2008) an empowerment outcome was a reduction of vascular risk in patients with symptomatic vascular diseases. Smeulders et al. (2010) study showed

the empowerment intervention resulting in congestive heart failure patients' significant improvement of cognitive symptom management and cardiac-specific QoL at the short-term follow up. Similarly, in the study by Chang et al. (2012) results of the study intervention showed a decrease in metabolic syndrome risk factors in hypertensive metabolic syndrome patients. In the study by Sit et al (2016) patients showed higher cognitive symptom management after empowerment interventions.

6.3 Characteristics of effective empowerment interventions

Based on information gained from chosen articles, the characteristics of effective nurse-led patient empowerment interventions are educational, individualized and personal goal focused. Characteristics of an effective empowerment intervention also include patient-centeredness and reflectiveness. Cooperation between patients and healthcare professionals is a key factor in promoting empowerment among patients.

An effective nurse-led patient empowerment intervention can be implemented into conventional rehabilitation. The intervention should cater to a diverse group of patients, to meet the varying health conditions of patients. An effective empowerment intervention promotes self-efficacy, self-management and self-belief in patients. It also enhances positive behavioral change and creates a sense of control for a patient over their own rehabilitation journey.

6.4 Summary of Findings

There are multiple nurse-led patient empowerment interventions that produce significant positive changes in patients. The nine chosen articles have demonstrated that a high percentage of patients with empowerment interventions implemented into their care experience a sense of control over their health and lives, a faster functional recovery, and better health management behaviors. Despite none of the chosen articles using the same empowerment intervention, the characteristics of the empowerment process and consequences of efforts share key themes. These findings demonstrate that implementing a nurse-led patient empowerment intervention into conventional rehabilitation is both

possible and beneficial to patients. It would seem that empowerment and rehabilitation go hand in hand as the aim of rehabilitation is for the patient to become as independent as possible in their daily living activities and empowerment also aims to exert a sense of control over one's life.

7 DISCUSSION

Various nurse-led patient empowerment interventions exist to promote patient self-efficacy, self-management and self-care. The interventions vary in theory and practice. To identify the main unifying characteristics of nurse-led patient empowerment interventions, literature was reviewed. As hypothesized in this thesis, patient empowerment can enhance patient recovery time and patient flow in rehabilitation services. There is an unmet need for rehabilitation services globally, partially due to long waiting times (WHO, 2019). Patient empowerment could cater to the worldwide need for rehabilitation. The findings from literature review of the chosen articles demonstrate that effective nurse-led patient empowerment interventions share similar characteristics. These five main characteristics are education, skill building, goal setting, plan execution and reflection, which are further divided into processes and outcomes.

These five characteristics are emphasized by the individual's participation in positively changing their health outcomes and wellbeing, which corresponds to the health empowerment theory's perspective to patient empowerment (Rogers, 1992; Shearer, 2004). Nurse-led patient empowerment interventions identified in this thesis demonstrate gaining control over one's health through five main phases with the outcome of wellbeing and positive change. This perspective to patient empowerment aligns with the health empowerment theory (Rogers, 1992; Shearer, 2004; Perkins and Zimmerman, 1995).

The nurse-led patient empowerment interventions of chosen articles tend to follow a mapped-out path. The empowerment interventions started with a certain phase, then moved on to the next. For example, the interventions started with an educational and skill building phase, which then was followed by a goal setting phase. These phases could last hours or even days. The empowerment interventions were not so much as singular assessments or single interventions, but more so individualized processes and journeys. The empowerment process was unique for all patients involved. An individual becoming empowered is a long and personalized journey. The results indicate empowerment being an endless journey over a person's lifetime, instead of it having a clear start and finish.

Patient-centered and individualized features could be identified in all five characteristics of nurse-led patient empowerment interventions. For the educational aspect of patient

empowerment to be effective, it should be catering to the patient's unique health condition. The patient should not only receive general knowledge on their health condition, but specifically individualized information, such as treatment options available to them and risks associated. The same can be applied to goal setting. The goal setting phase of patient empowerment in rehabilitation should be based on the patient's needs, wishes and values for the intervention to be effective. The health empowerment theory holds in this context, because a patient's personal values are being protected during the empowerment process (Rogers, 1992; Shearer, 2009).

The findings of this thesis unify the varying empowerment interventions, instead of providing an existing homogenous intervention. As previous studies have demonstrated how one empowerment intervention affects particular patient groups, this thesis reviews how the common factors affect diverse patient groups. The characteristics of the empowerment interventions can be implemented into conventional rehabilitation and the care of patients with varying health conditions. With the findings of this literature review, a nurse or other healthcare professionals, may be able to implement the characterized interventions into their practice, to promote the recovery of a patient in rehabilitation. The key components can be implemented into practice, to allow patients a greater role in their recovery and a transition from a "cared for" to a "self-care" role (Castor et al., 2016).

There is a transition of roles identified in the patient becoming empowered, from a "cared for" role into a "self-care" role. As an example, the author of this thesis identified a patient in hospital care to be in a "cared for" role and a patient admitted to rehabilitation to be transferring into a "self-care" role. This transition of roles was described in the life span development theory, where an individual transitions from a passive role into an active role in their health journeys (Castor et al., 2016). As interpreted by the author, this transition of roles is common for individuals as rehabilitation allows for individuals to become as independent as possible in activities of daily living.

The author has identified a significant characteristic of a nurse-led patient effective empowerment intervention as a good relationship between nurse and patient. As emphasized by the health empowerment theory, social support is essential for the well-being of an individual (Rogers, 1992). As interpreted by the author, a good relationship only enhances the effects of education and skill building. A good relationship between nurse and patient can allow the patient to feel support, reliance and autonomy in decision

making (Molina-Mula & Gallo-Estrada, 2020). A transfer of power was identified during the literature review. A characteristic of effective empowerment intervention is in the sharing of power between nurse to patient. The power lies in education on health conditions and skills for activities of daily living. In essence, the knowledge and skills to self-manage a condition is transferred from the nurse to patient. Good, trustworthy relationships play a role in this transfer of power.

The findings from chosen reviewed articles indicates that nurse-led patient empowerment interventions can be implemented into conventional rehabilitation. These interventions have shown to grow a patient's understanding of their health condition (Adolfsson et al., 20017; Smeulders et al., 2010; Sit et al., 2010; Messina et al., 2020), enhance functional recovery of patients (Sit et al., 2016) and speed up the recovery time in rehabilitation centers (Löfgren et al., 2014). It is after sufficient education that patients are able to make educated decisions on their health recovery journeys, rehabilitation or health promotion (Sol et al., 2008; Smeulders et al., 2010; Sit et al., 2016; Roets-Merken et al., 2018). It is the sense of control in the patient that allows them the autonomy to self-manage their lives and to practice self-care behaviors (Adolfsson et al., 2007; Sol et al., 2008; Smeulders et al., 2010). Despite empowerment interventions having positive outcomes, real and actual behavior change cannot be instilled upon another individual. Becoming empowered is a gradual, individualized process. Individuals' life experiences shape who they are and sense of control over their lives. There is no single intervention to empower all individuals. There is no single empowerment method to trigger behavioral change in an individual. As emphasized in the chosen articles, behavioral change is up to the individual patient. These interpretations align with the health empowerment theory, whereby empowerment is emphasized by intentional participation of individuals in the process of positively changing their health outcomes and wellbeing (Shearer, 2004). Yet it is up to the patient, whether they choose to participate in positive change.

The nine chosen articles studied the effectiveness of nurse-led patient empowerment interventions through the changes on patients' behaviors, functional recovery, health factors and length of rehabilitation stay as well as others. However, effects on nurse's workload were not studied in these articles. It could be believed that teaching patients self-care behaviors could decrease a nurse's workload over the course of the patient's rehabilitation stay. On the other hand, nurses having to adopt new interventions to cater

to individualized rehabilitation and empowerment of patients could increase their workload and become a burden. To suggest the implementation of key characteristics of empowerment interventions into rehabilitation would have to be preceded by an experimental study to evaluate the changes to nurse's workload. The author of this thesis has hypothesized nurse-led patient empowerment interventions to decrease nurse's workload. Instead of nurses providing services to aid in patients' daily living activities, the focus would be shifted to aiding in becoming as independent as safely as possible. This would be achieved by means of education, skill building, goal setting, plan execution and reflection, in essence through the characteristics of empowerment interventions.

7.1 Strengths and limitations

The identified characteristics of effective empowerment interventions have demonstrated being suitable for a diverse group of patients. The identified characteristics can be implemented into conventional rehabilitation. Empowerment interventions that can be applied to a diverse group of patients with varying health condition share unifying characteristics. Research has not yet proven a single empowerment intervention being effective on all patients with different health circumstances. However, by far the most important patient empowerment method is identified as education. The strength of this literature review's findings lies in the educational aspect of nurse-led patient empowerment.

By adopting the core, unifying aspects of all empowerment intervention and taking a patient-centered approach, nurses may have more success empowering patients in rehabilitation. There is not enough evidence to prove adopting these key components of effective empowerment interventions will ultimately shorten recovery times for patients in rehabilitation. Biological factors are not changed by empowerment interventions, but behaviors and attitudes of individuals may change. Despite the effectiveness of empowerment interventions being identified within a diverse group of patients, there is not enough research to prove every patient can take part of an empowerment intervention, such as those with cognitive decline. In the chosen articles, patients with cognitive impairment were excluded from the studies.

In terms of limitations of this thesis, the author was limited in the search process as not all relevant articles were available for free on online databases. This means, articles which could not be found for free had to be excluded from this thesis.

8 CONCLUSION

This thesis aimed to answer the research question of "*What are the characteristics of effective empowerment interventions for a diverse group of patients with varying health conditions?*"

A broad spectrum of nurse-led patient empowerment interventions share the same characteristics in terms of processes and outcomes. By incorporating the key characteristics of empowerment interventions into conventional rehabilitation, patients can gain a greater sense of control over their rehabilitation journeys. Based on literature review, the main themes of effective nurse-led patient empowerment intervention are characterized by education, skill building, goal setting, plan execution and reflection. Further, identified themes are divided into processes and outcomes. Based on chosen articles, the themes are effective for patients with different health conditions and disabilities. The characteristics of empowerment interventions can be introduced into the traditional rehabilitation setting. The author recommends that nurses utilize the unifying components identified in this literature review in their work to empower patients and promote patients' self-care behaviors. To conclude, this thesis suggests that incorporating key components of the nurse-led patient empowerment interventions would be sufficient in empowering patients, rather than choosing an existing set empowerment intervention. When patients are encouraged to practice self-care behaviors and enhance a sense of control over their lives, the result hypothesized by the author indicates that patients are more likely to return to the same living accommodation as before rehabilitation. This is due to their newfound re-possession of sufficient skills and knowledge to manage their own health conditions.

8.1 Recommendations

The author recommends rehabilitation services adopt a patient-centered approach where nurse-led patient empowerment is incorporated into the patient care. Rather than choosing an existing empowerment intervention, which may only target a specific patient group, nurses can focus on the core aspects of effective empowerment. Giving more autonomy to patients through means of education and skill building can empower the patient. By providing knowledge and skills, decision making and reflection opportunities during

rehabilitation, patients may be able to manage independently and return back to their original living accommodation. A patient-centered approach to rehabilitation would mean allowing the patient opportunities to have their voices heard. Empowered patients would be able to transition from the "cared for", passive role to the "self-care", active role in their rehabilitation journeys. The author believes that rehabilitation where skills of self-care and self-management are taught to patients based on their beliefs, wishes and needs will give patients the opportunity to continue their recovery journey more independently. An empowered patient equipped with enough knowledge on their health condition and skills of daily living may require less hands-on help and may be able to recovery effectively at home.

Patients with impaired cognition were excluded from studies in the chosen articles. This research illustrates that empowerment interventions are effective with a broad group of patients with varying health conditions but raises the question of whether empowerment interventions are effective for patients with impaired cognition. The author recommends more studies be conducted on the effectiveness of nurse-led patient empowerment intervention for patients with mild to severe cognitive decline. The effects of nurse-led patient empowerment interventions were also not reviewed on an organizational or community level in this thesis. The author, however, recommends research on the environmental effect of nurse-led patient empowerment interventions be conducted. Moreover, there is a primary focus on the effects of empowerment on patients, but experiences of the healthcare professionals who are empowering patients are lacking. The author was not able to research the effects of empowering patients with interventions on nurses and their workloads. The author suggests more research must be conducted in order to understand the experiences of nurses empowering patients. Whether incorporating new interventions into rehabilitation will burden nursing staff or not, this concept must be studied further. For patient empowerment interventions to be incorporated into conventional rehabilitation, it must not come at the cost of healthcare professionals' excessive workload.

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